THE IMPACT OF PEER MENTORING IN UK HIGHER EDUCATION

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ABSTRACT of THESIS

The present thesis is an investigation into the impact and role of formal peer mentoring programmes as retention and enrichment strategies within UK Higher Education. Reviews of the literature highlighted several limitations within the empirical evidence for benefits of mentoring schemes. This thesis systematically evaluated the availability and impact of peer mentoring schemes within UK Higher Education. Firstly, a new measure of wellbeing was constructed and validated in student samples. A UK wide survey of 94 Universities supported the notion of increasing popularity of formal peer mentoring schemes and demonstrated the perceived benefits of peer mentoring as a retention strategy. Employing a theoretically driven longitudinal methodology a controlled comparison between first year students' attending a UK university with a peer mentoring scheme versus a university without a peer mentoring scheme further substantiated the benefits of peer mentoring. Those within the peer mentoring university were three times less likely to think of dropping out of university, were coping better with the transition to university and were better adapted to university life: an important predictor in intention to leave. The relationship between peer mentoring and intention to leave was mediated by integration in university as proposed by Jacobi (1991). In support of the 'buffering' hypothesis existence of peer mentors moderated the relationship between predicted changes in social support, affect and self esteem during the transition to university. Within the fourth research study of first year students at a Scottish university; attitudes towards the introduction of a peer mentoring scheme within a university without such a scheme was investigated. Results indicated a

positive perception of mentoring, with no student stating that they would not seek advice from a peer mentor if one was available. Although individuals who were experiencing greater levels of stress and homesickness were more likely to indicate they would use a peer mentor demographic variables did not differentiate between individuals who wanted peer mentors and those who felt less need. The most important attributes of a peer mentor for this sample of 158 first year students were commitment to the scheme and listening skills. Finally the impact of formal peer mentoring schemes within Higher Education was assessed from the perspective of the mentor, employing a qualitative (focus group) methodology at a university with an established peer mentoring scheme. Multiple benefits were indicated including personal, emotional, and academic advantages of becoming a mentor. All of the mentors within this study highlighted numerous motives for becoming a mentor although most important was their own previous experience (negative and positive) of the peer mentoring scheme. The results of each study are discussed in line with previous literature, limitations of the research and suggestions for future research. This thesis concludes that formal peer mentoring schemes can have a positive impact on the mentees, mentors and institutions involved and specifies nine recommendations for policy and practice.

TABLE OF CONTENTS

Part B – Methodology of Results Chapters

List of Tables

List of Figures

List of Formulas

Chapter 4

List of Appendices

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A journey only begins with an idea but as this book closes another will naturally fall open.

Preface to the Thesis

The present thesis is an investigation into the practice of peer mentoring in higher education in the United Kingdom. It has three main aims: 1) to establish the prevalence of peer mentoring schemes within higher education in a UK context; 2) to investigate the impact and possible benefits of mentoring at an institutional level, as well as at an individual level from the perspective of both mentors and mentees and 3) to assess students' attitudes towards the development of a mentoring scheme within a university where a scheme was not currently available. As such the main research questions were as follows:

1) What are UK universities currently providing for their students in terms of mentoring schemes and why were they introduced?
2) Are peer mentoring schemes having an impact on student retention figures at the university level using statistics derived from performance indicators?
3) Are peer mentoring schemes having an impact on student wellbeing and retention at the individual level and from the mentee perspective?
4) Are peer mentoring schemes having an impact on students' transferable skills at the individual level and from the perspective of the mentor?
5) How are peer mentoring schemes utilized within the first few weeks at university from the perspective of mentors?
6) How does a peer mentoring scheme aid the transition and adjustment to university from the perspective of the mentor?
7) What are students' attitudes towards the introduction of a peer mentoring scheme in a university which does not currently run one?

8) Is there a subset of students who would benefit the most from a mentoring scheme?

Rationale

The rationale for this thesis was driven from two observations. Firstly research into the transition to university and the first year experience at university has gained in momentum since the millennium and has consistently highlighted the negative impact and stressors attached to starting a university course for many students. Parallel to this is evidence of an association between student wellbeing and retention at university, together with increased pressure on institutions from the government regarding retention and widening participation.

Secondly; the concept of mentoring has always been associated with multiple and duel benefits, and interest in the subject has risen exponentially in the last three decades. However, much of the literature focuses on occupational research and as such cannot necessarily be applied to the higher education situation. It is important to investigate whether mentoring may hold the same benefits within a higher educational setting.

This thesis therefore aims to combine research on student transition, stress and dropout, with that of peer mentoring to assess the use of peer mentoring schemes as a supportive, enrichment, and retention strategy within higher education.

Overview

The first part of this thesis focuses on 3 consecutive reviews of the literature and a methodology chapter.

Chapter 1 primarily reviews the literature on mentoring, mostly within the organisational context and discusses definitions, current concepts, debates and practice of mentoring. This precedes a systematic review and critical evaluation of published studies concerning peer mentoring schemes within higher education with a particular focus on the benefits of mentoring.

Chapter 2 looks at the changes that have been evident in higher education since the 1990s including government policies and mass higher education. This chapter also considers the problem of student attrition and reviews how formal schemes such as peer mentoring could be adopted by institutions to help meet government targets of widening participation and reduction of withdrawal rates.

Chapter 3 focuses on psychological factors and considers the literature on the transition to university, the first year experience and student distress. This chapter also considers peer mentoring as a social support agent, arguing that it could act as a buffer in the stress-outcome relationship. Within the concept of social support this chapter also discusses the importance of social integration.

The second part of the thesis discusses the methodology adopted for the PhD as a whole and debates the benefits of triangulation (Chapter 4). There are five research studies within the current thesis and the first is discussed within this section. Chapter 5 (research study 1) concerns the development of a Student Wellbeing Scale

to be used within this thesis and within future research. Chapter 5 thus considers positive aspects of psychology (wellbeing and satisfaction) within the general literature and amongst students, alongside student distress and dissatisfaction and considers why a new scale is needed within the educational literature.

The third part of the thesis reports on the findings of 4 consecutive studies into peer mentoring in higher education.

Chapter 6 assess the prevalence of peer mentoring in UK higher education in 2003, looks at the diversity of these schemes and highlights the problems of comparative research. Also within this chapter is a comparison of universities with and without mentoring schemes using outcome variables derived from the UK performance indicators such as non-completion and student diversity.

Chapter 7 assesses the possible benefits of mentoring for the mentee and the university by comparing a university with a peer mentoring scheme with a university that does not have such a scheme on several psychological outcome variables. Further objectives within this study were to evaluate how a peer mentoring scheme is utilized within the first semester at university from the perspective of the mentee.

Chapter 8 continues the peer mentee's perspective and asks students who are not involved in a peer mentoring scheme how they would feel if such a scheme were to be introduced. This study also investigates whether there are vulnerable subgroups (more distressed individuals) within the student population and if their attitude towards a peer mentoring scheme differs from those appearing more adjusted to university life.

Chapter 9 asks what motivates an individual to become a peer mentor and what possible costs and benefits involved in such a scheme may hold for the mentor. This study also considers how peer mentors feel they help first year students during the transition to university.

The Thesis concludes (Chapter 10) by summarising and discussing the research findings with a particular focus on recommendations for future research, policy and practice of peer mentoring in Higher Education.

Part A: Literature Reviews Regarding Mentoring in Higher Education, the Changing University, Widening Access and Dropout, and the First Year in Higher Education

Chapter 1
Mentoring in Higher Education

1.1 Overview

Mentoring has expanded to such an extent over recent decades that it should now be considered a social phenomenon (Freedman, 1993). Yet the growth in mentoring practice is not reflected in the development of its theoretical underpinnings and conceptual understanding (Colley, 2003); indeed 'the existing research evidence scarcely justifies its use on such a massive scale' (ibid, p. 1).

The concept of mentoring first appears in Homer's Odyssey (translated by Fagles, 2003) in which a mentor guides and advises the young Telemachus, the only son of Ulysses and Penelope, during his journey to find his father after the fall of Troy. The classical origins of the mentor have been viewed by authors such as Roberts & Chernopiskaya (1999) and Colley (2000, 2001) as inconsistent with today's mentoring concept. Roberts and Chernopiskaya (1999) argue that Mentor in the Odyssey was unsuccessful as a counsellor and protector and that modern associations of mentoring are more likely to come from the influential book of the 18th century *Les Adventures de Talamaque* by Fenellon (1966) which adds more clarity to the concept of mentoring.

1.2 Definitional Diversity in Mentoring

Modern mentoring literature remains disadvantaged by the lack of a concise and uniform definition. Clutterbuck highlighted at the 3rd European Mentoring

Conference in 1996 that "the biggest problem for researchers into mentoring is still defining it" (Clutterbuck, 1996). Although Merriam's review of the mentoring literature occurred in the early 1980's, her conclusions regarding the operationalization of mentoring still stand.

> "The phenomenon of mentoring is not clearly conceptualized, leading to confusion as to just what is being measured or offered as an ingredient of success. Mentoring appears to mean one thing to developmental psychologists, another to business people, and a third thing to those in academic settings"
>
> (Merriam, 1983, p. 169)

Examples of the diversity in mentoring definitions can be found in Table 1.1 which provides a review of 16 definitions from the areas of psychology, business and academia. Many business definitions revolve around the classic concept of an older individual becoming a teacher/ sponsor and advisor of a younger, less experienced individual: a key feature not always present in educational and developmental definitions. Roles such as guiding, coaching and role modelling also appear in such definitions. Researchers rely heavily on dictionary definitions which often include the concept of non-judgemental care to distinguish mentoring from other processes of instruction (Hall, 2003). Roberts (2000) argues that when we attempt to put mentoring into practice we are entering a 'definitional quagmire'; "each definition appears akin to the needs wants and desires of those who initiate a mentoring program" (p. 82). Philip (2000) concludes that the vast array of meanings regarding mentoring only serve to reveal the many underlying assumptions associated with it.

The role of a mentor can be one or more of several things: counsellor, coach, role model, advisor and a mentee can be that of a protégé, client, pupil or apprentice.

The process of mentoring itself also remains unclear in the literature with Philip (1999) describing it as 'reciprocal', 'helping', 'advising', 'leading', or 'facilitating'; as 'a collaborative enterprise' with shared ideals or as a 'learning process' by which the mentor leads by example (Philip 1999). As a result of such diversity Wrightsman (1981) argues that the term mentoring has become devalued. Individuals use the term with a lack of precision required for its application in 'hard' sciences. It is also important to acknowledge that the uniqueness of the mentoring experience for each individual influences the complexity of the definition (Scandura & Williams, 2001).

Table 1.1: Definitions of mentoring from the field of Psychology, Business and Education

Definitions	**Functions**
Concise Oxford English Dictionary (1991) "Mentor = an experienced and trusted advisor. (Greek *Mentor*, advisor of the young Telemachus in Homer's Odyssey and Fenellon's *Telemaque)*" p.742	• Advisor
Definitions of Mentoring from the Field of Psychology	
Levinson, Darrow, Klein, Levinson & McKee (1978) "The mentor relationship is one of the most complex, and developmentally important, a man can have in early adulthood… No word currently in use is adequate to convey the nature of the relationship we have in mind here. Words such as 'counselor' or 'guru' suggest the more subtle meanings, but they have other connotations that would be misleading. The term 'mentor' is generally used in a much narrower sense, to mean teacher, advisor, or sponsor. As we use the term, it means all these things, and more… Mentoring is defined not in terms of formal roles but in terms of the character of the relationship and the functions it serves" p. 97-98.	• Teacher • Advisor • Sponsor

Flaxman, Ascher & Harrington (1968) as cited in Gay (1994) "Mentoring is defined as a supportive relationship between a youth and a young adult and someone who offers support, guidance, and concrete assistance as the younger partner goes through a difficult period, takes on important tasks or corrects an earlier problem" p.4.	• Guidance • Support
Philip & Hendry (2000) "Classic mentoring – a one-to-one relationship between an adult and a young person where the older, experienced mentor provides support, advice, and challenge" p. 216.	• Support • Advice • Guidance
Scandura, Tejeda, Werther, & Laukau (1996) "Mentors foster nurturing environments wherein protégés may develop faster and more completely that their peers and are therefore better prepared to compete in organisation and as leaders" p. 50.	• Provision of nurturing environment
Definitions of Mentoring in the Field of Business and Management	
Alleman, Cochran, Doversoike, & Newman (1984) "A relationship in which a person of greater rank or expertise teaches, guides, and develops a novice in an organisation or profession. The experience has an unusually beneficial effect on the protégé's personal and professional development" p. 329.	• Teacher • Guidance
Burlew (1991) "A mentor is anyone who provides guidance, support, knowledge, and opportunities for whatever period the mentor and protégé deem this help to be necessary" p. 214.	• Guidance • Support • Knowledge • Opportunities
Chao, Walz, & Gardner (1992) "Mentorship is defined as an intense work relationship between senior (mentor) and junior (protégé) organizational members. The mentor has experience and power in the organization and personally advises, counsels, coaches, and promotes the career development of the protégé" p. 624.	• Advisor • Counsellor • Coach
Kogler- Hill (1989) "[Mentoring is] the process of an older, more experienced member of the organization assuming a parental role with a less experienced protégé" p. 356.	• Guidance
Kram (1985) "Derived from Greek mythology, the name implies a relationship between a young adult and an older, more experienced adult that helps the younger individual learn to navigate in the adult world and the world of work. A mentor supports, guides, and counsels the young adult as he or she accomplishes this important task" p. 2.	• Guidance • Support • Counsellor

Ragins (1997) "Mentors are defined as individuals with advanced experience and knowledge who are committed to providing upward mobility and support to their protégés careers" p. 90	• Upward mobility • Support
Definitions of Mentoring in the Field of Education	
Blackwell (1989) "Mentoring... as a process by which persons of superior rank, special achievements, and prestige instruct, counsel, guide, and facilitate the intellectual and/ or career development of persons identified as protégés" p. 9.	• Guidance • Counsellor • Instructor • Facilitator
Bligh (1999) "A voluntary relationship, typically between two individuals, in which: the mentor is usually as experienced, highly regarded empathic individual, often working in the same organisation or field as the mentee; the mentor, by listening and talking with the mentee in private and in confidence, guides the mentee in the development of his or her own ideas, learning and personal and professional development" p. 33.	• Guidance
Donaldson, Ensher, & Grant – Vallone (2000) "Traditionally mentoring is viewed as a dyadic face to face long term relationship between a supervisory adult and a novice student that fosters the mentees professional, academic and personal development" p. 233.	• Facilitator
Healy & Welchart (1990) "A dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and beginner (protégé) aimed at promoting the career development of both" p. 17.	• Facilitator
Moses (1989) "Ideally, a professor takes an undergraduate or graduate students under his or her wing, helps the student set goals and develop skills, and facilitates students successful entry into academic and professional circles" p. 9.	• Facilitator
Shandley (1989) "First, it is an intentional process of interaction between at least two individuals… Second, mentoring is a nurturing process that fosters the growth and development of the protégé… Third, mentoring is an insightful process in which the wisdom of the mentor is acquired and applied by the protégé… Fourth, mentoring is a supportive, often protective process. The mentor can serve as an important guide or reality checker in introducing the protégé to the environment he or she is preparing for. Finally… an essential component of serving as a mentor is role modelling" p. 60.	• Guidance • Nurturing • Supportive • Role Modelling

Although definitions of mentoring differ they do agree on the main aims of mentoring regardless of the context: these can be summarised as supportive (psychologically, emotionally, and professionally) providing direct help with career and professional development, as well as providing role modelling.

1.3. Functions of mentoring

As definitional diversity continues to characterise the mentoring literature many researchers now define mentoring in terms of the functions provided during the process (Blackwell, 1989; Kram, 1985; Levinson et al., 1978; Zey, 1984)

Jacobi (1991) reviewed 15 functions ascribed to mentors provided in eight definitions. Although there is a large degree of overlap, not one author agreed completely with another, and no one function is listed by all eight (see Table 1.2). From this review Jacobi (1991) highlights an additional problem: the functions, or roles, of a mentor themselves, need further definition and clarification.

Several researchers organised the mentoring functions into two clusters (Kram, 1985; Noe, 1988; Olian, Carroll, Giannantonia & Feren, 1988; Schokett, Yoshimura, Beyard-Tyler & Haring-Hidore, 1983; Schokett & Haring-Hidore, 1985). Kram's (1985) domains of *career* and *psychosocial* remains the most prevalent. Career functions focus on increasing a mentees skill, knowledge, and/ or self efficacy in particular role (Kram, 1985; Russell & Adams, 1997) whereas psychosocial functions reflect behaviours that provide support, encouragement and / or nurturance (Kram, 1985; Russell & Adams, 1997). Other categorisations although labelled differently, have the same theoretical underpinnings.

Table 1.2. Functions Served by Mentors Listed by Eight Authors.

Functions	Blackwell, 1989	Burke, 1984	**Fowler et al.. 2005**	Nieva et al.. 1981	Kanter, 1977	Kram, 1985	Levinson et al.. 1978	Phillips-Jones, 1982	Zey 1984
Acceptance/support/ encouragement	X					X	X	X	X
Advice/ guidance	X		**X**	X		X	X	X	X
Bypass bureaucracy/ Access to resources				X	X				X
Challenge/ opportunity/ "plum assignments"		X	**X**			X		X	
Clarify values/clarify goals	X								
Coaching		X	**X**		X	X			
Friendship			**X**						
Information	X	X		X	X				
Protection	X		**X**			X			X
Role Model	X			X		X	X	X	
Social Status/ reflected credit				X	X				
Socialization/ "host and guide"	X						X	X	X
Sponsorship/ advocacy	X	X	**X**		X	X	X		X
Stimulate acquisition of knowledge	X		**X**						
Training / instruction	X			X	X		X	X	X
Visibility / Exposure					X	X		X	

Source: Jacobi (1991) p. 509 *Note*. Bold items added.

For example Olian et al. (1988) argued from their quantitative analysis of business managers that mentors served an instrumental (career) and intrinsic (psychosocial) function. Focusing on students, Schokett et al. (1983, 1985) found both vocational mentoring and psychosocial mentoring.

Factor analysis on data provided by school teachers and administrators conducted by Noe (1988) confirmed the two factor status. Olien et al. (1988) thus conclude that

> "protégés who have close contacts with a mentor see two primary dimensions to the benefits obtained from the relationship: job and career benefits through information and external brokering provided by the mentor, and psychosocial benefits from the emotional support and friendship obtained within the relationship"
>
> Olien et al. (1988, p.19)

The two core dimensions were also supported from exploratory factor analysis using data yielded from 80 managers in a professional development course (Burke, 1984). However, this analysis resulted in three factors; the third being labelled *role modelling*. Researchers (Allen, Russell, & Maetzke, 1997; Baugh, Lankau, & Scadura, 1996; Dreher & Ash, 1990; Grant Vallone, & Ensher, 2000) have continued to concentrate on the two dimensions and not include role modelling as a third separate component to mentoring, but instead incorporate it into the psychosocial component (Schokett et al., 1983, 1985). Jacobi (1991) maintains that separate components should be considered. A separate function of role modelling is supported by a study comparing traditional, step ahead (mentors are slightly higher up the career ladder than their mentees, although not as much so as in traditional mentoring)

and peer mentoring on protégés satisfaction (Ensher, Thomas, & Murphy, 2001). When predicting levels of satisfaction with the mentoring relationship from the protégés perspective, role modelling significantly accounted for the highest amount of variance in satisfaction. Vocational (career) mentoring was also significant; although psychosocial support did not uniquely add any significance within the final equation.

Two studies in Higher Education have focused on the functions provided and received within peer mentoring. Amongst 29 peer mentoring pairs in America, higher levels of psychosocial support, over instrumental (career) support, were reported (Grant Vallone et al., 2000). Positive associations between the two types of support and general satisfaction were also reported although they did find that higher levels of support were related to higher levels of stress. As this was a cross sectional study and no causality could be inferred it may be that individuals who were highly stressed were turning to their mentors more. In a study of 68 first year MBA students who were taking part in a group peer mentoring program, Allen et al. (1997) report a greater level of satisfaction with mentoring when more career and psychosocial support was received. Further to this in a similar study of 64 first year MBA students Allen, McManus & Russell (1999) found that greater levels of psychosocial support was reported than career support: a finding that supports Grant – Vallone et al. (2000) and Kram and Isabella's (1985) qualitative work.

Colley (2003) states the potential functions of a mentoring relationship may expand further as mentoring is currently practised in so many ways. It is also possible that as mentoring occurs in different settings, some functions will be more prevalent than others, for example, psychosocial support behaviours may be more important during transitional phases (such as starting a new job or at university for

the first time), whilst career related functions may take over as the relationship continues. The functions of a mentor should therefore not be viewed from a single standpoint but must be considered as unique to particular setting and situations and are likely to change over time as each mentor- protégé pair adapts to meet changing needs.

Some of the functions provided by a mentor evident in the qualitative research (e.g. Eby, & McNaus, 2002) may not be captured by quantitative measures of mentoring functions. For example Dreher & Ash (1990) argue that mentoring provides an exchange of information, knowledge acquisition and access to social networks.

1.4. Satisfaction with Mentoring Relationships

It is believed that the greater the number of mentoring functions provided, the more successful the relationship will be (Kram 1985). This view has been supported by research into the relationship between mentoring functions and mentoring satisfaction. Four studies have focused on this relationship when assessing formal mentoring schemes aimed at students within Higher Education. In a study of 64 first year MBA students taking part in a peer mentoring scheme, Allen, McManus and Russell (1999) reported a significant positive relationship between amount of career support offered and satisfaction with mentoring, as well as psychosocial support and satisfaction. Regression analysis indicated that psychosocial support added significantly to the variance in satisfaction above and beyond career support. Allen et al. (1999) also reported a significant positive relationship between the amount of contact time and satisfaction with mentoring although contact time did not add

significantly to the regression analysis once career and psychosocial support had been accounted for. Grant-Vallone & Ensher (2000) also reported a significant relationship between contact time and levels of satisfaction with the mentoring relationship in their study of 29 first year graduate students taking part in a peer mentoring scheme. Contact time was also positively related to the perceived degree of psychosocial and career supportive behaviours received. In support of Allen et al. (1999), Grant-Vallone & Ensher (2000) found strong significant positive relationships between psychosocial support and satisfaction in both the Fall (Autumn) semester (r = .84) and spring semester (r =.73) and between instrumental support and satisfaction (fall: r = .72; spring: r = .66). As Grant-Vallone & Ensher's (2000) research focused on a dyadic perspective, the mentors were also questioned on the level of support they gave and their satisfaction with the program and their results reflected those of the mentees.

In a comparison between dyadic mentoring and 'network' mentoring (i.e. group mentoring) for first year students in Higher Education, Walker & Taub (2001) found similar results; frequency of meetings was positively related to satisfaction in both the mentees (r = .59) and in the mentors (r =.58). They also found no significant differences between the two programs (dyadic vs. network mentoring) and no significant difference between the reported level of satisfaction for the mentees and the mentors. It is unlikely that the relationship between support and satisfaction/ effectiveness will be a simple one but little work has been done looking at potential mediators and moderators within the literature. One study by Young and Perrewe (2000) found that whether or not an individual's expectation of the mentoring process was met was a mediating factor in the relationship between support and effectiveness.

In summary, the functions of mentoring appear to be multidimensional and dependent on context. However, the mentoring literature appears to focus on two broad functional dimensions: career and professional development; and psychological and social support. The literature also suggests a strong relationship between the number of functions provided and the success of the relationship.

1.5. The benefits of mentoring for the mentee

Mentoring has long been indicated as a beneficial practice in organizations (Kram, 1985), academia (Jacobi, 1991) and more recently amongst school based children (Philips 1999), with consistent claims that those who have been mentored are at an advantage in comparison with those who have not experienced mentoring relationships (Chao, Waltz, & Gardner, 1992; Levinson, 1978; Kram, 1985; Scandura, 1992). More recent qualitative reviews of business mentoring (e.g. Noe, Greenberger and Wang, 2002) indicate that mentored individuals report higher levels of career and job satisfaction, a greater number of promotions, higher incomes and lower levels of intention to leave and work alienation. However, as the practice of formal mentoring continues to expand amongst youth, organisations and in academia, the importance of critical and quantitative summaries of mentoring benefits becomes paramount. Such a review would aid the advancement of theory and research on the topic (Allen, Eby, Poteet, Lentz, and Lima, 2004). In a meta-analytic review of the work-place mentoring literature, Allen et al. (2004) focus on a number of objective (e.g. promotions) and subjective outcomes (e.g. job satisfaction) in a comparison of mentored and non-mentored individuals. The relationship between the degree of mentoring and objective/ subjective outcomes was also

evaluated. Forty three studies were included with sample sizes ranging from 77 to 3,220 with a median of just over 200. Mentoring within academia and Higher Education was explicitly excluded from the review. The primary indicators of objective career success were: percentage salary changes over a set period of time, number of promotions (self reported) and compensation (total annual salary including all forms of compensation). For subjective career success the primary indicators were: career and job satisfaction, commitments, expectations for advancement and intention to remain in the organization. The authors also included satisfaction with the mentoring relationship as an outcome measure. Allen et al.'s (2004) first hypothesis that mentored individuals would report more positive levels of both objective and subjective career outcomes was fully supported except with regards to intention to stay. They also found that both career mentoring and psychosocial mentoring were positively related to objective and subjective career outcomes, concluding that one form of mentoring is not likely to be more successful than the other. Allen et al.'s (2004) final hypotheses linking specific mentoring functions to specific outcomes i.e. career mentoring to objective outcomes and psychosocial mentoring to subjective outcomes produced more mixed results. For objective outcomes, greater benefits to mentees were evident for career mentoring over psychosocial factors as predicted. However, with regard to subjective outcomes, job satisfaction was more highly related to career mentoring.

The relationship between career satisfaction and psychosocial mentoring was similar to that of career satisfaction and career mentoring. Allen et al. (2004) conclude that there is minimal evidence specifically linking the types of mentoring functions to the different outcome measures, but argue that the greater link between career and job satisfaction could be explained by the informational and instrumental

support provided by career mentoring. It is speculated that this will lead to a gain in confidence, self efficacy, as well as job enrichment which will lead to satisfaction (Allen, McManus, & Russell, 1999; McManus & Russell, 1997). The highest reported effect size within the meta-analysis was between psychosocial mentoring and satisfaction with the mentoring relationship (r = .62). As Kram (1985) argued that psychosocial functions represent a deeper and more intense relationship between mentor and mentee then this result is not surprising.

The results of the meta-analysis described above generally support the claims of consistent benefits to mentees from being involved in a mentoring relationship. However, regardless of the significant findings, the average statistical relationship between objective measures and beneficial outcomes was very low. The relationship between functions provided by mentors and objective outcome measures range from correlations of -.04 to .19, whereas studies evaluating mentored versus non-mentored individuals show a slightly higher association (.12 - .31) indicating that it is the presence of a mentor that appears to be important in the measurement of objective outcomes, rather than the degree of mentoring provided.

Eby, Allen, Evans, Ng, & Dubois (2008) conducted a meta-analytic review of 116 studies on 'traditional'[1] mentoring across three domains: youth, academic and workplace mentoring (Peer, group/ team, or reverse mentoring were excluded from the review). Eby et al. (2008) found similar results to Allen et al.'s (2004) meta-analysis of workplace mentoring and its benefits: a wide range of benefits were evident although the effect sizes were generally small. Some differences were also found across the different types of mentoring. Notably effect sizes were larger in

[1] Traditional mentoring is defined as a dyadic, face-to-face, long-term relationship between a supervisory adult and a novice student that fosters the mentee's professional, academic, or personal development (Donaldson, Ensher, & Grant-Vallone, 2000).

academic mentoring studies in comparison to youth or workplace mentoring studies regarding the following outcomes: performance (academic achievement, GPA: r = .19); withdrawal behaviour (r = -.11); school attitudes (r = .36); and motivation involvement (r = .14). It should be noted, however, that the largest effect size was based on only 3 studies with significant heterogeneity in the sample effect sizes. In such a case a random effects model should be applied. As the authors applied a fixed effect model this is indicative of an unstable model. Based on overlapping 84% confidence intervals Eby et al. (2008) conclude significant differences between the subgroups (with academic mentoring showing higher effects) on performance, withdrawal behaviour, and school attitudes. This cross discipline meta-analysis highlights the multiple benefits observed from mentoring relationships regardless of the context within it presents itself, although Eby et al. (2008) highlight the need to pay greater attention to potential benefits within the particular areas of mentoring.

1.6. The benefits of mentoring for the mentor

Traditional mentoring is often considered to be asymmetrical in nature where the primary beneficiary is the mentee and thus much of the literature has focused on the advantages of being mentored (i.e. the protégés). However, Levinson et al. (1978) highlighted the possible advantages of being a mentor. Other authors have also recognised and emphasised the mutuality and reciprocity of the relationship (e.g. Hunt & Michael, 1983; Kram, 1985). Yet the research into the benefits of mentoring is more conjectural than empirical (Allan, Poteet & Burroughs, 1997) and thus research from the mentor's perspective is limited. Allen (2007) argues that a need to

understand the dynamics of the mentoring relationship from the perspective of the mentor is critical for both theory and practice.

The process of mentoring is dyadic and complex in nature and success relies on both mentor and protégé's experiences and behaviours. Ignoring one half of the duo leaves a critical gap in understanding the nature and process of the relationship as a whole. Hunt and Michael (1983) argue that mentors may benefit from such a relationship by receiving a renewed sense of purpose, a sense of satisfaction and intrinsic fulfilment as well as recognition and power within the organisation. This is supported by qualitative studies that have considered the benefits of mentoring for the mentors (Allen et al., 1997; Kram, 1985). Kram (1985) found that mentors gain confirmation and support, and report intrinsic satisfaction from helping someone develop, as well as recognition and respect within the organisation. In interviews with 27 mentors from five different organizations, Allen et al. (1997) found support for Kram's (1985) original findings but also indicated tangible benefits for the mentor him/herself (e.g. increases mentor's own knowledge) and other job focused benefits (e.g. builds a competent work force).

There are very few studies that concentrate on long term tangible benefits of being a mentor. In a sample of 188 university administrators in England reporting on levels of both mentoring received and provided, Bozionelos (2004) found an association between the degree of mentoring provided to a protégé and a mentor's perception of career success. A relationship was also evident between mentoring provided and objective measures of career success (number of promotions) although this relationship was not statistically significant. Allen, Lentz & Day (2006) compared 'informal' mentors, that is individuals not in a formal mentoring scheme, with those who had no experience of mentoring others, on levels of objective and

subjective career success. The mentors reported higher levels of income, faster promotion rates and significantly stronger perceptions of career success after other variables such as gender, education, hours worked and organizational tenure had been accounted for. Eby, Durley, Evans, and Ragins (2006) argued that long term benefits were more likely to occur in a situation where a mentor reports greater immediate benefits from mentoring. In a study of 659 employees (department heads, directors, managers) of two large state universities in America, Eby et al. (2006) reported that short term benefits predict work attitudes but not career success. Reported short term benefits of mentoring were also related to mentor job satisfaction and commitment as well as their intention to mentor again. On closer inspection, the instrumental mentoring benefits (e.g. improved job performance, recognition etc) were reported as having a greater impact on satisfaction and commitment than the relational mentoring benefits (e.g. rewarding experience, loyal base of support). Eby et al. (2006) conclude that "generally speaking, short term benefits have their strongest effect on outcomes more closely tied to mentoring than to the job or organization" (p. 439).

All the studies described above used cross sectional survey methodology and therefore it is not possible to draw causal conclusions. Also, this work was conducted on informal relationships in business and organizations therefore generalizability to formal schemes in Higher Education is questionable. In particular, the outcome measures of objective 'career' [degree] success are likely to be very different in student mentoring schemes in comparison with business settings. Ragins & Verbos (2007) discuss the mutuality and reciprocal nature of mentoring in terms of shared learning. For student mentors, mentoring may provide a reaffirmation of basic skills and earlier lessons; rehearsal and practice that may enhance their own academic

success. Hunt and Michael (1983) and Kram (1985) both argue that mentoring may enhance a sense of purpose and foster a deeper sense of belonging within an organization as well as increasing satisfaction derived from work; factors that could potentially be mapped onto a student mentor's experience in Higher Education.

1.7. Negative impacts of mentoring for the mentor

Very little research has looked into the possible negative impact of mentoring for the mentors. The most noted negative impact of mentoring is time demands, but studies by Halatin and Knots (1982) and Ragins and Scandura (1994) have also indicated, in organisational contexts, employee jealousy, the possibility of being 'backstabbed' by a disloyal protégé and embarrassment if the protégé were to fail. A qualitative study by Allen et al. (1997) also found time requirements to be a main barrier to entering a mentoring relationship but also discussed issues of favouritism to the protégé, the protégé abusing the relationship i.e. using it to their own benefit in a destructive fashion, and feelings of failure. When considering barriers to contact between mentors and protégés in a formal mentoring scheme, Noe (1988) noted that time limitations, incompatible work schedule and physical distance were the main issues. Again, since this research has been conducted on business and corporate mentoring it is difficult to know how this would apply to formal peer mentoring schemes within Higher Education.

1.8. Informal versus formal mentoring

Mentoring can appear in informal and formal ways among any institution with a hierarchical structure in which a lower level individual may benefit from interactions and guidance from an upper level individual (van Gyn & Kicks, 1997). Given the potential benefits of mentoring summarised earlier, it is easy to understand why many organizations and universities have utilized mentoring, structured into a more formal program.

Informal mentoring partnerships develop from mutual identification; mentors can choose protégés like themselves and protégés can select mentors whom they feel best meet their needs and view as role models. It is this mutual identification that contributes to the closeness and intimacy of mentoring relationships often cited in the literature (e.g. Kram, 1985). On the other hand, formal mentoring relationships are initiated by organizational programs and develop through the assignment of members to each other by a third party (Murray, 1991). Formal mentoring can take the 'traditional' route (e.g. Campbell & Campbell, 1997, 2007) or the form of peer relationships (e.g. Allen et al. 1997, 1999), social networks (e.g. Walker & Taub, 2001), or email contact (e.g. Hixenbaugh, Dewart, Drees & Williams, 2005).

Most comparisons between formal and informal mentoring schemes have been conducted within business settings. The two types of mentoring, informal and formal, differ in length and structure. Informal mentoring is unstructured and mentor and protégé meet whenever contact is perceived as needed. Such relationships are believed to last on average 3-6 years in business contexts (Kram, 1985). In contrast, formal mentoring is often contracted to last a maximum of a year and the mode, frequency, and location may be sporadic or specified (Poldre, 1994; Murray, 1991).

It can also differ in terms of purpose. Informal partnerships are often focused on helping the protégé achieve long term career goals (Kram, 1985) whereas formal schemes tend to focus on short term career goals directly applicable to a protégé's current situation (Murray, 1991). Some concentrate on the orientation and socialization of newcomers (Allen et al. 1999) or provide 'on the job' training (Murray, 1991).

Within Higher Education there is a greater focus on retention of students with regards to more formal mentoring schemes (Jacobi, 1991). Klaus (1981) and Kram (1985) warn that formal mentoring may not be as beneficial as mentoring relationships that develop informally in this context. This is believed to be because the relationships have not formed by mutual desirability and on the initiative of the individual, although both parties informally 'contract' into the relationship. Formal assignment of mentor/protégé dyads could lead to personality conflicts as well as a lack of true commitment of either mentor or protégé, both of which could lead to a dissatisfactory relationship. Due to some current practices of random assignment some believe that the probability of success in formal relationships is low (Chao, Waltz & Gardner, 1992). Chao et al. (1992) highlight the need to pay more attention to the selection phases to guarantee a more successful relationship and call for continued research into what attracts mentors and protégés to each other (e.g. Olian et al., 1988). This could be applied to identifying critical matching factors in formal mentoring programs. A further problem with formal schemes in business contexts is that the mentors may not be as intrinsically motivated as their informal counterparts because they may not have volunteered to be a mentor (Ragins, Cotton, and Miller, 2000). Therefore Noe (1988) states that organizations should not expect protégés to obtain the same benefits from assigned mentoring relationships as they receive from

an informal established primary mentoring relationship[2]. The structured features of a formal mentoring programme have often rendered the relationships to be inexact copies of informal partnerships because they may not have occurred on their own. However, it is possible that formal mentoring can offer distinctive benefits over more traditional informal mentoring.

Comparing formal versus informal mentoring in research studies has led to mixed results. Although there is ambivalence regarding the formal/informal debate, no studies so far have indicated that formal protégés report greater benefits than informal relationships (Baugh & Fagenson-Eland, 2007). A longitudinal survey of alumni from a large mid-western American university and a private institution in America focusing on current mentors and comparing 213 informal protégés with 53 formal protégés and 284 who had no mentor, found that the informal protégés perceived greater amounts of career focused mentoring than the formal protégé (Chao et al., 1992). No difference was evident in psychosocially focused mentoring. Although the informal protégés also reported slightly higher levels of satisfaction, organizational socialization and salaries, these differences were not statistically significant. However, in all outcome variables both mentored groups had significantly more favourable outcomes than non-mentored individuals. Chao et al. (1992) suggested that the initiation phase, which is characterised by the match between prospective mentors and protégés, may explain differences in perceived career focused mentoring. Informal mentoring grows out of informal relationships where individuals may know one another for an extended time period. Mentors and protégés in formal relationships are more likely to have never met one another before

[2] Primary mentoring relationships are characterised by an increased level of commitment by both protégés and mentors and are seen as more critical for personal development. In most mentoring relationships only a subset of possible functions are provided by the mentor (Kram 1986).

(Murray, 1991) thus a longer adjustment period may be required in a formal relationship for each to get to know the other. However, in contrast Fagenson-Eland, Marks, and Amendola (1997) reported that formal protégés believed they received less psychosocial support than their informal protégé counterparts yet reported no differences in career mentoring. Formal protégés also reported less perceived communication with their mentors. Formal mentors in this study also believed there was less communication with protégés although they reported no difference in giving psychosocial or career support when compared to their informal mentor counterparts. Scandura and Williams (2001) found that formal protégés are worse off than their informal counterparts on both psychosocial and career mentoring as well as role modelling. Ragins and Cotton (1999) found that protégés with formal mentors reported that their mentors performed fewer mentoring functions as a whole than informal protégés. They also reported lower levels of current annual compensation[3] and lower levels of satisfaction regarding the relationship. Although the informal protégés reported favourable outcomes on all measures when compared to the non-mentored individuals no differences were found between formally mentored and non-mentored individuals.

Inconsistencies in the empirical results comparing informal and formal mentoring schemes could be due to differences in the mentoring process such as length of programme, time spent mentoring, contact time between mentor and protégé, degree of structure, and amount of mentor training offered, all of which makes comparisons across programmes problematic. An additional issue is the measurement of mentoring functions within the more formal relationships. The development of mentoring function scales (e.g. Noe, 1988; Ragins & McFarline,

[3] Current annual compensation is defined as salary, bonuses, commission, stock options and profit sharing.

1990; Scandura, 1992) were based on informal mentoring relationships with no corresponding scales for formal relationships. Qualitative research on the possible functions received in a formal mentoring relationship has not yet been conducted and so relying on measures developed to assess functions formulated from interview research with informal mentoring dyads may not be appropriate (Baugh & Fagenson-Eland, 2007). There may also be different underlying expectations of the relationship from an organisational, mentor and/or protégé perception.

Correlational studies focused on formal mentoring with no informal mentoring comparison report that individuals perceive greater levels of psychosocial support than career support (Allen et al. 1999; Noe, 1988). However there is no corresponding research on levels of functions provided for informal protégés for comparison. Most research on formal mentoring schemes is cross sectional. In a longitudinal quasi-experimental study comparing individuals in a formal mentoring scheme with individuals not currently being mentored, Seibert (1999) reported greater job and career satisfaction amongst mentored individuals than the non-mentored individuals although no differences were found between the two groups with respect to organisational commitment, work role stress or self esteem. This study did not have a comparison group of informal mentored individuals.

Most research does not consider the satisfaction with the relationship as a possible moderating variable in the association between type of mentor and outcome variables. Ragins et al. (2000) argue that the quality of a mentoring relationship can be variable and these differences in quality may account for the differences between formal and informal mentoring outcomes. Formal mentoring is considered less rich than informal (Kram, 1985) and, due to the random nature of the matching process, there is a greater probability of unsatisfactory relationships. Ragins et al. (2000)

found that protégés within a satisfactory formal relationship reported greater benefits in organizational commitment, career commitment, job satisfaction, organisational based self esteem, and organisational justice as well as lower levels of turnover intentions than individuals in informal relationships. They further reported few differences between mentor dyads categorised as less satisfying and non-mentored individuals regardless of type of scheme (formal v informal). Regression analysis indicated that quality and satisfaction with the relationship explained additional and a larger amount of variance than either presence of mentor (mentor v non mentor) and type (formal v informal) concluding that a positive mentoring experience is beneficial regardless of its type. Although it can be concluded that individuals in formal mentoring programmes do not fare as well as individuals being mentored on an informal basis they are still at an advantage relative to non-mentored individuals. Although formal mentoring schemes have undergone evaluation in academic settings no comparison has been made with informal mentoring relationships.

1.9 The concept of peer mentoring

Although there has been a lot of research on traditional mentoring where an older more experienced individual mentors a less experienced individual, less is known about alternative sources of mentoring such as peer mentoring. Kram and Isabella (1985) highlighted the possible benefits of utilizing peer kinships in this way during their qualitative work with peer mentors in a business setting. They found that although peer mentors appeared to provide less career focused support than traditionally defined mentors, the types of career and psychosocial support offered were direct reflections of the traditionally defined mentoring relationships. Kram and

Isabella's observations can be found in Table 1.3. This has been supported by more quantitative work by Ensher, Thomas and Murphy (2001) who compared traditional and peer mentoring relationships amongst 142 informally mentored individuals within an organisational context. Results indicated that traditional mentors provided more career support than peer mentors.

Table 1. 3: Developmental Functions – Comparison of Mentoring and Peer Relationships

Mentoring Relationships	**Peer Relationships**
Career- enhancing functions • Sponsorship • Coaching • Exposure and Visibility • Protection • Challenging work assignments	Career- enhancing functions • Information sharing • Career Strategizing • Job-related feedback
Psychosocial functions • Acceptance and confirmation • Counselling • Role modelling • Friendship	Psychosocial functions • Confirmation • Emotional support • Personal feedback • Friendship
Special Attribute • Complementarity	Special Attribute • Mutuality

Source: Kram and Isabella (1985) p.117

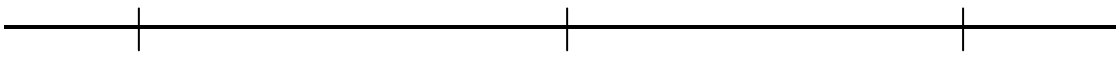
Ensher et al. (2001) also report that mentors in traditional mentoring relationships reported a greater level of satisfaction with the relationship and report a greater degree of job satisfaction than their peer mentored counterparts. This difference, they argue, is due to the perception that traditional mentors can provide more tangible career benefits to their protégés because they are by definition further on in their career, which is directly linked to satisfaction. However, no significant

differences were found in the amount of social support and reciprocity between the two mentoring types.

Peer mentoring is distinguished from traditional mentoring and characterised by its mutual relationship therefore a lack of significant difference in levels of reciprocity is unsurprising. Peer mentoring can also be differentiated from traditional mentoring by age and rank; within conventional mentoring there may be a difference in both age and rank whereas peer mentors and protégés tend to be similar in age and / or rank. Rice & Brown (1990) surveyed undergraduate students who were acting as peer mentors and reported that students preferred a mentor 1-3 years older than themselves, supporting the suggestion by Mead (1978; cited in Rice and Brown, 1990) that "students may look to their near peers as models more than they do their parents, grandparents, or other elders" (p. 31).

As well as indicating the types of support received from a peer, Kram and Isabella (1985) also identified three types of peer relationship that can be based along a continuum of trust, commitment level, relationship intensity, issues addressed and needs satisfied. This continuum of peer relationships can be found in Figure 1.1

Figure 1.1. A Continuum of Peer Relationships



Information Peer	Collegial Peer	Special Peer
Primary Function	Primary Functions	Primary Functions
Information- sharing	Career Strategizing Job-related feedback Friendship	Confirmation Emotional support Personal Feedback Friendship

Source: Kram and Isabella (1985) p. 119.

This distinction of peers into three categories is supported by McDougall and Beattie's (1997) qualitative work with 28 informal peer mentor pairs. They defined peer mentoring as "a process where there is mutual involvement in encouraging and enhancing learning and development between two peers, where peers are people of similar hierarchical status or who perceive themselves as equals" (McDougall & Beattie, 1997 p.425). They highlight the possibility of moving through the ranks from co-worker to utilitarian peer mentor and onto holistic mentor. As individuals move from basic information sharing to a deeper and broader relationship, it is likely that the prevalence of mentoring episodes will increase until the nature of the relationship transforms into mentoring. Exactly when this transformation takes place is difficult to define and is likely to require more long term research alongside investigations into peer relationships that never reach this point (McManus and Russell (2007).

Allan et al.. (1999) argue that peer mentoring relationships are particularly efficacious with regards to outcomes of work related stress and socialization: the extent to which participants believed they had adjusted to their role within the academic programme. In an evaluation of 64 full time first year MBA students in a formal team peer mentoring program, Allen et al.. (1999) report that psychosocial mentoring and career mentoring were positively related to socialisation. Although there was no association between mentoring and reported work related stress both mentoring functions related positively to beliefs that their mentors helped alleviate work stress (r = .54 for psychosocial and r = .57 for career focused mentoring).

Although mentoring in Higher education has been around at an informal level for decades it is now viewed less in the 'traditional' (apprenticeship model/ faculty staff mentoring students) manner but more as a formal strategy to reduce student

drop-out rates. There continues to be an increasing literature attesting to the importance of mentors for undergraduate education. A large body of literature indicates that mentoring by a faculty member is predictive of academic success (Astin, 1977; Jacobi, 1991) though little is known on how mentoring relationships are initiated and the prevalence of informal mentoring relationships between faculty and students and no research to date has been conducted on informal peer mentoring relationships amongst students. Another more recent phenomenon that has led to a surge of mentoring programs in UK, USA and Australian universities is the increased interest in the transition to, and the first year experience in, university. Kram (1985) argued that the complementarity in peer relationships can take the form of empathy and mirroring of one's own experiences. As mentors may have recently had similar experiences to the protégés, protégés may feel more comfortable discussing these experiences with peers rather than staff or more formal services offered at the university.

1.10. Review of formal mentoring schemes in Higher Education

In order to assess the outcomes of mentoring in Higher Education a review of the literature on both traditional mentoring and peer mentoring in Higher Education was carried out using PsychINFO and ERIC databases. The following key words were applied: Mentor*; Peer Mentor*; Buddy (this was included as American mentoring schemes are often labelled as buddy schemes); + Student* (college); Higher Education. A publication restriction of peer reviewed journals only yielded 90 (PsycINFO) and 116 (ERIC) studies from 1985 – 2008. Included within this review are any studies which specifically evaluate a formal mentoring scheme either

quantitatively or qualitatively. Therefore studies reviewing or researching mentoring processes, as well as articles on setting up mentoring schemes in Higher Education were excluded from this review. After these exclusion criteria were applied 14 studies remained with a further 4 being identified from references and Mentoring/ First Year in Higher Education conferences. Six of the studies contained a mixture of quantitative statistics and qualitative findings with only 2 reporting only qualitative research. Most of the qualitative studies look at the benefits from both the mentees and the mentors' perspective. Five studies focused on formal faculty to student mentoring (traditional). Most studies were comparative designs, matched (3) or unmatched (9); relatively few (3) adopted the more rigorous randomised control trial methodology. Outcome measures can be divided into objective (academic performance, retention) and subjective (satisfaction, commitment, self esteem). Table 1.4 reviews the empirical studies of formal traditional mentoring schemes within Higher Education whereas Table 1.5 reviews the empirical studies of formal peer mentoring schemes within Higher Education.

Table 1.4: Review of empirical evaluations of formal traditional mentoring schemes within Higher Education.

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Salinitri	2005 (Canada)	Matched Comparative Study	Mentees = at risk (low GPA) first yr students One faculty (arts and social sciences)	GPA Module Failure	56 Expt grp 72 control 2 cohorts 2001 & 2002	Expt grp opt in. Control grp matched from data base of admissions	Sem 1 GPA Mentees higher than controls for both cohorts Final GPA Mentee 01 higher than control 01 (02 cohort no different) Sem 1 course failure mentees higher than controls for both cohorts Sem 2 course failure mentee 02 = control – no data given for 01 cohort. Control grp 2 – worse off in all occasions
Santos & Reigadas	2002 (USA)	Cross sectional (with retrospective recall)	Mentees= at risk students (Latinos) not necessary first years. University wide scheme	College adjustment College self efficacy Goal definition Social embeddedness-number of mentor/mentee contacts	Volunteers for program – all invited to take part. 32 Latinos (no response rate given)	Expt grp opt into scheme. No control comparison	Significant increases in self efficacy and goal definition. No change college anxiety. Freq of contact > greater adjustment to university, higher self efficacy and better defined academic goals
Craig	1998 (Australia)	Comparative Study Mostly qualitative data	Email Mentoring Mentees= female students. One department (Computing sciences)	Retention	Volunteers for the scheme (20) Control grp = 40.	Expt grp opt in (control group = individuals not involved)	No stats provided. From data provided - significantly greater number of non mentored dropped out

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Campbell & Campbell	1997 (USA) Follow up in 2007.	Matched Comparative study	Mentees = underrepresented groups 1st year University wide	Academic performance (GPA) Unit completion Retention Contact with mentors	All new students contacted 20% volunteered (339). Control grp = 339	Expt grp opt in. Control grp = individuals not involved. Matched on gender, ethnicity, GPA.	Mentored higher on 1st semester GPA, 2nd semester GPA and overall GPA. More units completed by mentors. Lower dropout rate within expt grp. No difference in graduation rate 1.2 &3.6% variance in academic performance attributed to variance in mentor –protégé contact. FU= sig more mentored in graduate work and staying on for teaching credentials. No difference in dropout rate by end of year.
Cosgrove	1986 (USA)	Randomised Controlled Trial (mixed design)	Formal Faculty> Student Mentees= first year students Concentrates on transition to university University wide	Satisfaction Use of campus services Participation in extra curricular activities Developmental change	All enrolling students contacted 259 (34% of class) volunteered for the scheme. Expt grp = 98, control grp = 93	Stratified Random assignment matched on genders, residential status and SAT	Use of campus services - NS Satisfaction with campus services - NS Satisfaction with university overall – sig (Expt grp more positive) Participation in extracurricular activities – NS Sig differences in developmental changes

Note. GPA = Grade Point Average; SAT = Scholastic Aptitude Test; NS = Not Significant; Grp = Group

1.11 Traditional Mentoring Studies

Table 1.4 shows that most of the formal faculty / student mentoring studies (except that evaluated by Cosgrove, 1986) focus on at risk students. Salinitri (2005) selected mentees on the basis of Grade Point Average (GPA) on entry to university, Santos and Reigadas's (2002) evaluation focused on a scheme specifically formulated for ethnic minority groups and Campbell & Campbell's (1997) research focused on mentees from underrepresented[4] groups.

Research using the objective outcome measures of retention and grades indicates a positive impact of mentoring on retention rates, module pass rates and general GPA. Craig's (1998) evaluation of an email peer mentoring scheme within a school of computing sciences, which was aimed specifically at females, also reported high levels of retention amongst the mentored individuals (90%) in comparison to those not receiving mentoring (45%). However, individuals who were in the control group were those who chose not to be involved in the mentoring scheme. No matching occurred and no demographic comparisons were made therefore it is unknown whether there was already a difference (perhaps in motivation and/ or academic ability) between the two groups. Those who volunteered to be a part of a mentoring scheme may have had higher levels of motivation and academic achievement prior to being mentoring.

Campbell and Campbell (1997) assessed a group of 339 mentored first year students against a matched control group in a university wide faculty / student mentor programme. Results indicated a significantly lower dropout rate amongst the mentored individuals (14.5% vs. 26.3%) as well as a greater number of units

[4] This concept was not defined.

completed (9.33 vs. 8.49) and a significantly higher GPA (2.45 vs. 2.29). In their follow up study eleven years on (Campbell and Campbell, 2007) it was reported that significantly more of the mentored individuals were in graduate work or had stayed on to gain teaching credentials. As with Craig's (1998) study, the students involved in the program were volunteers and although matching did occur with regard to GPA, gender and ethnicity, the differences evident within the results could reflect differences in motivation and commitment between the two groups.

Other studies focusing on GPA and academic achievements have found mixed results. In a faculty / student formal mentoring scheme across two cohorts, Salinitri (2005) found that the experimental group for one of the cohorts (2001) scored consistently higher GPA and module passing rates than both control groups at both time points of measurement. However, for the 2002 cohort there was no clear pattern. The mentored groups scored higher than the second control group at all times, but mixed results were reported when comparing against the first control group. The second control group included individuals who were not involved in either mentoring or a first year orientation programme (University 101). Any inconsistencies between mentoring and the first control group could be due to the students' involvement in a University 101 course. Therefore it is arguable that mentoring added little to the value they receive from University 101.

When focusing on the more subjective psychological measures (satisfaction, anxiety, self esteem for example) results have been mixed. In a randomised control trial with pre and post measurements, Cosgrove (1986) reported higher levels of satisfaction and greater developmental changes amongst his sample of 64 students who had received a faculty mentor in comparison to 64 matched students who had not. There were no significant differences in levels of campus service usage,

satisfaction with campus services and engagement in extra-curricular activities. In a final study assessing a formal faculty/ student mentoring program for at risk students, Santos and Reigadas (2002) asked 32 mentored Latino students to retrospectively recall how they felt before entering the mentoring program and then asked how they felt now. From this, they concluded that the participants experienced significant increases in self efficacy and goal definition but no changes in levels of college anxiety. As these individuals were volunteers into the program, it is difficult to assess their initial levels of self efficacy and goal definition or whether their perceptions have been biased by a positive experience in the programme. This finding is also impeded by a lack of control group.

1.12 Peer Mentoring Schemes: Objective Measures

Table 1.5 shows results from the empirical evaluations of peer mentoring schemes from 13 studies. Five studies have evaluated peer mentoring schemes through the use of retention statistics; all of which report a positive outcome with regards to the peer mentored groups in comparison to non-peer mentored individuals (see Table 1.5). Drew, Pike, Pooley, Young and Breen (2000) report that amongst their sample of 30 mentees 13% withdrew from university, which was significantly less than the 20% withdrawal rate from the control group. However, the control group consisted of individuals not selected for the scheme and no details were provided regarding selection criteria. As these were not 'at risk students' it may be that individuals opting into and being selected for the scheme had underlying differences. No statistics were provided in this paper so it is not possible to determine statistical significance.

Table 1.5: Review of empirical evaluations of formal peer mentoring schemes in Higher Education.

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Budney, Paul & Bon	2006 (USA)	Comparative Study (control group = prior to treatment)	Group mentoring Mentees = freshman year One department (Engineering)	Retention > honours, transfers out GPA	Whole year from single program at a single institution Part of a course – all students take part	Year of registration	Significant improvement on retention rates (no stats given) Qualitative> large proportion experiencing problems adjusting & large proportion state mentors helped
Fox & Stevenson	2006 (UK)	Comparative study (differences pre mentoring tested)	Mentees = potentially failing 1st year students One department – accountancy and business financing	Academic performance	Potentially failing students from 2 cohorts 61 participants (2001) and 78 in 2002.	Potentially failing students identified Students opt in	No difference pre mentoring on average number of passes but differences in average pass mark pre mentoring. Both groups showed a decline in average pass mark but this was significantly more so for non-mentored. Number of passes increased for mentored and decreased for non-mentored.
Sanchez, Bauer, & Paronto	2006 (USA)	Randomised Control Trial	Individual Mentees = freshman year One department (Business studies)	Satisfaction Affective Commitment	128 school of Business Recruited from orientation program.	Random	Mentoring sig related to satisfaction at time 2, 3 and 4. No sig association with commitment. Satisfaction correlated with intention to persist (does not look directly at the mentoring relationship in this. Quality of peer mentoring associated with satisfaction with University.

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Hixenbaugh, Dewart, Drees & Williams	2005 (UK)	Comparative Study (control group = prior to treatment)	Email Mentees = Freshman year One Department (Psychology)	Academic aims/ambition Satisfaction Confidence/Anxiety Financial Concerns Social Integration Self efficacy.	2001 n =81, 2002 n=126 Doesn'*t* say how recruited By T3 31 v 36	Year of Registration	Expt grp greater elevation of social integration than control. Satisfaction with university decreased with both groups but less so for expt grp No other results reported
Fowler, & Muckert	2004 (Australia)	Comparative study (mixed design) Qualitative section	Mentees= 1st year students (Also looks at mentors) Three departments	Commitment Self esteem Stress Career readiness Interactions with faculty Intention to persist	Expt grp = 17 Control=16	Expt grp opt in. Control grp were those not selected- doesn'*t* say why this is.	Significant differences in interactions with faculty, institutional commitment, self esteem, stress and career readiness. Mentored better off in all cases. No differences in intention to persist. More confident with assignments. More confident knowing people experienced this before
Durkin & Main	2002 (UK)	Randomised Control Trial. (matched on assignment marks) Some qualitative data provided	Mentees = first and second year students in one department (Business studies)	Compares study skills course, mentoring and control group. Assignment grades Examination results	Volunteers for course 15 students per condition no stats given on year etc	Stratified randomisation matched with regards to baseline assignment marks	No stats provided Compares pre-post data. No clear pattern of mentoring in comparison to control. Mentored group performed 'appreciably better' than control in summer examinations

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Walker	2001 (Australia)	RCT between dyadic and network mentoring No control group	Mentees = first year undergraduates	Satisfaction	61 in mentoring program	Randomly assigned to either dyadic or network matched according to academic major	More contact significantly related to higher satisfaction for mentors and mentees. No significant difference in satisfaction to program. No significant relationship between similarity and satisfaction.
Drew, Pike, Pooley, Young & Breen	2000 (Australia)	Comparative Study (Mostly Qualitative)	Mentees = First year students One Department (Psychology)	Retention	All new enrolments invited 110 opt in 30 are selected	Expt grp opt into scheme Control grp = non selected individuals and those not interested	Significantly less withdrawals in expt grp 13.3% dropout v 20% No numbers or stats given

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Thile & Matt	1995 (USA)	Comparative Study Pre-post test design	Mentees = at risk > ethnic minority	GPA SAT Retention Self efficacy (academic milestones and educational attainment) Contentment Self esteem	All ethnic minority freshman and transferring juniors contacted 33 students took part.	Expt grp – opt in Control grp – university wide freshman and transferring juniors	Fall 1990: significantly higher levels of GPA. No significant difference by spring 1991. After participating for 1 year- 82% freshmen returned compared to 73% university wide – NS 87% juniors returned compared to 67% university wide – Sig Sig more likely to return to second semester than ethnic peers No sig changes in DV's BUT decrease in contentment
Quintrell & Westwood	1994 (Australia)	Matched Comparative Study	Mentees= international students University wide	Satisfaction Use of campus services Academic performance	All new arriving international students offered the opportunity Expt grp = 41, control grp = 41.	Expt grp- opt in. Control grp matched by country of origin, age and gender.	Adjective checklist- Expt grp higher on confusion. No other differences. Accumulation of positive and negative responses indicated no significant difference. Expt grp had more use of counselling, student advisor and language and learning campus facilities. No significant difference in grades overall – though it should be noted that expt grp were receiving more F grades

Authors	Year (Country)	Study Design	Type of Scheme	Dependent Variables	Participants	Method of Allocation	Findings
Twomey	1991 (USA)	Comparative Study	Mentees = first year undergraduates	Academic performance Retention Commitment	41 students split into 3 groups	Expt grp1 individual mentoring Expt 2 Group mentoring Control group No information on assignment.	Mentored groups had higher GPA (irrespective of group) Group mentored individual's higher retention rate than non-mentored and individual mentored. No change in commitment amongst any group
Bowman, Bowman, & Delucia	1990 (USA)	Cross sectional	Mentees = first year undergraduates Concentrates on transition to university Whole university	Contact time Perception of impact Topics of discussion Extracurricular involvement Mentor program value Number of topics addressed	40 students involved in the scheme. Usable responses from 24 (60%)	Expt grp = opt in No control comparison Comparisons made between high contact and low contacts.	21% met 1 or 2 times and 100% of those meeting 3 or more times reported mentor positively influenced stress of transition More contact related to greater involvement in activities More contact related to high mentor program value Most common topic of discussion = coursework Program rating correlated to number of topics addressed in mentoring meetings

Note. Expt = Experimental, Grp = Group

Thile, and Matt (1995) report mixed results from their evaluation of a peer mentoring scheme aimed at ethnic minority 'at risk' groups. They found that after participating for one year, 82% of the mentored freshman returned to university in comparison to 73% non mentored individuals. This difference was, however, not significant. Focusing on juniors (equivalent to second year of Higher Education in the British system) Thile et al. (1995) report that 87% of mentored individuals returned in comparison to 67% university wide: a significant difference. Thile et al. (1995) also report significantly higher levels of GPA amongst their mentored group during the autumn semester although no differences were evident by spring semester.

Budney, Paul and Bon (2006) assessed a group peer mentoring programme for first year engineering students and used accumulative data from pre-programme as a control group. They reported a significant improvement in honour completion (29.20% v 21.05%) and a lower rate of transfers out (9.18% v 10.46). However, no statistics are calculated and reported making these conclusions difficult to assess. Budeny et al. (2006) also reported an improvement in general GPA in the 4 years during the mentoring program (average GPA = 2.82) in comparison to the five years prior to the mentoring program (average GPA = 2.59) and concluded the mentoring to be a success. Again no significance testing is provided. Twomey (1991) compared group mentoring and individual mentoring with a control group. Both mentored groups benefited from a higher GPA whilst the group mentored individuals experienced lower levels of withdrawal than the control and the individual mentored groups. Interestingly mentee-mentor similarity had no effect on mentee outcome variables although a detrimental effect on mentor GPA was evident.

In a similar design that compared a study skills course, the course plus mentoring, and a control group, Durkin & Main (2002) observed no clear pattern of

improvement from a pre-mentoring academic assignment to post-mentoring assignment for the mentoring group in comparison to the control. They argue that the mentored group performed 'appreciably better' than the control group in summer exams, but no statistics or figures are provided thus it is hard to establish firm conclusions. Quintrell & Westwood (1994) in their evaluation of a peer mentoring scheme for international students found no significant differences overall in grades received by mentored individuals and non-mentored individuals. Their comparison of grades is based on a selection of 25 individuals (there were 41 in the original sample). The authors fail to justify why they chose a selection and from the descriptive statistics it appears that academically the mentored individuals are poorer overall with a number of mentored individuals receiving F grades. Again, this study focuses on volunteers to the programme who are matched on country of origin, age and gender not academic ability. Without a baseline control for academic ability available, it is difficult to know whether these individuals chose the scheme for a particular reason; potentially that they were academically poorer. Quintrell et al. (1994) also report that their 41 mentored individuals showed significantly higher usage of counselling, student advisor and language and learning campus facilities.

The most recent study to assess academic performance amongst mentored and non mentored individuals was based in the UK (Fox & Stevenson, 2006). In this case mentored individuals were potentially failing students who opted in to the program. This longitudinal study did control for pre-mentoring pass marks and number of passes. Although both groups showed a decline in average pass mark this was significantly more so for the non-mentored group. Simultaneously the number of passes increased for the mentored individuals but decreased for their non-mentored counterparts.

1.13 Peer Mentoring Schemes: Subjective measures.

When focusing on subjective output measures such as satisfaction, commitment, integration and self esteem the research is more mixed. In a randomised control trial of 128 business school first year students, Sanchez, Bauer & Paronto (2006) found that mentoring was significantly related to satisfaction with university during the intervention and one semester afterwards. The self reported quality of peer mentoring was also significantly related to satisfaction with university. Although the authors conclude that mentoring can have an impact on retention, this result was derived from a significant relationship between satisfaction and intention to leave which did not directly assess mentoring as a mediator/moderator. However, there was no significant relationship between mentoring and institutional commitment. In a comparison trial of 17 mentored individuals versus 16 controls, Fowler and Muckart (2004) found that after factoring out pre-intervention institutional commitment there were significant differences in post-intervention institutional commitment between the two groups. Significant differences in interactions with faculty, self-esteem, stress and career readiness were also reported, where individuals who had received the peer mentoring intervention were better off on all outcome variables in comparison to their non mentored counterparts. They report no significant differences between the groups in intention to leave. Although this study looked at a mentoring scheme across three different departments, the sample size was small and statistical power questionable. They also describe the control group as individuals who had signed up for the mentoring scheme but had not been selected. The criteria for non-selection are not detailed and no baseline comparisons of the two groups are provided.

In a comparison of pre intervention cohort and post intervention cohort within a UK university, Hixenbaugh et al. (2005) reported that although both the year groups showed a decrease in satisfaction with university from the first weeks of university to the end of the academic year, this decrease was less for the mentored cohort and by the end of the academic year the mentored cohort were reporting significantly higher levels of satisfaction. Hixenbaugh et al. (2005) also report that the mentored cohort experienced a greater elevation of social integration than the control cohort. Although they also measured self efficacy, results were not reported. Thile et al. (1995) also measured self efficacy defined as academic milestones and educational attainment, alongside contentment and self esteem. They report no significant differences between the mentored and non-mentored individuals except for a decrease in contentment for the mentored individuals. A further null result was reported by Twomey (1991) who found no difference in commitment to university between the 'group' mentored, 'individual' mentored and control group.

This null finding was not supported by Quintrell et al. (1994) who reported that their 41 mentored individuals showed significantly higher usage of counselling, student advisor and language and learning campus facilities. Again in contrast to Cosgrove (1986), they reported no differences in levels of satisfaction. This conflicting finding with regards to satisfaction could be explained by the measures used; the Quintrell study used an adjective checklist as a measure of satisfaction which may not have been measuring the concept of satisfaction but appraisals to life instead.

1.14 Peer Mentoring Schemes: Qualitative Studies.

Eight studies report outcome themes from mentees (see Table 1.6)

As can be seen in Table 1.6 a range of academic and social benefits have been reported from mentees. Academic benefits include study skill support (Treston, 1999) finding necessary information (Drew et al. 2000; Fowler et al. 2004; Treston, 1999) and adjusting to increased workload (Budney et al. 2006). The social benefits that have been identified include opportunity to meet people (Craig, 1998; Fowler, 2004; Hill & Reddy, 2006; Treston, 1999) and an increase in confidence (Craig, 1998; Fowler, 2004). Many students reported an improvement in their communication skills (Drew et al. 2000; Fowler, 2004). Hill and Reddy conclude from their UK based study that students are more willing to turn to a mentor than academic staff and that mentors were able to aid the transition to university.

Table 1.6: Review of Qualitative Evaluations of Formal Peer Mentoring Schemes in Higher Education

Country	Author (Year)	Context	Method	# participants	Main Outcome themes
UK	Hill & Reddy (2007)	Peer Mentoring One department	Tape recordings. Participants asked to record view and expectations of the peer mentoring scheme	13 Mentors and 7 Mentees completed evaluations	More willing to turn to mentor than academic staff. Mentors able to aid transition to university, value of having someone who has been through the system. Mentees commented on advantage of having another student to turn to. Opportunity for social relationships to be made. All but one mentee found the scheme positive and met expectations. Personal and academic development
UK	Thomas, Casey & Houston (2006)	Peer Mentoring Mentees –first year students	Various and ongoing e.g. questionnaires, focus groups and individual interviews	12/30 mentees and 8/17 mentors	Gain in confidence (83%), ability to communicate ideas (67%) and an enhanced understanding of subject (58%)
Australia	Fowler & Muckart (2004)	Tiered mentoring programme. Lower tier reported here: Mentees – first year students. Across three departments	Questionnaires, Telephone interviews and a focus group on completion of programme	17	Range of academic and social benefits – most commonly reported was an increase in confidence, getting to know someone at a more advanced level, gaining insight and information about the course, assistance and advice and friendship. Protégés felt encouraged, supported and improved on their communication skills.

Country	Author (Year)	Context	Method	# participants	Main Outcome themes
Australia	Drew, Pike, Pooley, Young, & Breen (2000)	Peer Mentoring Mentees- first year students Psychology	Semi structured open ended group interviews	Not given. However 24 mentors and 30 mentees took part in the programme	Mentees reported needing ongoing support and motivation. Felt relieved there was somewhere there if needed. Almost all perceived involvement lead to benefits in personal, professional and other aspects of their life Personal = support, encouragement, help and information. Academic benefits = finding information necessary for assignments from library and assistance with campus computers. 2/3rds felt able to extend support to other first years not involved in the scheme. Most satisfied with outcomes of participating.
Australia	Treston (1999)	Peer Mentoring Mentees- first year Whole university	Survey questionnaires, telephone interviews, focus groups and regular reports.	Not given. Report is on data collected over eight years of the scheme running	Retention due to bonding with survivor student who know the hidden curriculum and are positive about tertiary experiences Study skill support and assistance in socialising. Receiving vital information and advice. Networking aspect and technical advice
Australia	Craig (1998)	Traditional E-Mentoring. Mentees – female students from computing sciences.	Small group interviews and written reports	20 categorisation into mentors and mentees not given	Opportunity to meet people> 90% made new friends, getting to know others, protégés realise they are not the only ones feeling worried/ uncertain. Non- intimidating, open environment. Raised self esteem, confidence. 3 students suggested that they were still on course because of the support received from MicroNet
USA	Budney, Paul & Bon (2006)	Group peer mentoring, mentees – first year engineering students.	Methodology unclear Survey questionnaire	Not given. Report is on the cohort of 2004 and 2005	70% believed mentors had helped them adjust to the increase in workload. Authors link this directly to increase in GPA and increase in retention rates Students report greater stressors in the academic transitions than family and personal. They also report a greater use of mentoring for the academic transitional stress however 58.5% say mentors helped with personal issues

Country	Author (Year)	Context	Method	# participants	Main Outcome themes
USA	Salinitri (2004)	Traditional mentoring. Mentees- at risk (low GPA) first year students from the faculty of arts and social sciences.	Reliable questionnaire: The Mentor Assessment Survey. Mentor effectiveness scale (developed by author) Plus journal writing	56 (over 2 cohorts – 2001 & 2002)	All felt mentors were very good at providing guidance in exploring realistic options and attainable academic and career objectives. Mentors act as role models in sharing their own experiences. 19% did not discuss anxiety, self doubt and anger. 50% stated mentors were effective in all areas of mentor functions. Mentees appeared to be adjusted and developed friendships with both mentors and other peers

1.15. Methodological Limitations within the mentoring in Higher Education Literature.

This review suggests a general consensus that formal mentoring schemes can be beneficial within Higher Education, using both objective outcome measures such as retention, academic performance, and subjective psychosocial measures of satisfaction, self esteem etc. Causality cannot however necessarily be assumed as in many of these studies mentees opt in to the scheme: successful students may differentially enter or sustain mentoring. Truly comparable control groups are rarely found. In a review of the Higher Education literature Jacobi (1991) highlights three major limitations to the mentoring literature in general: 1) the lack of strong methodological designs, 2) the lack of outcome based studies, and 3) a lack of theoretical rationale within programs and the research. These findings are largely evident amongst the empirical research on peer mentoring.

One of the main limitations highlighted in this review is the methodological weaknesses of many of the research papers in both design and measurement. Much of the research linking mentoring with success/persistence relies on retrospective recall and/or is correlational in design where the data is collected at a single time point meaning that any changes specific to the mentoring scheme cannot be tracked across time. This research thus fails to control for any confounding variables or alternative explanations for the success attributed to mentoring. Within this review 6 studies were cross sectional and almost all of these did not attempt to match their mentored individuals to a non-mentored control group. Two of the studies which were longitudinal in nature did not assess participants pre-intervention, although they did match them up according to one of their dependent variables: GPA. The lack of longitudinal research means that causality cannot be inferred. Despite the cross

sectional nature of the general mentoring literature, many researchers continue to endorse causal language in their conclusions (e.g. Wanberg, Welsh, & Hezlett, 2003). One needs to consider the possibility that the causal relationship is reversed; successful individuals' may be more likely to enter into a mentoring relationship (Noe et al., 2002). In these circumstances, mentoring becomes a consequence and not a cause of an individual's success. This argument is supported by Jacobi (1991) who highlights Zey's (1984) research into the characteristics of a mentee that attract mentors i.e. certain individuals are more likely to be mentored because of characteristics such as enthusiasm, commitment, and achievement/success. Jacobi (1991) argues that the attributes of an individual that attract a mentor are similar to those of a successful manager with or without a mentor.

There is therefore a need for systematic evaluation of mentoring. Although most of the studies above contain control groups these control groups are often composed of individuals who chose not to be involved in the mentoring scheme. This leaves the possibility of individual differences between those who want a mentor and those that do not; which may then explain the differences in outcome measures. In other studies, participants were matched on specified criteria to individuals within the control group. However, with the exception of Campbell and Campbell (1997) and Salinitri (2005) the matching process concentrated on demographics of gender, ethnicity etc. and therefore does not rule out the possibility of significant differences between individuals who opt in versus those who decide against the scheme. This type of allocation fails to control for confounding variables and self-selection biases that may occur (Cook and Campbell, 1979). It is likely under such circumstances that the groups will differ on measures regardless of intervention, for example, in commitment, motivation and interpersonal skills.

In many of the studies, baseline information and comparison data (between experimental and control group) was also missing and although some did adopt a pre-post test design, very few controlled for entry variables in the final analysis. Jacobi (1991) argues that when evaluating such schemes, researchers should expand the pre-post test methodology and measure across several time points. An argument for such a design is supported by Hixenbaugh et al. (2005) who found no significant differences between two groups at the beginning of the semester or half way through the year; differences only became evident at the end of the year.

A further limitation is the low or unknown/ unreported response rates which can limit the generalizability of the results. External validity is also questionable when so much of the research is based in one department at one university (exceptions to this are Fowler, 2004; Thile et al., 1995; Quintrell et al., 1994; Bowman et al., 1990) and sometimes of one gender or ethnicity (e.g Good, Halpin & Halpin, 2000)

A further limitation of much of the mentoring literature within Higher Education is the lack of valid and reliable measurement instruments. Questionnaires focusing on mentoring regarding the characteristics and functions of the relationship have been developed (Fowler & O'Gorman, 2005, Noe, 1988; Ragins & McFarline, 1990; Scandura, 1992), however, the diversity in such measures mirrors the general diversity within the literature. When evaluating potential benefits of formal mentoring schemes in areas such as satisfaction and self esteem the use of reliable and valid measures would allow for comparison across several studies. Well constructed measures also allow the reader assurance of internal validity. Construct validity is also questionable when using multiple measures. Many of the evaluations of formal mentoring programmes in Higher Education have focused less on objective

benefits such as career success to more subjective measurements such as satisfaction with university and well being. Measurement in this case is often not multi item, or using reliable and valid measures within the literature, thus comparison across studies is difficult. In a study of a peer mentoring scheme in Australia, Quintrell and Westwood (1994) measured levels of satisfaction using an adjective checklist. For example, individuals were asked to indicate words that described their first year experience at university, for example, challenging, lonely, exciting. It is difficult to know if this measures satisfaction or other constructs such as appraisals of university life. Of the studies reviewed above that did not rely on objective statistics (such as retention and GPA) as an outcome variable, none (with exception of Hixenbaugh et al.'s (2005) use of the General Self Efficacy Scale) used validated, reliable and formal measures. This makes replication of research difficult.

1.16 Conclusion

Much of the literature on mentoring is descriptive in nature and focuses on process variables rather than outcomes, or is fraught with methodological limitations such as poor study design, validity and reliability issues, small sample sizes and lack of clear and concise statistics. Truly comparable control group studies are rarely found. Mentoring is, however, frequently and repeatedly found to be associated with improved academic, professional and personal outcomes. However, causality cannot necessarily be assumed as successful students may differentially enter and sustain mentoring. The concept of mentoring is very diverse with a lack of agreement on definition and measurement which makes comparisons amongst the literature difficult.

Chapter 2
The Changing University, Widening Access and Dropout

2.1 Overview

The aim of this chapter is to highlight the move from elitism to mass Higher Education within UK's expanding university sector and draw attention to the increasing importance of performance indicators within UK Higher Education, with particular reference to student attrition. At the centre of these reforms are governmental and funding policies, which will be discussed. The main focus of this chapter concerns a critical review of the theoretical and empirical literature on student retention with its links to peer mentoring, the identification of factors predicting student withdrawal, the mediating/ moderating roles of these factors and the utilization of theoretical models within attrition literature. It is important to note that many of the theoretical models and, indeed the research that tests them, were developed within the USA. While the majority of the attrition literature discussed within this chapter will revolve around American literature; the UK research will also be presented and the difference between the countries discussed.

2.2 Expanding University/ Mass Higher Education

UK Higher Education has changed from elite to mass education over the last four decades expanding student numbers from 400,000 in the 1960s to 2,000,000 at the turn of the century (Greenaway & Haynes 2003). Reports now indicate that one in three people attend university instead of 1 in 16 at the beginning of the 1960s

(Blanden & Machin, 2004). Lewis (2002) reports that between the academic years 1988/9 and 1993/4 student numbers increased by 54%. More recent research has, however, indicated the slowing of expansion by the mid 1990s and in some cases no increases from year to year (Hodgson & Spours 2000). However, it has been argued that the pedagogical structure of university remains the same despite the change in the student population and increasing numbers of non-traditional students whose needs are vastly different from previous generations of students (Burr, Burr, & Novak, 1999). In order to deal with such an expansion many universities have increased the level of support that is available to the incoming student. It is possible that to meet the growing demands of such an increasing population universities could tap into an unutilized resource: that is other students in peer mentoring schemes.

2.3 Performance Indicators- Widening Participation and Dropout

The development of performance indicators is a recent feature of Higher Education. During 1985 a report into university efficiency - The Jarrett Report - recommended that there be clear objectives for universities to work towards in order to assure value for money, and that the development of reliable and consistent performance indicators could aid in the efficient and effective management of universities.

> "A range of performance indicators should be developed, covering both inputs and outputs and designed for use both within individual institutions and for making comparisons between institutions."
>
> (Jarrett, 1985 p.36)

This increasing interest in the use of performance indicators is due to a number of causes: improving the quality of learning and teaching within institutions; educational authorities' emphasis on accountability of the institutions, and improving value for money to central and local governments.

In response to the Jarrett report a working committee established a clear set of performance indicators (including % non-completion, % mature students, % of students from low participation neighbourhoods). Johnes and Taylor (1990) argue, however, that providing information on a set number of variables is not sufficient in evaluating university performance and that a university's objectives also need to also be considered. Furthermore several researchers argue that statistical indicators, whether reliable or not are rarely valid operationalisations of quality (Cave, Hanney, Henkel & Kogan, 1997; Johnes and Taylor, 1990; Yorke, 1991). Despite growing attention to performance indicators, a unified definition of the concept has not been set. A report by the HM Inspectors of Schools (1990) defines performance indicators as "a statement, often quantitative, about resources deployed and/ or services provided in areas relevant to the particular objectives of the college" (HM Inspectors of Schools, 1990, p. 3).

2.4 Government Policies on Widening Participation

The definition of widening participation remains unclear; however, broad definitions indicate that it targets groups which have been previously under-represented in Higher Education, for example, mature students and individuals from low-participation neighbourhoods. In particular it was noted (Connor, 2001; Thomas, 2005) that individuals with disabilities, specific ethnic minority groups and lower

socio-economic status groups continue to be under-represented in Higher Education: these groups have all been labelled non-traditional[5]. HEFCE define widening participation policies as "initiatives to target the individual groups that Higher Education institutions have identified as under-represented and ensure their success" (HEFCE 2001).

The merits of widening access have remained unchallenged and unchanged yet it was not until the 1980s that it became a priority for the UK Government, the Higher Education Funding Council for England (HEFCE) and Higher Education institutions when it became a focal point of discussion. In 1997 the UK Government released the Dearing Report (National Committee of Inquiry into Higher Education, 1997) outlining its widening access policies and indicating a target of 50% of young people aged 30 and below having access to Higher Education by the year 2010. The Dearing Report's recommendations are based on findings that lower socio-economic status individuals were not accessing Higher Education because of poor qualifications, lack of aspiration and poor decision making (Greenbank 2006; Dearing Report, 1997). It was therefore believed that Higher Education institutions played a role in improving aspirations and the decision making process.

2.5 How Peer Mentoring can aid Widening Participation

Given the increase in attention to widening participation, several UK universities have introduced cross-institutional peer mentoring. This usually involves students from further and Higher Education visiting local schools to mentor students,

[5] Individuals labelled as non-traditional are fundamentally different in USA and UK literature. Within the USA non-traditional students predominantly mean mature and part time students (Kilky and Page, n.d.) where as UK literature encompasses all groups targeted by widening participation policies.

particularly those from a non-traditional background. Tinto (1975; 1996) argues that preparation is the key difference within non-traditional students between those who continue and those that do not. School mentoring works on the principle of preparation. Mentors can provide information, guide and advise students on the process of entering Higher Education as well as what to expect when they arrive. In theory, increasing preparation and anticipation should help sustain new students within a largely unknown system. Students acting as peer mentors, specifically if they themselves are from a non-traditional background can become a role model to the potential student. Mentors can intercept any fears about entering a system perhaps perceived as elitist where non-traditional students may not be able to fit in. Mentors provide an excellent example of someone who has entered the process and succeeded. There is very little empirical research with regards to student peer mentoring and its possible effects on retention. Anecdotally, there is a perception that mentoring is beneficial and this is a reason for the increase of schemes being initiated throughout the UK, USA and Australia. This thesis does not focus on the cross institutional peer mentoring schemes but investigates intra university peer mentoring i.e. mentoring students who have applied and been accepted on a course.

2.6 Problem of Student Withdrawal

Within the academic year 1995-96 the cost of non-completion within UK universities was estimated to be £90 million or around 3% of the funding assigned to teaching of undergraduates. Post funding changes predict that the figure will be in the region of £55 million providing the same student population data (for further

breakdown and information regarding costs of student withdrawal refer to Yorke (1999).

In comparison to other countries UK's attrition rate is relatively low (see Figure 2.1 on dropout rates provided by the Organisation for Economic Cooperation and Development: OECD), however, a time frame for data collection is not given.

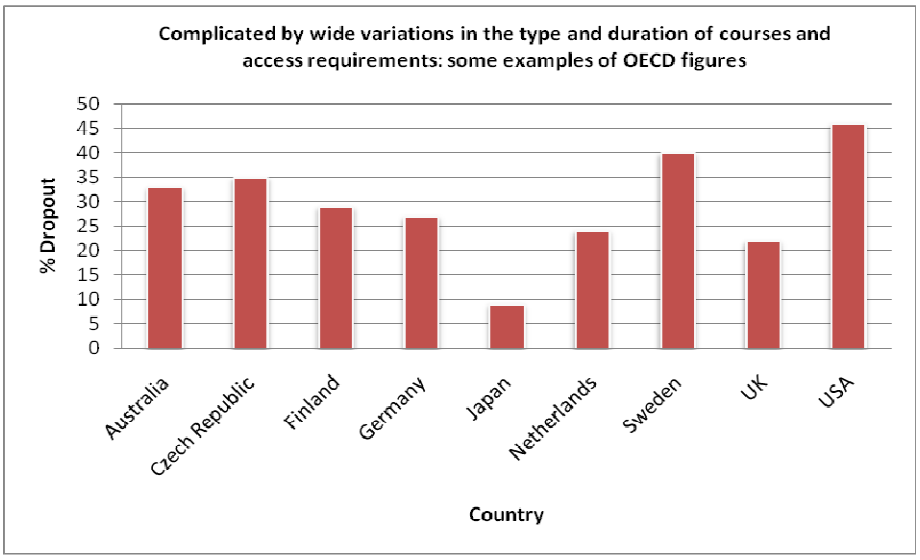


Figure 2.1: Dropout statistics by country. Source BBC News, 2008.

Recent figures indicate that dropout has remained 22% for the past five years (The Guardian, 2008) but this figure is highly variable between subjects and universities (Johnes, 1992; Johnes & Taylor, 1989; Yorke, 2001; Yorke & Longden, 2004). Although dropout figures have been stable over the years since the introduction of performance indicators, student dropout has become of increasing concern, with a rise in empirical interest into the reasons why students withdraw from university. More recently, however, the percentage of student withdrawals has increased (Laing & Robinson, 2003) and with new government policies, such as widening participation, it is set to continue rising (Select Committee on Education and Employment, 2001). With the introduction of widening access policies UK

universities teach a greater number of 'at risk students' and thus correspondingly a higher level of dropout. Universities are now attracting 31% of their students from 'non-traditional' backgrounds because of attempts to widen participation (BBC News, 2008). UK government statistics (HEFCE) indicate a strong positive relationship between student diversity - that is individuals from low participation neighbourhoods and low social economic status, as well as mature students, and level of withdrawal within the university. Thus the older universities have lower levels of student diversity and equally low levels of student withdrawals. The newer universities (the 'transformed polytechnics') are the opposite with high levels of student diversity and high levels of student withdrawal. It has also been noted that the rate of withdrawal for Higher Educational institutes with a greater proportion of non-traditional students has been steadily increasing (Select Committee on Education and Employment, 2001).

Withdrawal is not just an issue for the government but also for the individuals themselves. Individuals who leave university without completing their education have a lower financial return than their graduate counterparts (Johnes & Taylor 1991). This is also lower when compared with individuals who never entered Higher Education (Blundell, Dearden, Goodman, & Reed, 1997). Davies and Elias (2003) indicate that these individuals have difficulty obtaining a graduate level job. Davies and Elias (2003) also report the psychological setbacks for individuals who withdraw (for a fuller account of this study refer to Davies & Elias, 2003). This finding supports earlier studies by Morgan, Flanagan, & Kellaghan (2001) who indicated that the damage of withdrawal is not only restricted to financial factors but extends to psychological factors such as lower self esteem and self confidence. It is, however, important to consider the other side of the argument; Davies and Elias

(2003) report that some individuals believe that the experience of withdrawal had been a learning experience that had made them stronger.

With the numbers of 'non traditional' students increasing Burr, Burr, & Novak (1999) argue that universities should make a 'seamless' retention effort whereby students' needs are anticipated and identified before they enter the Higher Educational system either as 'traditional' school based or 'non-traditional' entrants. Indeed Yorke and Longden (2004) argue that with the increasing levels of self-funding by students and greater interest in lifelong learning, the rationale for using dropout in the performance indicators is weakened, and it may be more important to concentrate on the student experience and satisfaction with Higher Education.

Many researchers (Laing & Robinson, 2003; Ozga & Sukhnandan, 1998; Smith & Naylor, 2001) have reported that USA literature, and indeed the models that explain dropout, cannot be directly applied to British educational systems, which are different in many respects from their American counterparts[6]. Also within the current understanding of attrition from university in America, studies have relied on white, middle class, young, and residential (living in university accommodation) American Freshers (Stage & Anaya, 1996). Given that student populations within the USA include ethnically diverse and older students and many students partaking in part time education, extrapolating beyond the USA literature may be inappropriate for the UK context. Also Yorke & Longden (2004) argue that many of the models of student withdrawal are managerially orientated and thus lose sight of the importance of the student perspective. Student experience of Higher Education, they argue, should be

[6] To obtain a bachelors degree in America students need to attend college/ university for four years similar to the Scottish educational system but dissimilar to the English and Welsh 3 year degrees. Americans can attend a community college for the first 2 years of Higher Education and then apply for a four year course to complete the remaining 2 years of study. American Higher Education has a more diverse student population than the UK counterparts.

at the heart of the departure puzzle; involving multidisciplinary psychological, sociological and other approaches.

2.7 Research on Attrition in the UK

Research within the UK on attrition has been generally based on national statistics (Department for Education and Skills: DfES, and Higher Education Funding Council for England: HEFCE – incorporating Irish, Scottish and Welsh universities), institutional case studies (Lucas & Ward, 1985) and, increasingly so, case studies of departments within a university (Bennet, 2003; Trotter, & Cove, 2005). Most of this research has been conducted in England which has a different educational system than Scotland: most notably the 3 year degree in comparison to Scotland's 4 year degree. Also Scottish students can start a university degree at a younger age which may have implications for student withdrawal. Studies focusing on national statistics are flawed by problems of data gathering: non-completion statistics are often collected post-Christmas as many do not keep logs of students within the first few weeks. However, many researchers have identified the first few days of university as critical for withdrawal decisions with the highest proportion leaving within the first few weeks. Using post-Christmas methodology ignores pre-Christmas leavers. Also institutional and departmental case studies may not necessarily be generalizable to the wider Higher Education community. As Ozga and Sukhnandan (1998) also observe, much of the attrition literature places the 'blame' on the individual and has not considered the interaction between student and institution. In addition, some attrition research has failed to consider the changing context of Higher Education; with a more diverse student population a need to re-

evaluate models such as Tinto's (1975; see 2.9) in light of today's student experience has been called for (Barefoot, 2006).

Within UK research the data indicate that the reasons for leaving are diverse. Yorke (1999) studied 6 institutions from mid-England and concluded that there are seven main factors in predicting dropout. These findings were later supported by Davies & Elias (2003) who also indicated 'wrong choice of institution' and 'personal problems' as a major issue in student retention. See Table 2.1 for a comparison. Reasons for withdrawal also depend on the time of withdrawal (Davies & Elias, 2003; McGivney, 1996)

Table 2.1: Predictors of student dropout within two UK based studies.

Factor	Yorke	Davies & Elias
Poor quality of student experience	X	
Inability to cope with demands of the programme	X	X
Finances	X	X
Dissatisfaction with aspects of institutional provision	X	
Unhappiness with the environment	X	
Wrong choice of course	X	X
Wrong Choice of Institution		X
Lack of peer support	X	
Personal Problems		X

2.8 Linking Peer Mentoring and Persistence

As persistence in higher education has become of such national and political significance there has been widespread expansion of, amongst other things, peer mentoring schemes within Higher Education. Peer mentoring has been cited and utilised in many UK universities as a relevant scheme for providing information, preparation, and generalised support for new students. Again there is very little

research (and none within the UK) indicating the benefits of peer mentoring schemes with reference to persistence. Of the few studies conducted predicting retention all found a significantly higher retention rate amongst mentored students (Budney et al., 2006; Campbell & Campbell, 1997; Craig, 1998; Drew, 2000; Twomey, 1991), although these studies contained significant methodological flaws (see literature review 1, for a discussion). When the dependent variable was the intention to persist, Fowler and Muckert (2004) found no significant difference between mentored and non-mentored individuals. However, their sample size was small (33 in total) power calculations indicate their power to be approximately .60; it is possible that a type II error has occurred. Also within this study all of the students who requested a mentor were allocated into the mentored/ not mentored group, however, no selection criteria were provided nor a reason for this methodology. It is possible that significant differences existed before intervention and peer mentoring nullified this difference (i.e. individuals may have been selected into the experimental group because they were at a greater risk of withdrawing from university).

2.9 Theoretical Models of Student Departure

Withdrawal from university is of political importance world-wide not only because of the labour market but also in accountability terms concerning funding and investments. Student withdrawal, either involuntarily (via academic failure or some other uncontrollable factor) or voluntarily, can be construed by the public as inefficiency and therefore failure. Thus the "Departure Puzzle has been the object of empirical enquiry for over 70 years" (Braxton, 2002; p 1). Summerskill (1962: cited in Braxton, 2002) reviewed articles on student dropout dating back to 1926, while

Pantages and Creedon (1978) provided a review of the literature from 1950 to 1970 concluding that attrition is multifactorial and complex, deserves empirical attention, and mostly revolves around the first year in Higher Education. Interest in student withdrawal has been greater in the USA than the UK because of continuing high attrition rates. In the USA withdrawal from Higher Education has remained at 45% over the last 100 years (Tinto, 1982). The explanations for student withdrawal have changed within recent decades from focusing on demographic and personality predictors of attrition (so called 'blame' models; Braxton, 2002) to understanding the phenomenon as it relates to the educational process (a person-environment fit and situationist perspective; Stage & Rushin, 1993).

Within a survey of the attrition literature Spady (1970) and Tinto (1975) concluded that there was a lack of theoretical formulations to describe student withdrawal behaviour and that little was to be gained from further descriptive, atheoretical, research into student withdrawal behaviour which employs only univariate statistics. These authors argued that what was needed was the adoption of multivariate designs and statistical procedures to gain greater understanding, which can be accessed by Higher Education administrators and educational planners (Terenzini & Pascarella 1979). Pre-1960s research into student attrition highlighted several individual and institutional characteristics that predicted student withdrawal from Higher Education but less was known about the relative importance of these variables and the interrelations between them. In order to remedy the deficiency within the literature, Tinto (1975) utilised and expanded the earlier work of Spady (1970, 1971) to develop a longitudinal interactionalist theory of student departure which remains seminal within this scientific area today. Although other economic, psychological, sociological and psychological models have been forwarded in order

to account for dropout in Higher Education, Tinto's Interactionalist Theory holds "near paradigmatic status as indicated by more than 400 citations and 170 dissertations pertaining to this theory" (Braxton, Milem, & Sullivan, 2000, p. 569).

Tinto (1975) argued that student departure is interactionalist in nature. Departure decisions are based on the interaction between the individual student and characteristics of the university or college as an organizational whole. This perspective was based heavily on Durkheim's research into Suicide. Durkheim (1952) argued that individuals who were not integrated into society were at the greatest risk from suicide. Similarly integration is pivotal in Tinto's Model of student dropout. The conceptual difference, however, between Tinto and Spady is that social integration in the principle element within Spady's model, whereas Tinto (1975) asserts that there are interacting effects of equal importance between social and academic integration. Within a revision of his original model Tinto (1986) argues that academic and social integration perform a compensatory role i.e. low levels of academic integration can be compensated by high levels of social integration and vice versa.

> "Given individual characteristics, prior experiences, and commitments, … it is the individuals integration into the academic and social systems of the college that most directly relates to his continuance in that college. Given prior levels of goal and institutional commitment, it is the person's normative and structural integration into the academic and social systems that lead to new levels of commitment. Other things being equal, the higher the degree of integration of the individual into the college systems, the greater will be his commitment to the specific institution and to the goal of college completion" (Tinto, 1975, p.96)

In summary Tinto's model posits that an individual's background characteristics can directly and indirectly (via initial commitment and integration) influence withdrawal decisions. The varying degrees of academic and social integration in turn affect the level of further commitment and goal attainments which will ultimately lead to the decision to persist or withdraw from the institution. The model includes 15 propositions in total which can be found in Figure 2.1. Tinto's full model can be found in Figure 2.2

1	Student entry characteristics affect the level of initial commitment to the institution
2	Student entry characteristics affects the level of initial commitment to the goal of graduation from college
3	Student entry characteristics directly affect the students likelihood of persistence in college
4	Initial commitment to the goal of graduation from college affects the level of social integration
5	Initial commitment to the goal of graduation from college affects the level of academic integration
6	Initial commitment to the institution affects the level of social integration
7	Initial commitment to the institution affects the level of academic integration
8	The greater the level of academic integration, the greater the level of subsequent commitment to the goal of graduation from college.
9	The greater the level of social integration, the greater the level of subsequent commitment to the college
10	The initial level of institutional commitment affects the subsequent level of institutional commitment
11	The initial level of commitment to the goal of graduation affects the subsequent level of commitment to the goal of graduation from college.
12	The greater the level of subsequent commitment to the goal of graduation the greater the likelihood of student persistence in college
13	The greater the level of subsequent commitment to the institution, the greater the likelihood of student persistence in college
14	A high level of commitment to the goal of graduation from college compensates for low level of commitment to the institution and vice versa in influencing persistence in college
15	Academic and social integration are mutually interdependent and reciprocal in their influences on student persistence in college

Figure 2.2: Propositions within Tinto's model of Institutional Departure.

Source: Braxton (2000), p. 134.

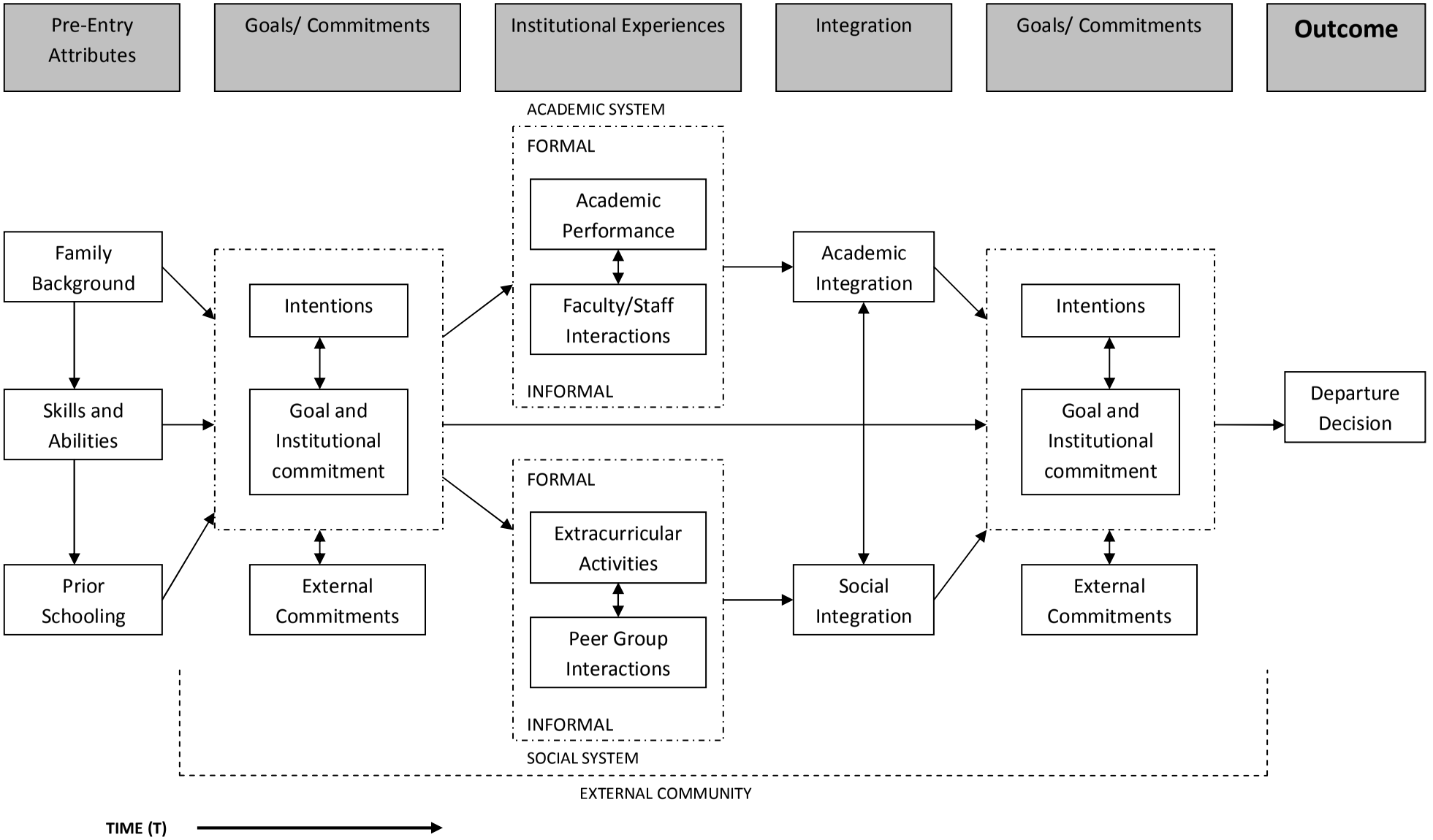


Figure 2.3 Tinto's (1993) longitudinal model of institutional departure. Source: Tinto (1993: 114)

Early research operationalizing the Tinto (1975) model indicated its efficacy within the field of student persistence (Pascarella & Chapman, 1983; Pascarella & Terenzini, 1979, 1980; Terenzini & Pascarella, 1977, 1978, 1980)

2.10 Tinto's Interactionalist Model of Student Departure: A Critique

Several studies have directly focused on the conceptual core of Tinto's model and in general research has supported the importance of the person –environment fit aspect of the model, (Aitken, 1982; Bean, 1980, 1985; Munro, 1981; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1979; Terenzini, Pascarella, Theophilides, & Lorang, 1985). In a review of the literature, however, Braxton (2000) concludes that the model is only 'partially supported and lacks empirical internal consistency' (p. 3). Braxton, Sullivan and Johnson (1997) only found strong support for less than half of Tinto's propositions which included the link between academic/ social integration and persistence.

Braxton, Sullivan, and Johnson (1997) also reported a lack of empirical substantiation for proposition 3: background characteristics can directly influence persistence decisions. Given that background characteristics can be construed as gender and social economic status (SES) this lack of support can only be seen as a good sign since it indicates that persistence decisions are amenable to intervention instead of relying solely on unchangeable attributes. Most studies have only found moderate associations between pre-entry characteristics and persistence behaviours and not causal relationships between these two variables (Braxton 2000). Furthermore scholars, including Tinto himself, argue that persistence behaviour cannot and should not be based on pre-entry characteristics alone and that many of

the relationships between the two are in fact of a more indirect nature (Braxton, 2000; Braxton et al. 1997; Tinto, 1993).

Academic and social integration are argued to be pivotal within Tinto's (1975) model and several studies designed specifically to test these areas have confirmed the importance of academic and social integration in a student's subsequent decision regarding withdrawal (Bean, 1980; Pascarella & Terenzini, 1977, 1979; Terenzini and Pascarella, 1977, 1978). Pascarella and Terenzini (1980) developed a scale to directly measure these two concepts, they then went on to assess whether these scales i.e. academic and social integration could distinguish between 'persisters' and 'leavers'. Their findings largely supported the core constructs of Tinto's 1975 model and were later replicated by Terenzini, Lorang and Pascarella (1981). Pascarella and Terenzini (1983) later used the same constructs to build a path analytical model of student persistence using a four year residential population in America providing further support for the influence of academic and social integration in student persistence. Several studies however, have indicated that the relationship between academic and social integration and persistence differs with college type (commuter v residential: Munroe, 1981; Pascarella and Chapman 1983 a, b), although this is not clearly explained. It is also still unknown if Tinto's model can be applied to the British Higher Educational system. Initial findings within one study in the UK indicated little support for the model (Brunsden, Shelvin, Davies, & Bracken, 2000). The American literature using Tinto's model has mainly concentrated on the concept of academic integration and its role in the student departure decision. Within the interactionalist model neither academic integration nor social integration is said to directly influence departure decisions instead the level of integration effects the further commitment to the institution alongside

individuals' goals for attaining a degree. Several studies have, however, tested the direct influence of academic integration on levels of persistence.

Although Braxton (2002) argues for the removal of academic integration from any future theories of student withdrawal because of the varied findings within his review, several studies have indicated that academic integration has the strongest relationship to withdrawal (Chapman and Pascarella, 1983; Munroe, 1981; Pascarella and Chapman 1983 a; Pascarella and Terenzini, 1977, 1978; Terenzini and Pascarella, 1978). Some of this evidence is, however, circumstantial: Chapman and Pascarella, (1983) for example, argue from their multi-institutional study that the colleges with the highest levels of integration are also those who have the lowest level of dropout without directly testing this relationship or offering up an alternative explanation. A major error is the lack of definition of academic integration. Tinto argues that academic integration should be measured on two levels: normative integration (Individual identification with the normative structure of the academic structure) and collective affiliation (the meeting of explicit standards of the institution). He also proposes that academic integration can be measured with regards to academic achievement. Perhaps Tinto's perspective of academic integration has led to its constructural complexity. It is thus not surprising that academic integration has been defined in several ways and that its measurement lacks internal consistency, making accumulation and comparison of research difficult.

The measurement of social integration also has a diverse definitional background (Braxton 2000). However, research into the effects of social integration on subsequent commitment is more promising. Multi-institutional tests and single institution tests provide different magnitudes of support for social integration

affecting the level of subsequent commitment to the college. Two thirds of tests of this construct in single institutions have upheld Tinto's theory of student departure (Allen & Nelson, 1989 (2 tests); Allen, 1986; Cabrera, Castenda, Nora and Hengstler, 1992; Cabrera, Nora and Castenda, 1992; Pascarella and Terenzini, 1983 and Stage, 1988 (2 tests). The multi institutional studies have, however, only reported moderate support for the construct of social integration with six out of the ten tests supporting this influence (Pascarella & Chapman, 1983b (2 tests); Munro, 1981; Braxton, Vesper & Hossler, 1995; Pascarella, Smart and Ethington, 1986 (2 tests). There is little direct information regarding social integration's influence on persistence. Although Fox (1986) found in his study within the USA that academic integration was associated with the persistence of disadvantaged students within a commuting university, social integration had no effect on persistence for this group. Within two-year college students Mulligan and Hennessy (1990) and Halpin (1990) found no association between social integration and persistence. Within their 1991 study at a 2-year college, Bers and Smith (1991) report that academic and social integration differentiate between persisters and non-persisters, however social integration is a better discriminator between those who persist and those who withdraw.

2.11 Peer Mentoring in Line with Tinto's Model

Theoretically, peer mentoring when considered as a general social support strategy could impact on the level of social and academic integration of a student. Indeed Hixenbaugh et al. (2005) in their study of peer mentoring within the UK found that the peer mentored group had significantly higher levels of social

integration. This is, however, the only UK study that has tested the link between peer mentoring and social integration. Jacobi (1991) recommends that researchers should focus on the impact of peer mentoring on retention with social integration as a mediating variable and this approach will be adopted in the current research. Therefore the current research will be focusing on the following section of Tinto's model:

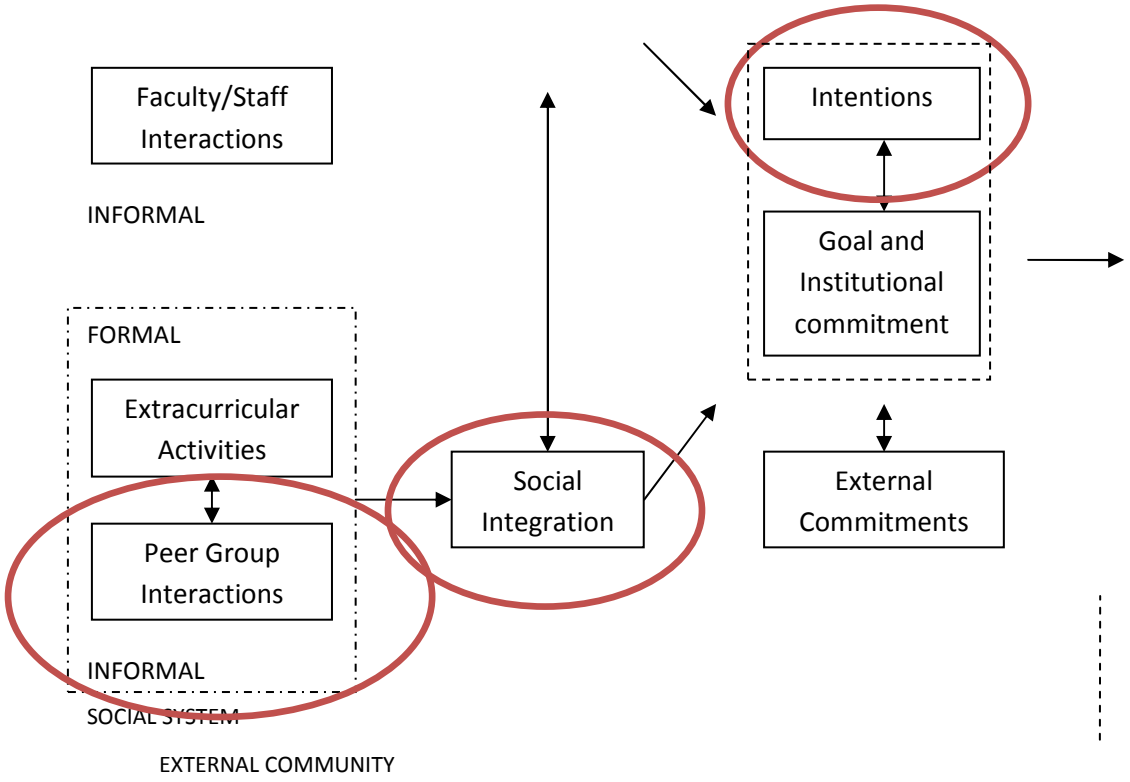


Figure 2.4: Section of Tinto's (1975) model of student departure to be studied within the current thesis.

Where peer group interactions can be defined in this case as peer mentoring and intentions are defined as intention to persist in university. Social integration will be measured using the College Adaptation Questionnaire.

There is substantial overlap between peer mentoring and peer tutoring, but this thesis will not focus on peer mentoring schemes that are by their definition

purely academic in nature. The primary areas of interest focus on the integration and social support areas, which according to Tinto's model and Braxton review of the research are the fundamental areas within the 'departure puzzle' (Braxton 2002)

2.12 Conclusion

Student withdrawal remains a worldwide problem. Within the UK dropout from university costs the tax payer £90 million per year. By far the most frequently endorsed model of university attrition is that of Tinto (1975) which has been substantiated by several American empirical studies, however this model has not been comprehensively tested in a UK population. Integration at the academic and social level are said to be pivotal within the model and have received the greatest support. Jacobi (1991) recommends that when researchers are investigating the effects of peer mentoring on student withdrawal one should consider integration as an explanatory variable.

Chapter 3
The First Year in Higher Education

3.1 Overview

The first year experience in Higher Education has been of increasing interest over the last decade specifically within America and Australia (Barefoot, 2000). American research has identified the first semester as a critical point in withdrawal decision making indicating that over half of dropouts occur during this time (Tinto 1996). Tinto (1995) demonstrated that 75% of university dropouts attributed their decision to leave to problems they encountered during their first year. These findings are largely mirrored within the UK literature (Davies & Elias, 2003; Earwaker, 1992; Rickinson & Rutherford, 1996; Wilcox, Winn & Fyvie-Gauld, 2005; Yorke, 1999). Earwaker (1992) observes that

> "students appear to be especially vulnerable at the start of their courses. Most experienced counsellors and student advisors agree that it is in the first year that students need most support. Some would argue that the first few days are critical" (p. 8)

Davies and Elias (2003) concluded from their study of 1,520 students who withdrew from UK Higher education that 67% did so in their first year of study, whereas only 8% withdrew in the 3rd year or after. McInnes (2001) supports this notion of the vulnerable first year and goes on to add that "although most students are happy most of the time, a sizeable minority actually find themselves in difficulties" (p. 106). This chapter focuses on the transition to university and the possible consequences of unsuccessful adjustment to university life.

3.2 The Transition to University

Chickering and Reisser (1993) argued that adjustment to university occurs at the personal, emotional and academic level. The transition to university can be seen as a positive challenge providing opportunities for personal psychosocial development (Tao, Dong, Pratt, Hunsberger, & Pacer, 2000). Motivation to learn, taking action to meet academic demands, a clear sense of purpose and general satisfaction are all important components of academic adjustment (Baker & Siryk, 1984, 1989). Students may also need to adjust to a new style of learning which many are unprepared for (Smith, 2004). In particular the hour long lecture and note taking which are not requirements at pre-university level of education (Marland, 2003). This unfamiliarity and lack of preparedness for the Higher Education style of learning can lead to early withdrawal from their studies (Ozga & Sukhanandan, 1997; Rickinson & Rutherford, 1995). Alongside more social factors (student identity, social involvement) academic application and the ability to learn independently were significant predictors of transitional success in a sample of 530 Australian students (Huon & Sanky, (2000).

At the personal and emotional level university life requires higher levels of independence, initiative and self regulation (Bryde & Milburn, 1990). For a sizeable majority the move to university could be considered an acute stressor (Gall, Evans, & Bellerose, 2000; Lowe & Cook, 2003). Amongst a sample of 22 students entering a graduate course of studies in the USA Goplerud (1980) found moderate to high levels of stress (as measured on a life events scale) within the first 6 months at university. Fifty seven percent of all the events listed amongst the sample were associated specifically with the transition to university, for example disruptions caused by moving, deadlines for coursework and examination stress. However, this

sample was USA graduate status (equivalent to UK postgraduate) and it is likely that UK undergraduate will experience higher levels of stress, particularly as this may be the first time they will experience such a transition. Gall et al. (2000) in a prospective study using 68 first year students at a Canadian university showed that the greatest level of stress was on entry to university resulting in a larger impact on wellbeing than at the end of the first year. However, Tao et al. (2000) found the opposite: in their sample of 390 first year students from a Chinese university, levels of anxiety and depression increased significantly over the course of the first term. Within the UK Lowe and Cook (2003) reported that from 691 students most appeared to manage the transition to university successfully reporting decreases in personal and academic concerns between entering university and the end of the first year. However, over the course of the first year 20-30% within this study continued to experience academic and personal problems. Questioning 102 first year students at university in Taiwan, Lu (1994) reported that major life events (as measured by the Holmes and Rahe (1967) Social Readjustment Rating Scale) predicted levels of anxiety; whereas daily hassles were significant predictors of depression one month into the course. However, descriptive statistics were not reported therefore it is unknown how depressed or anxious these students were.

Fisher and Hood (1987, 1988) suggest that all of the Scottish students within their research experienced heightened levels of psychological distress and absent mindedness during the transition to university. Their series of studies conclude that 60-70% reported a degree of homesickness (Fisher, Murray & Frazer, 1985; Fisher & Hood, 1987, 1988) and a high proportion of first year undergraduates experience heightened depression and anxiety, alongside a decrease in cognitive functioning during the first few days at university (Fisher & Hood, 1978, 1988).

In a sample consisting of 233 first year undergraduates from France, Bouteyre, Maurel & Bernaud (2007) report that 40% reported clinically significant levels of depressive symptoms as defined and measured by the Beck Depression Inventory with 2.5% scoring 30+ (severe depression). Bouteyre et al. (2007) also report a significant correlation between daily hassles and depression amongst their sample of French students. In a study of over 3000 second year students at ten UK universities, Webb, Ashton and Kelly (1996) report that between 12% and 15% of the students were scoring above the cut off point for depression on the Hospital Anxiety and Depression (HADS) Questionnaire with 17% to 25% of individual scores indicating moderate to severe anxiety. Using a sample of 2229 second year students from two separate cohorts (1998 & 2001) the University of Leicester Student Psychological Health Project (Grant, 2002) reported that 13% of students were reporting feelings depression and 12-14% indicated moderate anxiety. These studies are, however, based on second year students who may exhibit different levels of distress from their first year counterparts. No studies thus far have systematically studied changes in distress over the course of a student's education.

A report by the Royal College of Psychiatrists (RCPsych: 2003) stated that students within Higher Education are at increased risk of mental health problems than age matched controls. The experience of Higher Education is associated with a degree of psychosocial stress including the transition to university, the less structured environment, examinations and coursework and learning to become independent. Although stress in itself is not pathological it is often related to negative health outcomes (Lazarus & Folkman, 1984)

The RCPsych (2003) report also noted that some universities were not meeting the needs of students with regard to mental health issues despite the

increased concern expressed by members of university staff and the students themselves.

3.3 Theoretical Explanations Regarding Transition and Distress

Fisher et al. (1985, 1987, 1988) argued that there are four separate theoretical explanations for distress during any type of change and / or transition. However, little empirical research has been conducted to evaluate the relative importance of each factor and it could be argued that the distress is created by a combination of factors. The four theoretical explanations put forward by Fisher (1989) are briefly described below.

3.3.1 Separation- Anxiety and Loss

The separation- anxiety model is based on research into child- parental attachments. Bowlby (1973) demonstrated that a secure attachment to a parent figure leads to a sense of security and is particularly sought after in times of stress. When separation occurs this creates behaviours of searching, anger and frustration. Weiss (1991) argues that similar attachment behaviours are evident in adults as well (for example within relationships between close friends and marriages etc). However instead of the bond involving the caretaker infant role it now involves peer relationships and thus attachment does not overwhelm other activities as it does with infants. Nevertheless similar behaviour patterns observed amongst infants can arise in adults after the loss of a close relationship (friend / family member). In this sense homesickness can be considered a grief reaction, not only to an individual loss but to the loss of a whole home environment. Besides friends and family, losses may also

include places of emotional significance, a career and or valued possessions. However, leaving home is considered a partial loss because the object lost still exists and thus the individual is able to contact and visit home if they so wish. The relationship between attachment and homesickness is evident in several studies (Brewin, Furnham & Howes, 1989; Hamdi 1974; Porritt & Taylor, 1981). Within Brewin et al.'s (1989) study of 64 psychology students, there was a strong relationship between self-reported dependency on others and homesickness. The authors concluded that anxious attachment was a risk factor for developing homesickness, highlighting the anxiety associated with anticipated separation, as well as the actual separation, as an antecedent to later homesickness.

3.3.2 Interruption of Lifestyle

Adverse effects of transition may be created by an interruption of existing life styles and routines. Although the change may not be permanent it nevertheless represents a break in these routines / lifestyles. Mandler (1990) writes that interruptions are a significant part of any move in that they disrupt a previous predictable routine and situations. Interrupted tasks in laboratory studies have also indicated raised levels of anxiety, distress and fear (Mandler, 1975). Fisher (1984) argues that development of homesickness may follow on from 'old plans' being dominant within the new environment.

3.3.3 Reduced Control

The Theory of Reduced Control places greater emphasis on the new environment rather than the transition itself and was developed from studies on animals and learned helplessness (Weiss, 1968, 1970). Although studies on human participants have been less consistent, Fisher (1984) argued that any change would result in a reduction of personal control leading to the maladaptive behaviours manifested in poor adjustment. Fisher (1984) also argues that old behaviours may be inappropriate in a new environment thus new coping strategies will need to be acquired and learnt. This aspect of change and transition may be relevant for individuals entering Higher Education where an individual will need to adopt their learning styles as well as learn to become more independent as a whole.

3.3.4 Role Change and Self- Consciousness

This conceptualization of transitional stress also focuses on the new environment in that transition creates a change in an individual's perceived role. Any new environment will require an adjustment to new roles and consequent raised levels of anxiety (Fisher, 1997).

The remainder of this literature review will focus on the negative aspects of the transition to university as manifested in homesickness and loneliness before discussing the possible buffering effects of social support in the stress – strain relationship.

3.4 Homesickness

3.4.1 Definitions of Homesickness

Although homesickness is a common experience and everyone will have an intuitive idea of what constitutes homesickness there is very little research into the phenomenon and its effects. On questioning homesick individuals and non-homesick individuals Fisher (1989) found a consensus on the key features that make up homesickness: 1) A preoccupation with family and friends, home and routines, 2) negative attitude towards the new environment and its consequences. Therefore the term homesickness in terms of these key features carries, the same meaning across affected and non-affected populations. Homesickness is characterized by negative emotions, ruminative cognitions about home and somatic symptoms. Vingerhoets (1997) sets three propositions in order to understand the relationship between homesickness and adjustment: 1) homesickness leads to a failure to adjust within a new situation, 2) homesickness is a psychological state which will then prevent and interfere with good adjustment and thus 3) homesickness is more or less synonymous with the failure to adjust. This hypothesis is mostly linked to the theory of reduced control because it concentrates on the new environment.

When asking adults to describe homesickness experiences Thijs (1992: cited in Van Tilburg & Vingerhoets, 1997) found that in many cases there was an emphasis on the emergence of the homesickness feeling after some kind of problem was experienced. Vingerhoets (1997) questions whether this is 'real' homesickness or merely the desire to avoid something unpleasant, identifying a case study which highlights the feeling of homesickness even in pleasant situations (i.e. a family holiday).

3.4.2 Relocation, Adjustment and Homesickness

Van Tilburg (1997) writes that homesickness should be viewed in line with Scherer's (1986) model of emotional processes which involve 4 interrelated aspects: 1) antecedent condition, 2) the person, 3) the reaction and 4) social regulation and control. The antecedent condition involves the transition from the old to the new. Most moves will involve some knowledge regarding the move and thus preparation. Fisher (1989) argues that the difficulty arises in both the separation from the old and the adjustment to the new. Van Tilburg (1997) argues that a major cause of homesickness is the difficulty separating from the old before assimilating into the new. Although separations from attachment figures may not have a direct causal role in the development of homesickness, they may aggravate it. However, geographical distance does not appear to play a role. During a study of hypothetical situations that centred around three variables: distance, duration, and company, participants indicated that the distance from home was the least important factor (Gruijters, 1992: cited in Van Tilburg & Vingerhoets, 1997). Although these were hypothetical vignettes and thus it is difficult to generalise to individuals' actual reactions during separation from home, the lack of importance of geographical distance within homesickness has been supported by Fisher, Frazer and Murray's (1984) research into boarding school children and university students. Fisher, Murray & Frazer (1985) argue that geographical relocations of any kind cause disruption and distress. They go on to highlight the added stressors of distancing oneself from existing social support which is provided by family and friends when one leaves home.

3.4.3 Homesickness amongst University Students

Research indicates that large proportions of students report homesickness but the prevalence of homesickness in the first year undergraduate differs vastly within and between countries. For example Carden and Feicht (1991) report that 19% of American students and 77% of Turkish students attending universities in their own countries were classified as homesick in their cross cultural study (classification was based on a cut off point of 1 standard deviation above the mean rating for the group on a homesickness questionnaire). Another cross cultural study of homesickness amongst Dutch (n = 482) and UK (n = 280) students studying in their respective countries indicated high levels of homesickness in both countries (The Netherlands = 50%, The UK = 80%: Stroebe, van Vliet, Hewstone, & Willis, 2002). Burt (1993) reported that amongst his Australian sample all first year undergraduates had experienced some degree of homesickness. Within the UK Fisher et al. (Fisher, Murray, & Frazer, 1985; Fisher & Hood, 1987, 1988) have conducted a number of studies and report high levels of homesickness. When homesickness is measured dichotomously, 60% of the first years classified themselves as homesick 6 weeks into university (Fisher et al. 1985). Further studies (Fisher et al. 1988) endorsing Likert type scales (0-4) which were later dichotomised (e.g. 0 = not homesick, 1-4 = homesick) indicated that 31% reported being homesick within the first 6 weeks at university. Retrospective accounts of homesickness imply that 71.9% of residential students reported homesickness either on arrival or when measured six weeks in. For 36.6% homesickness had developed since arriving at university but for a further 57.1% who had homesickness on arrival this experience had since diminished (Fisher et al., 1987). Also Fisher et al.'s (1987, 1988) work involved Scottish students who

attend university at a younger age than English/ Welsh students and are thus possibly more vulnerable to psychological distress and homesickness.

In two samples of English students who had left home for the first time measured six weeks into their first semester at university, Brewin et al. (1989) reported similar figures (39%) of homesickness. A further 20% were 'unsure' and could therefore not be classified. Brewin et al. (1989) highlighted the fact that homesickness was, however, a fairly common phenomenon amongst this sample but it was relatively short-lived. However, 5 out of this 64 student sample (7.8%) continued to report feelings of homesickness at the time of the second measurement 6 weeks into term. Fisher et al. (1985) also found that although 60% of their students were labelled as homesick the majority stated that the intensity, frequency and length of homesickness episodes had gradually decreased over the first six weeks at university. These findings support Bergsma's (1963: cited in Van Tilburg & Vingerhoets, 1997) distinction between 'normal' and 'pathological' homesickness. According to Bergsma (1963) homesickness is a normal phenomenon that can become pathological with time if it is not coped with adequately. Although Bergsma (1963) work is based on Freudian theories, which are not adopted by many clinicians in modern day practice, such classifications, if valid, could have major implications for research, theory and intervention regarding homesickness (Van Tilburg, Vingerhoets, & Van Heck, 1996).

3.4.4 Correlates of Homesickness in Students

In a study of 101 first year students assessed three weeks into first semester Fisher et al. (1985) reported homesick individuals differed from their non-homesick

counterparts in that they would like to go home more and they had less control over their decisions to attend university. However, the number of actual visits home did not differ between the non-homesick and the homesick (perhaps due to financial reasons) with approximately one visit only per person in the six weeks at university. Satisfaction with present residence and friendships was also significantly lower for homesick students, who were also expecting more social support from friends to a greater degree than their non-homesick counterparts. However, authors are unsure of the direction of this effect i.e. high expectations lead to dissatisfaction and homesickness or vice versa. The scores on a measure of cognitive function (Cognitive Failures Questionnaire: Broadbent, Cooper, Fitzgerald, & Parker, 1982) which assesses the level of 'mistakes' an individual makes and includes questions such as 'do you find you forget people's names?' were significantly higher amongst those that were homesick, however, self esteem levels were no different between the homesick and non-homesick groups. Within the homesick group 16 (26.7%) reported that the experience of homesickness had adverse effects on their work, citing poor attendance to lectures and lack of concentration as important. In a further study 100 students were followed longitudinally from pre-transition to post transition (6 weeks into university: Fisher & Hood, 1987). It may be that differences in cognitive failures were a vulnerability factor within the individual rather than a reaction to the transition itself. Students were assessed a month before attending university and then again six weeks into university. The self-identified homesick group reported higher levels of absentmindedness and psychological disturbance before even attending university, indicating a possible vulnerability factor. Increases in psychological disturbance and absent mindedness that followed the move occurred in both groups but was greater within the homesick group showing a higher level of post transition

psychological disturbance in terms of anxiety, somatic symptoms and obsessional symptoms. This group were also less adapted to college. Because over 35% of the participants developed homesickness over the course of the first semester it could be argued that they are reacting to novel difficulties.

Fisher and Hood (1987) conclude that "homesickness is a complex cognitive-motivational- emotional state with symptoms similar to depression and which focuses on yearning and grief for family, friends, security and familiarity of home" (p. 432) and that the obsessive thoughts and high levels of focus on the 'old' environment may inhibit and interfere with exploration and the adaptation to the new environment.

Within this thesis homesickness is an indicator of poor adjustment and measured alongside depression, anxiety, and loneliness under the heading of 'wellbeing'. Homesickness will also be measured in order to assess the relationship between poor adjustment and perceived need for a mentor.

3.5 Loneliness

3.5.1 An introduction

Loneliness is not a modern concept yet research into the phenomenon of loneliness only began in the 1980s. Such prevalence studies of loneliness may not be valid when applied to today's population. No recent survey into loneliness has been conducted on a British population. Loneliness is an unpleasant experience and has been linked with physical and psychological distress and life threatening consequences such as alcoholism and suicide. Loneliness reflects a breakdown in social interactions and relationships.

Loneliness has been associated with clinicians' ratings of mental status and adjustment (Berg, Mellstrom, Persson, & Svanborg, 1981) and thus there is a negative relationship between general adjustment, life satisfaction, overall happiness and loneliness. Within this thesis loneliness is used as an indicator of poor adjustment.

3.5.2 Definitions of Loneliness

According to Peplau and Perlman (1982) the public have no difficulty in defining loneliness and when asked lay people can explicitly state whether or not they currently feel lonely. There are several more formal definitions within the literature (see Peplau and Perlman for a full list of these) but the varying theoretical orientations also reflect biases within the definitions. Differences in definition, however, all appear to revolve around a social deficiency experienced by the lonely individual. Thus loneliness is defined as an aversive state experienced when one's perceived social and interpersonal relationships are discrepant from those one wishes to have (Peplau & Perlman, 1982) At the heart of this definition is the fact that loneliness is an emotionally unpleasant experience but it also highlights the perceptual cognitive element of loneliness. A lonely individual's social network is often no smaller than a non-lonely individual (Fischer & Phillips, 1982; Jones, 1982; Parker & Seal, 1996) and indeed lonely individuals often do not spend more time alone than others (Hawkley, Burleson, Bernstson & Cacioppo, 2003). Loneliness is therefore the belief that one's social and personal relationships are some way inadequate (Heinrich & Gullone, 2006).

Within college students, Cutrona (1982) and Jones (1981) report that it is the subjective rating of satisfaction with social relationships that are the greater predictors of experienced loneliness over and above the frequency of contact. Indeed Wheeler, Reis, and Nezlek (1983) found that the amount of social contact and loneliness are independent of one another. Jones (1981) argues that the number of social relationships does not capture the type of social relationships an individual has. Lonely individuals engage in more interactions with strangers and acquaintances and less so with intimates in comparison to their non lonely counterparts. The types of relationships lonely people engage in are less likely to satisfy needs of belonging. Despite the multitude of definitions there appears to be a consensus on three issues. 1) Loneliness is seen as resulting from some deficiencies in an individual's relationships, 2) is a subjective experience and is thus not synonymous with the objective experience of being alone and 3) is unpleasant and distressing (Peplau & Perlman, 1982; Jones and Carver, 1991).

3.5.3 Demographic Correlates of Loneliness

With respect to gender differences in loneliness there appear to be a number of inconsistent findings. Loneliness is experienced by both males and females but according to a comprehensive review of the adult literature, females are more likely to admit to being lonely (Borys & Perlman, 1985). Studies that use self rating measures of loneliness such as those requiring people to respond to a statement such as 'I am a lonely person' are the ones that tend to report a greater degree of loneliness in females, whereas studies that use scales that do not include the word lonely or ask them explicitly to label themselves as lonely find no differences

between males and females. Therefore any reported differences in gender found in loneliness research could be an artefact of the measurement used to assess loneliness.

Looking at the childhood and adolescent literature, Koenig and Abrams (1999) found no apparent gender differences in childhood loneliness but argued that some differences may emerge during adolescence. Gender differences were not consistent across studies with only 50% reporting significant findings. Within both the adolescent and adult literature, however, where differences were found they appeared to indicate that males were lonelier than females (Borys & Perlman, 1985; Koenig & Abrams, 1999). A relationship between age and loneliness is also evident: research has indicated that loneliness decreases with age and that it occurs more frequently within the early developmental years in comparison to old age. For example when focusing on individuals who are 65 and over the prevalence of loneliness amongst 999 UK participants measured on a self rating loneliness scale was 7%: this figure is unchanged within the last 5 decades (Victor, Scambler, Bowling & Bond, 2005). In a large scale study Parlee (1979) found that 79% of under 18 year olds reported feeling lonely 'sometimes' or 'often' as opposed to 37% of those aged 55 years and older. Indeed loneliness was considered a problem within the past year for 66% of high school students in a survey conducted by Culp, Clyman & Culp (1995). However, while over 50% of adolescents and young adults are experiencing recurrent feelings of loneliness, it remains persistent and painful in 10-20% of these cases (Brennan, 1982)

3.5.4 The Importance of Loneliness for Mental Health

Although some authors argue that loneliness is a normative experience, especially during adolescence, it has the potential to become pathological (Asher & Paquette, 2003) The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR: 1994) states that "relationship problems sometimes warrant the focus of clinical attention because they may cause clinically significant distress and or complicate the treatment of, or intensity of mental disorders/ general medical conditions" (Heinrich & Gullone, 2006 p. 695) Authors over the last 50 years have asserted the importance of loneliness in psychosocial problems, mental health and physical wellbeing (e.g. Fromm-Reichmann, 1959; Heinreich & Gullone, 2006). Loneliness has been related to shyness, neuroticism, social withdrawal, extracurricular and religious participation (Hojat, 1980, 1983; Horowitz, French & Anderson, 1982; Russell, Peplau, & Cutrona, 1980). Loneliness has also been associated with depression in adolescents and adults (Weeks, Michela, Peplau, & Begg, 1980), anxiety (specifically social anxiety) (Jones, Rose, & Russell, 1990), schizophrenia (Gerstein, Bates, & Reindel, 1989) and low self esteem (Brage, & Meredith, 1994). The DSM-IV-TR (1994) also notes that loneliness is an associated feature of avoidant personality disorder and borderline personality disorder (Henreich & Gullone, 2006). Overholser (1992) found loneliness was also associated with dependent personality style. However causality is difficult to argue from the research; does loneliness cause depression or depression lead to loneliness?

Several studies have found that loneliness may play a causal role in the development of depression. In a study of college students by Rich and Scovel, (1987) it was found that loneliness reports at the start of semester predicted depression later on in the semester. After controlling for initial symptoms, loneliness in adolescence

was shown to predict depressive symptomology two and a half years later (Koenig & Abrams, 1999). Furthermore loneliness has been indicated in suicidal ideation, parasuicide and suicide completion (Stravynski & Boyer, 2001) with numerous studies supporting these associations in high school and college students (e.g. Garnesfski, Diekstra & de Heus, 1992; Rich, Kirkpatrick-Smith, Bonner & Jans, 1992; Roberts, Roberts & Chen, 1998; Rossow & Wichstroem, 1994; Weber, Metha, & Nelson, 1997; Yang & Clum, 1994). Low self esteem is one of the most prominent cognitive factors of loneliness, but while longitudinal investigations (e.g. Cutrona, 1982) have suggested that low self esteem plays a causal role in the development of loneliness it is likely that the relationship between the two factors is more reciprocal (Peplau, Miceli, Morasch, 1982) and thus a vicious cycle develops wherein low self esteem and loneliness reinforce one another.

3.5.5 The Importance of Loneliness in University

Cutrona (1982) in her study of 354 university students in the USA found that three quarters of them had experienced at least occasional loneliness within the first two weeks of their academic career. Over 40% of these reported that their loneliness was moderate to severe in intensity. After classes began in week two of the semester (test point 1) the mean score on the UCLA loneliness scale was 40.2 (with a range of 20-80). By time point 2 (7 weeks into the first semester) scores had dropped significantly to 38.0 and by 7 months this score had dropped significantly to a mean score of 34.0. One hundred and sixty two students were followed throughout the year and by the end of the spring term only 25% continued to report experiencing loneliness in the previous two weeks. Cutrona (1982) argues that this indicates a

great resilience in university students and a successful social adjustment to their new situation. However, no statistics are offered on attrition rates from the study nor possible differences between individuals who dropped out of the study in comparison to those who remained. Loneliness has been linked to persistence in education (Nicpon, Husser, Blanks, Sollenberger, Befort, & Kupius, 2007), and it may be that lonely individuals had dropped out. In a study of 236 psychology students two weeks into the first semester of an American university mean scores on the UCLA loneliness scale were 36.04 (Hoglund & Collison, 1989). A mean of 35.65 on the UCLA was reported by Hamid (1989) and 36.2 by Hecht & Baum (1984) both within the USA, but there is no indication in these papers of when this measurement was taken. Cutrona's (1982) study shows loneliness decreases as time at university increases. She argues that it is the move away from home and change in social relationships which leads to the temporary experience of loneliness by many students within the first weeks at university.

According to Horowitz, French and Anderson (1982) everyone's experience if loneliness is unique and thus being lonely will not be the same for everyone. In order to conclude that 'I feel lonely' one needs to sum up a constellation of thoughts and feelings, thus according to Horowitz et al. (1982) loneliness is an abstract summary of a cluster of specific feelings, thoughts and behaviours. Loneliness is associated with both psychological and physical ill health and thus it follows that the alleviation of loneliness will ease psychological and social distress.

3.6 Social Support:

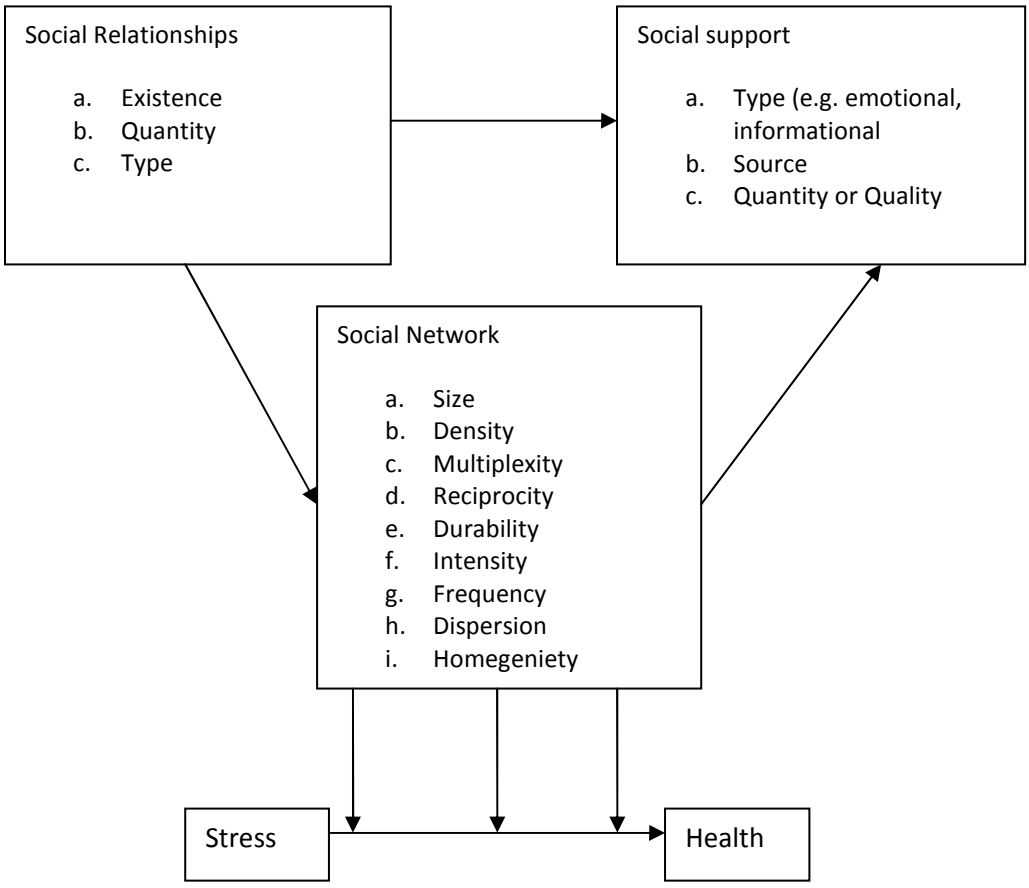
3.6.1 An Introduction

Peer mentoring could be conceived as another source of social support. Many of the functions of mentoring are closely linked to types of support and several definitions of mentoring include the concept of support within them (see Table 1.1). Social support is an umbrella term that contains a diverse number of phenomena (Sarason, Pierce, & Sarason, 1990). There is wide agreement amongst theorists that social support is a multidimensional concept (Cobb, 1976, 1979; Cohen & McKay, 1984; House, 1981; Schefer, Coyne, & Lazarus, 1981; Thoits, 1982; Weiss, 1974). The social support literature is disadvantaged by the lack of an agreed definition. The concept of social support has also been operationalized in a number of different ways and several multidimensional models of social support have been proposed – although there seems to be a convergence on a common set of dimensions. The term 'social support' is often used interchangeably to represent existence, structure and behavioural functions of social relationships (House, 1987).

The 'social support' literature has a greater focus on the functional aspects of relationships; compared with 'social network' which studies the connections between people who may (or may not) provide social support but also have additional functions other than social support. Social networks can be defined in terms of dyadic ties: the characteristic between the focal individual and another person in the network, or in terms of the characteristics of the network as a whole (House, Umberson, & Landis, 1988; Israel, 1982). A final idiom: 'social integration' or its inverse 'isolation' characterizes the existence or quantity of social ties (House, Umberson, and Landis, 1988); and is considered a positive influence in Higher

Education retention (Astin, 1977; Tinto, 1975). Distinctions between the differing concepts of social support impact on empirical findings. Social integration or the mere existence of social support has greater benefits for physical and mental health regardless of the presence of stress. Conversely perceived availability of social support has been shown to buffer the effects of stress but rarely have additive or main effects on wellbeing (Cohen and Wills, 1985). If a peer mentor can be conceptualised as an additional social support they may have direct effects (by merely being part of an individual's network) as well as moderating effects (by supporting that individual) on a student's wellbeing. A model for studying social relationships, networks and support in relation to each other and to stress and health can be found in Figure 3.1

A further distinction is the dichotomy between perceptions of general (network) support and specific (individual) support and the expectations individuals may have of these. For example some individuals expect others to offer support (Sarason, Pierce & Sarason, 1990) whereas others may believe that people's supportive behaviours will be unlikely to meet their needs and thus don't expect to be offered support (Sarason, Sarason & Pierce, 1990) Research by Pierce, Sarason and Sarason (1992) has indicated that expectations of specific and general social support both contribute in a unique way to measures of adjustment and loneliness. However, their later study (Pierce, Sarason, & Sarason, 1992) found that general support expectations did not have any impact.



Source: House and Kahn, 1985.

Figure 3.1: Model for studying social relationships, networks and support in relation to each other and to stress and health.

Several researchers have tried to classify various types of social support (Cohen & McKay, 1984; Cutrona & Russell, 1990; House & Kahn, 1985; Schaefer, Coyne, & Lazarus, 1981; Wills, 1984) and have proposed a number of multidimensional models (Cobb, 1979; Cohen, Merlmelstein, Kamarck, & Hoberman, 1985; Kahn, 1979; Schaefer, Coyne, & Lazarus, 1981; Weiss, 1974), although the different dimensions within these models appear to converge onto a common set of components. The consensus among these classifications suggests five general areas of social support which can be found in Table 3.1

Table 3.1 Five areas of support and their definitions

Area	Definition
Emotional Support	Expression of care, empathy and concern
Esteem Support	Positive regard and expression
Tangible Support	Direct assistance
Informational Support	Feedback
Network Support	Feeling of membership

Empirical support for parallels between the differing models was provided in a study by Rose (1986: cited in Sarason, Sarason, & Pierce, 1990). Most measures of social support are based upon the multidimensional models and focus on the components of a person's subjective judgement regarding quality of social support available to them.

3.6.2 Social Support and Stress

Social support has often been linked with stress, (Cutrona & Russell, 1990). The perception of stress arises from a situation where an individual appraises that the demands outweigh their personal resources (Lazarus & Folkman, 1984) therefore social support could be viewed as a resource or coping strategy (Greenglass, 1993). A large body of literature highlights the protective factors of social support in a number of dependent variables including health, psychological well being and adjustment (Cohen, 1988; Cohen & Wills, 1985; Coyne & DeLongis, 1986; House, Landis, & Umberson, 1988; Reifman, 1995; Sarason, Sarason, & Pierce, 1990). Several prospective studies have also shown that social support is related to

mortality: for example the 9 and 12 year follow up studies of community samples by Berkman & Syme (1979) and House, Robbins & Metzner (1982). Within these studies the mortality rate from all causes was higher amongst individuals with low levels of social support. A positive relationship between social support and mental health outcomes is also evident (Aneshensel & Frerichs, 1982; Billings & Moos, 1982; Holahan, Moos, Holohan, & Brennan, 1997; Turner, 1981).

Perceived social support; a person's perception of being valued, loved and esteemed by others appears to have stronger associations with outcome variables than enacted support (Dunkel-Schetter & Bennett, 1990; Pierce, Sarason, & Sarason, 1992; Sarason, Pierce, & Sarason, 1990; Sarason, Shearin, Pierce, & Sarason, 1987; Wethington & Kessler, 1986). Adopting a cross sectional research design with a large sample (n = 1269) of married individuals aged 21 to 65, Wethington and Kessler (1986) report that perceived support is more important in predicting adjustment. However, the influence of received support in the adjustment to life events was mediated by perceived support. This study does not, however, consider personality and the measures of social support were not pre-validated and reliable multidimensional measures and thus may be considered imprecise.

In 1976 both Cassell and Cobb stated that strong social ties will have a protective factor against potentially stressful events. Cassell (1976) believed that events characterised as stressful often involved a lack of social feedback from the surrounding environment. In contrast a strong social network often mitigated or precluded the impact stressors may have on an individual. Similarly Cobb (1976) argued that life transitions and other critical stressors placed an individual at risk of developing physical and psychological illness. He concluded that social networks or the perception of support facilitated coping and adaptation.

Two main models have emerged as explanations of the protective role of social support in the stress-strain relationship: the main effects model and the buffering hypothesis (for a fuller explanation and description of these two models please refer to Alloway & Bebbington, 1987; Cohen and Wills, 1985; Schwarzer & Leppin, 1989).

The main effects model proposes that social support can have a direct influence on an individual's wellbeing and thus a beneficial effect irrespective of whether or not that individual is under stress. The mechanisms for this are believed to be the influential effects of an individual's social networks. An individual's social network may, for example, influence normative health behaviours such as diet and exercise. It has also been proposed that integration within a social network provides a source of generalised positive affect; stability and predictability; and recognition of self worth (Thoits, 1983; Wills, 1985). Particularly pertinent within a university setting Cohen, Underwood, & Gottlieb (2000) argue that having a wide range of social networks increases an individual's knowledge base thereby increasing the probability of having access to the appropriate information sources which could minimise stress.

The buffering hypothesis argues that social support will only be beneficial during stressful situations (Cohen & Wills, 1985). Pierce, Sarason, & Sarason, (1992) argue that the buffering hypothesis gives the false assumption that stressful situations can be dichotomized when it is likely that variations will be evident even amongst highly stressful situations. The benefits of social support may apply at several points in the causal chain that links stress to ill health (Cohen & Mckay, 1984). Primarily social support may bolster an individual's ability to cope with a stressful situation thus they are less likely to appraise it as stressful in the first place

(Thoits, 1986). Secondly the availability of support may reduce or eliminate the affective response to a stressful event.

3.6.3 The Protective Role of Social Support amongst Student Samples.

In order to assess the direct and moderating effects of social support amongst students in particular a review of the literature (using search engines PsychINFO and ERIC using key words: Social support + Students (college); social support + students + depression; social support + students + anxiety; social support + students + loneliness; social support + students + homesickness; social support + students + adjustment with a focus on the years 1980- 2008 was conducted. The focus of the reviewed articles was on assessing the effects social support has on general wellbeing, physical health and mental health either within the stress – strain relationship or as a direct correlation between social support and outcome variables. Given this the following exclusion criteria were applied: dissertation abstracts; publications not written in English; a focus on ethnic minority groups or international students (non-traditional students such as mature students were included due to the increase in focus on widening participation in the UK); Studies on Graduate students; articles where social support was the dependent variable (i.e. predicting individuals who perceive greater social support); articles on social support interventions.

Included within this review were 23 articles. 17 studies have looked specifically at the first year in Higher Education (undergraduate level), of the others no particular year was specified. Eleven of the 17 first year studies were also longitudinal in nature ranging from 4 weeks to 1 year with all time point 1 questionnaires occurring at the beginning of the first semester. Thirteen of the 23

studies (52%) used reliable and pre-validated measures of social support: notably 38% (5) utilized the ISEL. A review of these studies can be found in Table 3.2.

Table 3.2: Review of empirical studies of direct and moderating effects of social support amongst student samples.

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Bouteyre et al. (2007)	France	233 undergraduates (first year)	Cross sectional Correlational		Direct effects: social support was negatively associated with depression Moderating effects not tested.
Crockett et al. (2007)	USA	148 Mexican American College students Mixed years	Cross sectional Start: not indicated	Parent and peer support scales completed from the Network of Relationships Inventory – enacted social support.	Peer support was directly related to anxiety Parental support buffered the effects of high acculturative stress on anxiety and depression. Peer support moderated the relationship between stress and anxiety.
Friendlander (2007)	Canada	115 undergraduates (first year)	Longitudinal (Fall – spring semester) Correlational Start: beginning of 1st semester	Multidimensionsal scale of perceived social support-perceived availability of friends	Increased social support related to positive adjustment Changes in support from friends and not family was a greater predictor of adjustment Higher levels of social support, better self esteem and lower levels of stress related to better adjustment.
Quimby et al. (2006)	USA	209 (70% return rate) non traditional female undergraduates with children No specific year	Cross sectional Start: not indicated	Social Provisions scale-perceived availability of social support (multidimensional measure)	Direct effects: social support contributed to the prediction of psychological distress, self esteem and life satisfaction in the correct directions. Buffering hypothesis not tested.

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Williams et al. (2006)	USA	272 undergraduates (First year)	Cross sectional Correlational Start: not indicated	Quality of relationships inventory (QRI) – relationship quality and properties Social Connectedness Scale	Social support and social connectedness were directly related to psychological health. Social connectedness was the central factor in predicting self esteem and depression. Associations between social support and psychological health were mainly indirect and mediated by social connectedness.
Hale et al. (2005)	USA	247 undergraduates Mixed years	Cross sectional correlational Start: not indicated	Interpersonal Support Evaluation List (college version) – perceived availability of support (multidimensional measure) Miller Social Intimacy Scale-intimacy frequency and intensity	For women only – higher levels of belonging predicted better health perceptions. Tangible support, disclosure and social intimacy were not significant predictors. For men only – higher levels of belonging predicted fewer physical symptoms. Tangible support, disclosure and social intimacy were not significant predictors. Buffering hypothesis not tested
Carney-Crompton et al. (2002)	Canada	63 3rd / 4th year female students	Cross sectional Cohort comparison (traditional v non traditional students) Start: not indicated	Measure developed for the study assessing perceived satisfaction and quantity of emotional and instrumental support.	Significant direct effects of perceived emotional support on levels of anxiety and depression in traditional students only. Buffering hypothesis not tested
Pengilly et al. (2000)	USA	105 undergraduates (first year)	Cross sectional Correlational Start: not stated	Social Support questionnaire (short form) – perceived quality of social support	Direct effects: social support was negatively related to depression Moderating effects: significant stress x support interactions supports the buffering hypothesis of social support.

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Tao et al. (2000)	China	390 undergraduates (first year)	Longitudinal (one semester) Correlational Start: Beginning of 1st semester	Levels of social support Different sources of social support	Support was positively related to adjustment and coping skills Support related to adjustment directly and indirectly via coping styles. Overall levels of social support did not change significantly over time but support from different sources showed distinctive patterns of change.
Halamandaris et al. (1999)	UK	183 Undergraduates First year students	Cross sectional Start: End of first academic year	Interpersonal Support Evaluation List – perceived availability of social support resources (multidimensional measure)	Perceived social support negatively related to loneliness Perceived social support significantly predicted adjustment to university Buffering hypothesis not tested
Newland et al. (1999)	UK	123 undergraduates (first year)	Longitudinal across first semester Start: Beginning of first semester	Interpersonal Support Evaluation List (college version) – perceived availability of support Social support questionnaire – number of people perceived to provide social support and satisfaction Inventory of socially supportive behaviours – enacted support	Direct effects: perceived support significantly related to homesickness. Low levels of perceived social support and high levels of psychological disturbance predicted homesickness: ISEL accounted for 28% of the variance in homesickness. Enacted support was not included in the model

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Newby – Fraser et al. (1998)	South Africa)	247 (95% of possible cohort) undergraduates (first year)	Cross sectional Correlational Start: not specified	UCLA Loneliness measure – scored in reverse and based on close conceptual similarity of social support to its opposite loneliness	Direct effects: Loneliness significantly predicted psychosomatic symptoms and physical symptoms. Social support (loneliness) mediated the relationship between stress and symptoms & academic performance.
Diedricks (1995)	South Africa	77 undergraduates (first year)	Longitudinal (semester 1) Beginning of the first semester	Inventory of Socially Supportive Behaviours-received social support Social Support Questionnaire – number of social supports and satisfaction.	Direct effects: Positive relationships between social support measures and psychological distress Moderating effects: none found – buffering hypothesis not supported
Demakis et al. (1994)	USA	64 undergraduates (First year)	Longitudinal (Beginning and end of first semester) Correlational Start: beginning of 1st semester	Social Support Questionnaire-perceived availability and network	Direct effects: satisfaction with supportive network associated with increased levels of satisfaction with life and lower levels of negative affect. No significant main effects for either social support measure on physical health. No significant interaction effects thus buffering hypothesis not supported.
Riggio et al. (1993)	USA	136 undergraduates (Mixed years)	Cross sectional Start: not specified	Social support scale adapted from the Dimensions of Social support Scale: Network measure and amount of support provided	Direct effects: social support related to loneliness and life satisfaction

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Reifman, et al. (1990)	USA	161 (49% response rate) mixed years	Telephone survey Cross sectional Start: not indicated	4 single item support measures: social group membership; close friends on campus; spending time with campus peers; romantic relationships	Frequency of participating with other peers on campus negatively associated with depression and positively associated with health and fitness. Social group membership, close friends, and relationship did not yield consistent main effect results. Buffering effect was not established
Perl & Trickett (1988)	USA	92 (80% of sample contacted) Undergraduates (first year: residential only)	Longitudinal (12 weeks) correlational start: beginning of semester 1.	Social network instrument developed for the study	Sample bias checked Direct effects: Negative relationship between network satisfaction and utilization of campus facilities at a future date.
Cohen et al. (1986)	USA	609 undergraduates (first year) 188 in FU	Longitudinal (22 weeks) Start: Beginning of first semester	Interpersonal Support Evaluation List (college version) – perceived availability of support Number of close friends	Buffering effects: perceived social support (particularly belonging, self esteem, and appraisal but not tangible) moderated the relationship between stress and depression. Buffering effects remained once social competency; social anxiety; and social skills were controlled for. Social support is not stable over time- does not report the pattern or changes in number for close friendships.

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Compas (1986)	USA	64 undergraduates (first year) (26% of initial sample)	Longitudinal (3 waves; 6 months) Correlational Start beginning of semester 1	Social Support Questionnaire	Comparative statistics available. Life events, social support and psychological symptoms reciprocally related rather than linearly. All related across time and nature of these relationships changes during a major transition. Direct effects – met Moderation not tested.
Hays et al. (1986)	USA	89 undergraduates (first year)	Longitudinal (12 week) Start: Beginning of first semester	Social network	Residential versus commuters not sig different on social network. Residential contained a greater degree of new acquaintances and university friendships. But commuters higher on intimacy. Differences in functional components of the network depending on individuals gender, living arrangement and the temporal stage of the network Network characteristics were associated with adaptation: number of new acquaintances and fellow students were mostly strongly related to college adaptation Direct effects: number of friends in network associated with fewer psychological symptoms

Author (year)	Country	Participants	Study Design	Measurement of support	Results
Shaver et al. (1985)	USA	166 Undergraduates (first year)	Longitudinal (1 year) Correlational Start: Beginning of 1st semester	Network: Number of old/ new friends and satisfaction with friendships	Number and satisfaction of old friends decreases whereas new friends increases in number and satisfaction. Disruption to social support lasted longer than the first academic period. Loneliness changes mirrored changes in social support network and satisfaction. Amount of contact with old relationships and satisfaction with contact did not correlate with adjustment.
Cohen et al. (1983)	USA	57 undergraduates (Fist year)	Longitudinal (4 weeks) Correlational Start: First semester at university	Interpersonal Support Evaluation List (college version) – perceived availability of support Inventory of socially supportive behaviours – received support (multidimensional measure)	Direct effects: perceived social support related to depression. received social support related to physical symptoms Moderating effects: Perceived social support (particularly self esteem and appraisal support not belonging or tangible) moderated the relationship between stressful life events and depression and physical symptomology. Depression data supports the buffering hypothesis but Physical symptomology only partially supports buffering hypothesis. Received social support did not moderate the relationship between stress and strain

Most of the 23 studies only provided enough information to assess direct effects however eight also measured moderation and one study evaluated mediation. Looking at mixed year studies (i.e. not specifically first year) strong support has been indicated for the positive effects of social support on depression (Carney-Crompton et al., 2002; Reifman & Dunkel-Schetter, 1990), anxiety (Carney –Crompton et al. 2002; Crockett et al., 2002), self esteem (Quimby, 2006), loneliness (Riggio, Watring, & Throckmorton, 1993), life satisfaction (Quimby, 2006; Riggio et al., 1993) and physical symptoms/ health perceptions (Hale, Hannum, & Espelage, 2005). The beneficial effects measured directly are also evident amongst studies of first year undergraduates within multiple countries. In addition social support was indicated as advantageous for adaptation to university (Friedlander, Reid, Shupak & Crabbie, 2007; Tao et al., 2000) and network satisfaction was shown to be negatively related to the utilization of campus facilities in the future (Perl & Trickett, 1988). All 25 studies highlighted the benefits of high social support whether measured as a network (Carney-Crompton et al., 2002; Crockett, Iturbide, Torres Stone, McGinley, Raffaelli, & Carlo, 2007; Demakis & McAdam, 1994; Hays & Oxley, 1986; Riggio et al., 1993; Shaver, Furnham, & Buhrmester; 1985), supportive behaviours enacted/ received (Diedrick, 1995; Newland & Furnham, 1999; Tao et al., 2000) simple social contacts (Reifman et al., 1990) or relationship quality (Williams & Galliher 2006).

Testing the buffering hypothesis has produced a more mixed set of results with 5 yielding supportive results and 3 finding null effects. There does not appear to be any clear pattern to this inconsistency. The same proportion of studies supporting and not supporting the buffering hypothesis were longitudinal, used multidimensional pre validated measures of social support and had larger sample sizes. However, most of the studies supporting the buffering hypothesis focused on

perceived social support measured by either the ISEL (2) or SSQ (1) or social contacts with peers (1). Whereas the 3 studies that found no significant interactive effects measured different areas of social support: enacted support (Diedricks, 1995); network dimensions (Demakis, 1994). The third study (Reifman et al., 1993) indicating null effects measured social support with 4 Likert type questions covering a wide range of social support (e.g. number of close friends, social group membership). The literature indicated that perceived social support is more likely to elicit buffering effects (i.e. becomes beneficial only when individuals were under stress) whereas enacted support/ general support networks have their most positive effects when measured directly (Cohen & Wills, 1985). The research using student populations has supported this notion. Cassel (1976) argues that reports of main effects of perceived social support may be a result of the use of poor or inadequate measures. It is possible that in these cases support is acting as a buffer yet this could not be shown from the methodology or statistics employed. Notably, also, many of these studies lacked information regarding sampling methods, return rates, and comparative data with individuals not participating in the study.

3.7 The Importance of Social Integration in Higher Education.

Social integration describes the structure, size and density of an individual's social relationships (Schwarzer & Leppin, 1991). Although sometimes enmeshed with the close concept of social support (Weiss, 1969, 1974) House & Kahn (1985) believe the two should be distinguished where social integration focuses on structural aspects and social support is defined by the functional aspects (perceived or actual support).

Chickering (1969) argued that the transition to university was not only challenging academically but also involved a complex social aspect, experiencing the disruption and changes in previous pre-university social networks. It is the social integration aspect of Tinto's model of withdrawal that has received the greatest support within the literature (Braxton, 2002) and has also been proposed as a possible model for the benefits of mentoring within Higher Education (Jacobi, 1991). Although many of Chickering's concepts of change and adaptability remain, the current student experience is vastly different to that in the 1960s. The greater number of mature students, part time students and students remaining at home alters the experience of the first year student. There are shared notions of a student's identity – what it is like to be a student, how a student should behave and part of the transition to Higher Education involves adjusting to some extent into these roles (Earwaker, 1992). Although many more students are now living at home and maintaining responsibilities within their 'old' community, becoming a student requires an integration of the old and the new and some authors argue that the competing demands makes adjustment to university harder (Earwaker 1992, Tinto 1996; Wilcox et al. 2005). Astin (1977) noted that individuals who live off campus are less integrated into the institution, socially and academically and that these individuals are more likely to withdraw as they begin to feel more isolated from the system, however, these individuals may have an advantage over their residential counterparts. Not only can a secure social network be a moral and social support they also provide one with an identity which can help sustain individuals throughout minor crises (Thomas, 2002; Wilcox et al. 2005).

In a comparative study of residential students versus commuter students within the USA Hays et al. (1986) concluded no significant differences between the

two on general social networks but distinctive and changing patterns within each sub sample. In particular residential students reported a greater number of new acquaintances and university friendships which increased over time whereas 'commuters' were consistently higher on levels of intimacy with partners and 'home' friends. These network characteristics were associated with adaptation where the number of new acquaintances and fellow student friendships was strongly related to college adjustment. In support of this Crissman Ishler (2004) report that the individuals in their qualitative study who sought support from university friendships showed better adjustment. Also a greater number of new friends in an individual's social network was related to smoother transition to the university. Extrapolating from this research, commuting students appear less adapted to university, which supports Tinto's (1993) findings on university integration and withdrawal, and highlights the importance of social support within the university environment.

3.8 Social Transition and University

During a lifetime an individual will undergo many transitions and changes and some of these may result in adverse effects on psychological and physical health. In his model of student withdrawal, Tinto (1996) cites the work of anthropologist Van Gennep and his theory of rites of passage. In order to fully integrate into the new environment (i.e. university life) one needs to completely segregate from the past environment. The competing demands of the 'old' and 'new' are likely to result in tension which may lead to a poorer adjustment (Wilcox et al. 2005). Although some authors argue that past social support networks provide a valuable and additional role in adjustment (Thomas, 2002) it is inevitable that social networks will change and

some students will, as a result, feel very isolated and alone within the new situation. Wilcox et al. (2005) report that, amongst their UK sample, the students who failed to develop friendships at university or who continue to spend much of their time with former friendships/ relationships were more likely to be homesick. Mackie (2001) also found that frequent visits home led to social isolation at university. Tao et al. (2000) report that overall levels of social support did not change over the course of the first semester at university, however, support from different sources showed distinctive patterns of change. Parental support remained stable over the course of the study but university teacher support decreased significantly from week 1 to week 16 as did sibling support. However, peer support showed an increase over these time points. Tao et al. (2000) concluded that support from different sources plays different roles in the transition to university although this was never assessed directly. In a longitudinal study of 166 undergraduate students in America followed over the whole first year in Higher Education, Shaver et al. (1985) reported that the number and satisfaction with 'old' friends decreases, whereas 'new ' friendships increase in number and satisfaction. It was also found that disruption lasted longer than anticipated with Shaver et al. (1985) still reporting evidence of disruption by the end of the first year. Levels of loneliness amongst their student sample directly mirrored changes in social networks and satisfaction. However, negating past research the amount of contact with old relationships and satisfaction with that contact did not affect transition and adaptation as predicted.

Earwaker (1992) argues that "it takes time to establish ones own networks of support, and many new students are literally (or feel themselves to be effectively) cut off from previous sources of help" p. 8. Thus students feel an urgent need to belong, to identify with others feeling the same, and negotiate new friendships and identities

during the transitional phase of university (Wilcox et al., 2005). Kantanis (2000) argues that a student's isolation can be exacerbated by a lack of contact with fellow students and academic staff and those students will often overlook the fact that others will share their anxieties. The transition to university is, however, not a uniform concept, for some individuals moving away to attend university may be a welcome escape and bid for freedom and independence. An individual's reaction to change and transition may largely depend on that individual's personality and life experience. What may be a negative change and challenge for one individual may be a positive experience for someone else.

For Kantanis (2000) it is the social transition and the development of a social network which underpins the successful transition to first year of Higher Education "without friends, students have fewer resources at their disposal to assist them in the process of transition to university" (p. 103). Tao et al. (2000) reported that amongst their sample of 390 first year undergraduates in China, social support was related in a positive way to both adjustment to university and coping. In a more recent study of social transition (measured using a multidimensional scale of perceived social support) Friedlander et al. (2007) reported that changes in social support from friends, but not family, was a greater predictor of university adjustment amongst a sample of 115 first year undergraduates in Canada. Friedlander et al. also reported that higher levels of social support, better self esteem and lower levels of stress related to better adjustment. Katanis (2000) argues that one of the most common expectations regarding starting university was the prospect of meeting new and different people and that the social aspects of attending university dominated people's expectations rather than academic aspects. However, within Katanis's (2000) study nearly 70% indicated that half their expectations had not been met. Top

of the list regarding factors affecting their experience of coming to university was that making friends was proving difficult and almost half of the sample had not experienced success in establishing friendship groups by the end of semester 1. It was this development (or lack) of a friendship group which featured as a critical factor within students adjustment to university. Mackie (2001) found that leaving in the early part of the course frequently resulted from a failure to socially integrate including difficulties in making friends and homesickness. This finding was supported by Wilcox et al. (2005) who reported that in their study of 11 students who withdrew from their first year at a British university three quarters stated a reason being the difficulty in making friends. However, it should be noted that this is a very small sample size and more research needs to be conducted to confirm these results. Overall three factors emerged from Kantanis's (2000) study that influenced students' withdrawal decisions 1) social support, 2) academic, 3) material matter (financial factors). Social support was the most cited with 90% stating this to be a highly influential factor in their decision to withdraw from university:

> "What students needed was the opportunity to express concerns and vent frustrations rather than seek expert counselling; the issues that concerned them were not seen as being of such significance to warrant professional attention. In most cases it was moral support that was being sought, a case of the old adage: 'a trouble shared is a trouble halved'" Kantanis 2000, p.103

3.9 How Peer Mentors May Aid the Transition to University.

There are two proposed models for peer mentoring and its effects on student persistence and wellbeing: the stress buffering hypothesis and Tinto's model of Student withdrawal. The stress buffering hypothesis operationalises peer mentors as an additional support that will then help to buffer any negative impacts of the transition to university. Therefore the provision of a mentor may change the nature of the stress-strain relationship by altering the strength or even the direction of this relationship. It could therefore be hypothesised that individuals who experience a lot of transitional stress but have a mentor will not have such a negative outcome in comparison to those who experience a lot of stress but do not have a mentor.

Additionally peer mentoring could act as a mediator within Tinto's (1975) model of student persistence. By focusing on the aspects within this model that have received the greatest support (social and academic integration) peer mentors could affect persistence decisions through the mediation variable of college adaptation. Thus having a peer mentor could increase an individual's integration into university which will in turn affect a student's decision to persist with university. These two models combined are demonstrated in Figure 3.1. Figure 3.1 also highlights the possible direct effects of peer mentoring on intention to persist and college adaptation.

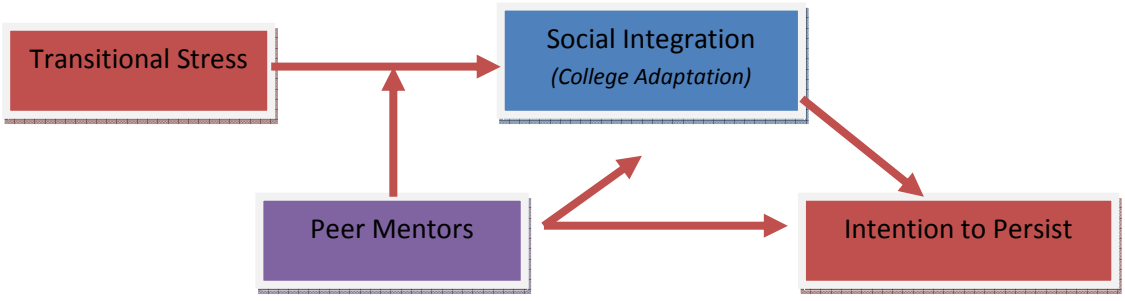


Figure 3.2: How Peer Mentors may aid the transition to university.

3.10 SUMMARY of AIMS and OBJECTIVES

The preceding literature reviews have highlighted the current interest in student withdrawal, the first year experience at university and use of mentoring schemes as a potential 'enrichment and retention strategy'. Despite the growing attention to formal mentoring schemes little evaluation has been conducted within educational settings with regards to the benefits they may bring. The current thesis focuses on formal peer mentoring schemes within UK Higher Education and aims to address the following limitations: 1) lack of knowledge with regards to the degree of formal peer mentoring schemes currently available in UK Higher Education; 2) lack of theoretically driven and methodologically rigorous research; 3) lack of reliable and valid outcome measures used to assess the effects of peer mentoring; 4) lack of research with regards to the mentors experience within Higher Education. Additionally the current thesis adds to the literature by addressing issues of withdrawal and peer mentoring as well as students' attitudes towards the introduction of a mentoring scheme. The research considers the use and benefits of a mentoring scheme from an institutional and individual level. On the individual level it considers the mentors and the mentees perspective as well as those who have never experienced a mentoring scheme.

Part B: Methodology of Research Chapters

Chapter 4
Methodology of Results Chapters

4.1 Introduction

The studies within this thesis have a primary objective of investigating both the availability of peer mentoring and the perceived value peer mentoring may have in Higher Education with specific regard to university adjustment and withdrawal decisions. However, different research chapters may incorporate additional aims and research questions (for example investigating adjustment in students living away from home in comparison with those remaining at home); these will be outlined within the individual chapters of interest. As this research has followed particular stages, the methodology employed, which is particular in each phase, will be described in detail within each research chapter. The aim of this chapter is to describe the overarching research methodology undertaken and the benefits of using and combining both quantitative and qualitative research methods and data. Therefore this chapter will provide an overview of the concept of triangulation within research. This chapter will then describe some of the methodological issues (selection of variables, data analysis) that concern all chapters and the measures used within this research.

4.2 Design

The debate regarding quantitative research methods versus qualitative research methods has continued within social sciences (Newman & Benz, 1998). The

quantitative approach, where data/ information is accumulated via systematic, objective and measurable means that can then be subjected to statistical analysis, is often favoured for its deductive logic and definitive conclusions (Begley, 1996).

Qualitative Research involves the in depth study of individuals and their personal experiences. In order to capture and understand the nature and depth of these experiences and the effect they may have on the individual quantitative methodology may be insuffecient. Couchman & Dawson (1990) state that qualitative research is based on inductive logic and is less concerned with causality. Qualitative research is thus "descriptive rather than explanatory, exploratory rather than testing" (Begley, 1996, p. 122). Quantitative methods can be useful when one knows something about the subject matter, or for hypothesis testing, whereas qualitative methods become more advantageous when one wishes to explore a topic more fully. The debate as to the status of the two methods appears meaningless as the two are based on differing assumptions within different research paradigms, not different techniques (Begley, 1996) and should not be viewed as polar opposites represented different ends to a continuum (Newman & Benz, 1998). Thus a combination of methods may provide a fuller understanding of the topic being studied. The final choice of method to be employed should therefore be based on the questions at hand.

In order to gain a multi-dimensional view of a research topic one could mix approaches in a method called triangulation.

> "In Social Science, triangulation is defined as the mixing of data or methods so that diverse viewpoints or standpoints cast light upon a topic. The mixing of data types, known as data triangulation, is often thought to help in validating the claims that might arise from an initial

> pilot study. The mixing of methodologies, e.g. mixing the use of survey data with interviews, is a more profound form of triangulation." (Olsen, 2004, p. 3).

Triangulation is thus the combination of theories, data sources, methodology, and research investigators in order to study a single experience or event (Denzin, 1989). The method of triangulation should therefore be aimed at gaining a greater understanding of a particular phenomenon by merging both qualitative and quantitative methodology. Fielding and Fielding (1986) note that "the important feature of triangulation is not the simple combination of different kinds of data, but the attempt to relate them so as to counteract the threats to validity identified in each" (p. 13). Multiple methods allow one to counteract any bias that may arise from single method designs (Denzin, 1986) confirming accuracy of the data and providing a more robust research approach.

Given that mentoring has been extensively studied in the areas of management and organization, but has not as yet attracted the same level of attention in education, a method of triangulation was deemed helpful in order to develop a deeper and wider understanding of mentoring in Higher Education. Denzin (1989) identified four levels of triangulation: investigator, data, theoretical and methodological. Kimchi, Polivka, and Stevenson (1991) added a fifth category of analysis triangulation. Shih, 1998 discusses a further method of triangulation: the unit of analysis. Table 4.1 provides a framework for the following thesis adopting multiple levels of triangulation.

Table 4.1: Framework for evaluating peer mentoring using multiple triangulation.

Type of Triangulation	Approach	Purpose/ Goal
1. Investigator		
2. Data Source	Universities	Obtain information on the number of peer mentoring schemes presently available within UK Higher Education and the reasons for establishing this formal support approach
	Peer Mentors	Obtain information on the motivations for mentoring and the benefits of mentoring from the perspective of the mentor
	Peer Mentees	Obtain information on the possible benefits of mentoring on psychological constructs
	Students not involved in a scheme	Obtain information on the possible benefits of mentoring from individuals who are not currently involved in a scheme.
Theory	First Year Experience University Integration Organizational Mentoring	Provide a complete understanding of how individuals experience the transition to university, withdrawal behaviours and how the development of peer mentoring may work with UK Higher Education.
Method	UK wide Survey	
	Longitudinal and Cross-sectional Questionnaires	Provide large sample sizes, more quantitative in nature, allowing the evaluation of formal peer mentoring using valid and reliable measures.
	Semi-Structured Focus Groups	Collect in depth data covering a broader spectrum regarding students perceptions of mentoring/
Unit of analysis	Individual	Focus on individual experiences regarding the transition to university and partaking in a peer mentoring scheme
	Interactional	Focus on the interaction between peer mentors and peer mentees.
Analysis	Descriptive statistical analysis Frequency percentage Multiple quantitative modes Thematic analysis	Obtain the completeness of the phenomenon

Source: Table adapted from Shih (1998, p. 635).

4.3 Selection of variables

An extensive review of the literature into peer mentoring from the areas of organisation and management, business, youth, and education identified many limitations within current research, which could be addressed by applying a psychological perspective. Researching current work on the first year experience, transition to university, student wellbeing, and student withdrawal behaviours indicated several areas where peer mentoring may be of benefit to first year undergraduate students. These approaches have not necessarily been applied in current research into educational formal peer mentoring schemes within the UK, USA and Australia. Therefore in order to assess whether peer mentors may benefit first year undergraduates within the UK, variables were selected specifically focusing on the first year experience. Table 4.2 provides a summary table of the studies within this thesis and Table 4.3 provides a summary table of the measures used for each study within this thesis.

Table 4.2: Studies within this thesis.

Study	Description	Chapter
Study 1	Validation of the Student Wellbeing Scales	5
Study 2	Prevalence of Peer Mentoring Schemes in UK Higher Education	6
Study 3	Comparative study of Mentoring v Non Mentoring	7
Study 4	Attitudes Towards the Development of a Peer Mentoring Scheme	8
Study 5	Peer Mentoring from the Mentors Perspective	9

Measures are described in each of the respective chapters. Where measures are used in multiple studies details are provided within the first research chapter they appear in and referred to in later chapters.

Table 4.3. Summary of measures used within the research studies

Study	Measure	Reference	T1	T2
1 (i)	Student Wellbeing Scale (SWS)			
	Oxford Happiness Scale (OHQ)	Argyle et al. (1989)		
	College Adaptation Questionnaire (CAQ)	Crombag (1968)		
	Satisfaction with Life Scales (SWLS)	Diener et al. (1984)		
	Life Orientation Test (LOT)	Scheier et al. (1985)		
	Academic Satisfaction	Swanson et al. (2006)		
	General Health Questionnaire (GHQ28)	Goldberg (1968)		
1 (ii)	Student Wellbeing Scales (SWS)			
	College Adaptation Questionnaire (CAQ)			
	Perceived Stress Scale (PSS)	Cohen et al. (1983)		
	Rosenberg Self Esteem Scale (RES)	Rosenberg (1965)		
	Interpersonal Support Evaluation List (ISEL 12)	Cohen et al. (1985)		
2	*Student Support Proforma**			
	Non Completion statistics	HEFCE, 2003		
3	Coping in Stressful Situations (CISS)	Endler et al. (1990)	X	
	*Transitional Stress**		X	
	Rosenberg Self Esteem Scale (RES)		X	X
	Index of General Affect	Campbell et al. (1976)	X	X
	Interpersonal Support Evaluation List (ISEL 12)		X	X
	*Utilization of a peer mentor**		X	X
	College Adaptation Questionnaire (CAQ)			X
	Student Wellbeing Scales (SWS)			X
	Perceived Stress Scale (PSS)			X
	*Peer Mentor Support**			X
	*Intention to Leave**			X
4	*Transition to University**			
	Interpersonal Support Evaluation List (ISEL 12)			
	College Adaptation Questionnaire (CAQ)			
	Academic Stress Questionnaire	Abouserie (1994)		
	UCLA Loneliness Scale	Russell et al. (1980)		
	*Homesickness**			
	*Intention to Leave**			
	*Where a mentor may help**			
	*Peer Mentor Expectations**			
	*Peer Mentor Characteristics**			
5	*Willingness to Mentor**			

NOTE * = scales constructed specifically for this thesis. Study 3 is longitudinal therefore T1 = measures taken at time 1 and T2 = measures taken at time 2.
Refer to table 4.4 and 4.5 for lists of validated and un-validated scales used in this thesis (refer to 4.1 for a list of studies within the thesis).

Table 4.4 List of validated variables used within the research studies.

Study	Theoretical construct	Measure	Author(s)	Date	# Items	Scale	Cronbach	Appendix
Study 3	Transition to University	Coping in Stressful Situations (CISS)	Endler et al.	1990	10 (48)	1-4	.45	3
Study 1, 3 & 4	Adjustment	College Adaptation Questionnaire (CAQ)	Crombag	1968	18	1-7	.91	5
Study 3 & 4	Social Support	Interpersonal Support Evaluation List (ISEL 12)	Cohen et al.	1985	12	1-4	.82	6
Study 3 & 4	Stress	Academic Stress Questionnaire (ASQ)	Abouserie	1994	34	0-7	.93	9
Study 4		Perceived Stress Scale (PSS)	Cohen et al.	1983	14	1-5	.72	10
Study 1	Wellbeing	Academic Satisfaction	Swanson et al.	2006	4	1-5	.77	11
Study 3		Index of General Affect	Campbell et al.	1976	8	1-7	.94	12
Study 1		General Health Questionnaire (GHQ28)	Goldberg	1978	28	0-3	.97	13
Study 1		Life Orientation Test (LOT)	Scheier et al.	1985	12	0-4	.84	14
Study 4		UCLA Loneliness Scale	Russell et al.	1980	20	1-4	.95	15
Study 1		Oxford Happiness Scale (OHQ- short version)	Argyle et al.	1989	8	1-6	.75	16
Study 1		Satisfaction with Life Scales (SWLS)	Diener, et al.	1984	5	1-7	.79	17
Study 3		Rosenberg Self Esteem Scale (RES)	Rosenberg	1965	10	1-4	.87	18

Note. In the case where measures were used on multiple occasions an average Cronbach Alpha is calculated
Study 2 not included as it does not employ Likert scales: Student Support Proforma can be found in Appendix 2.

Table 4.5 List of Un-Validated Measures used within the Research Studies.

Study	Concept	Measure	# Items	Scale	Cronbach	Appendix
Study 4	Transition to University	Challenge	10	1-5	.71	4
		Stress	10	1-5	.75	4
		Depression	10	1-5	.83	4
Study 3 & 4	Adjustment	Intention to leave	1	1-7	NA	
Study 3 & 4	Social Support	Contact with Peers	2	1-10	NA	6
Study 3 & 4		Satisfaction with Peers	2	1-10	NA	6
Study 3	Stress	Transitional Stress	10	1-5	.76	7
Study 4	Wellbeing	Homesickness	2	Dichotomous	NA	
Study 1 & 4		Student Wellbeing Scales	20	1-5	.92	20
Study 3	Mentoring	Peer Mentor Support	20	1-4	.91	24
Study 4		Where a Peer Mentor may help	10	Dichotomous	NA	4
Study 4		Peer Mentor Support Expectations	5	Part a) Dichotomous Part b) 1-5	NA	21
Study 4		Peer Mentor Characteristics	11	5	.76	22

Note: The items in the Peer Mentor Characteristics and Peer Mentor Expectations measures will be studied independently not as a whole scale.

4.5 Data Analysis

Analysis of data was carried out using SPSS for windows, versions 14, 15, and 16. All data underwent exploratory data analysis before inferential statistics were computed in order to test for normality, homogeneity of variances and multicollinearity. Missing data points within separate questionnaires were inspected individually. Any questionnaire missing more than 10% of its data was excluded: in practice no data was excluded for missing data. In cases where less than 10% was missing median substitution was calculated using the whole set procedure (Tabachnick & Fidell, 2001). Identification of outliers was achieved by transforming raw data to *z* scores. Any individual score receiving a *z* of +/ - 3.29 was considered a significant outlier. Very few outliers were present in all of the variables used within this analysis therefore no further precautions were necessary. Data normality was indicated by a visual inspection of histograms and Q-Q plots alongside testing for significant skewness or kurtosis by comparing the value obtained against the null hypothesis of 0 using the *z* distribution (Field, 2005; Tabachnick, & Fidell, 2001).

Formula 4.1a: Normality Distribution Calculation (Skewness)

$$Z = \frac{S - 0}{S_S}$$

Formula 4.1b: Normality Distribution Calculation (Kurtosis)

$$Z = \frac{K - 0}{S_K}$$

Note: S = Skewness, S_S = SEM for Skewness, K = Kurtosis, S_K = SEM for Kurtosis

No variables evidenced a significant kurtosis. Variables showing significant skewness were wherever possible subjected to non-parametric tests instead. Given the ongoing debate regarding transformation of data, transformations were used sparingly. In the case of one outcome variable (the Interpersonal Support Evaluation

List) required in multivariate analysis, square root [sqrt] transformation significantly improved the distribution and thus the transformed variables were used within regression analyses. As the skew was negative in nature the inverse square root calculation was used: [√ (k –x)] where k is a constant equal to the largest score in the variable + 1 (Bradley, 1982; Tabachnick and Fiddell, 2001). The inverse square root therefore inverts all scores indicating that on transformed variables higher scores equate to lower levels of social support. In the case of 'Intention to Leave' which demonstrated a severe positive skew, due to the high number of individuals who indicated no withdrawal behaviours, and could not be subjected to any transformation that improved the distribution, a dichotomisation of the variable was conducted using visual binning (SPSS, N.D).

Multicollinearity was assessed using a Pearson's product moment correlation matrix. Although there are no specific rules with regard to what constitutes high levels of collinearity Tabachnick and Fiddell (2001) suggest correlation values of ≥ .70 and Field (2005) suggests values ≥ .80. Although there were high interrelations between variables no bivariate correlation exceeded a value of .70, therefore no variables were excluded from analyses.

Due to the large differences in sample sizes and the high number of significant heterogeneity of variances evident in Research Chapter 8 all analyses of difference were subjected to non-parametric analysis. Research on the robustness (or lack of) for ANOVA and ANOVA-like analyses to violations of homogeneity of variances has shown that with equal sample sizes a violation of this assumption is not intolerable (Boneau, 1960; Box, 1953). However, it is generally agreed that as sample sizes deviate there is a greater chance of inflation to type 1 error when the larger variance is associated with the smaller sample size (Milligan, Wong, &

Thompson, 1987). Therefore in order to guard against type 1 errors non-parametric testing is suggested (Howell, 2007).

Effect sizes were calculated in the form of *r* for all analyses. Cohen (1988, 1992) gives the following guidelines for the social sciences: small effect size, $r = 0.1$; medium, $r = 0.3$; large, $r = 0.5$. Effect size calculations can be found in formula 4.2a and 4.2b

Formula 4.2a: Effect Size Calculation for Parametric Tests

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Formula 4.2b: Effect Size Calculation for Non-Parametric Tests

$$r = \frac{z}{\sqrt{N}}$$

Power for between measures analyses, with a medium effect size (Cohen, 1988) was calculated after the fact. The formula for this can be found in Formula 4.3.

Formula 4.3: Power Calculations for Two Unequal Sample Sizes (Source Howell, 2007, pp 220)

$$d = \frac{(\mu 1 - \mu 2) - (0)}{\sigma}$$

$$\delta = d\sqrt{\frac{n^h}{2}}$$

Note. n_h = Harmonic Mean in this case.

Calculating the Harmonic Mean:

$$\bar{X}_h = \frac{k}{\Sigma \frac{1}{x_i}}$$

Chapter 5
Components, Construction and Validation of the Student Wellbeing Scale

Abstract

Some studies indicate that over 60% of first year undergraduates experience some form of psychological distress during the transition to university. The increasing numbers and diversity of students entering university may compound this number. It is therefore important to accurately and reliably assess the psychological well being of undergraduate students in order to offer appropriate support and decrease withdrawal rates. Wellbeing measures that are available are diverse, yet unfocused on student welfare i.e. are general diagnostic scales that aim to measure severe distress. A new scale has been developed assessing wellbeing and issues that have been highlighted as important to university transition: depression, anxiety homesickness and loneliness. Study 1 using a sample of 74 undergraduate students, produced a two factor model with a high alpha level and good convergent validity. Study 2 with a sample of 179 undergraduates from two universities confirmed these findings. Results are discussed with regard to the scale's application and the need for further research using a longitudinal design.

5.1 Introduction

Wellbeing and positive psychology have been of increasing interest since the late 1960's after Wilson (1967) presented his research on happiness and its correlates. The understanding of happiness has evolved since then, however, its nature has still not been defined in a uniform way (Diener, Scollon, & Lucas; 2003). For example happiness can be described as contentment, satisfaction, peace of mind, and feeling fulfilled, or in terms of enjoyment and having fun. Subjective wellbeing has surprising little association with demographic variables, challenging definitions of original philosophical thinkers, Socrates, Plato and Aristotle who believed that happiness consisted of possessing the best good available in the material sense. Today's researchers into subjective wellbeing have greater focus on Democritus' beliefs that happiness emphasizes an individual's own assessment of his or her own life and includes satisfaction, pleasant affect and low negative affect. Although research into subjective wellbeing has focused on four outputs- overall satisfaction, elation/ mood, health and psychological distress the greatest number of studies have focused on the inverse links to wellbeing: depression, anxiety etc.

Subjective wellbeing is said not to be just the absence of negative, but must also include the presence of positive (Jahoda; 1958). In support of Jahoda's concept of well being, Bradburn (1969) reported that positive and negative affect are independent. This finding suggests not only that different factors may affect these two different spheres of happiness but also that happiness is not, as originally defined uni-dimensional with positive affect and negative affect at opposite ends of a continuum, but is in fact two dimensional where each component requires measuring separately. In support of Bradburn's (1969) original study, Lucas, Diener, and Suh

(1996) used a multitrait- multimethod analysis to show that positive affect, negative affect and satisfaction were all separate constructs.

Positive and negative affect represent people's evaluations and are short lived responses to ongoing events within their lives. It is argued that the momentary separation between positive and negative effect is present, i.e. when asking an individual about their life at that precise moment an individual cannot experience both sadness and joy simultaneously (Diener & Iran-Nejad, 1986). However, over time people can experience high levels of both. Conversely, some researchers believe that in unusual circumstances both positive and negative affect can be experienced together (Larson, McGraw & Cacioppo, 2001): Diener, Suh, Lucas, & Smith (1999) recommend that positive and negative affect be measured separately.

This chapter aims to briefly review research investigating wellbeing within the student population before examining current measures available for assessing student wellbeing within university settings. The aim of this research is to construct a new compact measure that includes depression, anxiety, homesickness, and loneliness - all areas of interest in university transition which can be summated to include a general measure of student wellbeing.

5.1.1 Student Wellbeing

Research into student wellbeing mostly comes from the USA and focuses on student satisfaction with campus and college facilities. There has been a steady influx of student satisfaction papers in the literature over the last three decades. Student satisfaction is of interest for three reasons: 1) Astin (1993) argues that satisfaction is in itself an important educational outcome, a notion supported by Okun & Weir

(1990); 2) evidence suggests a relationship between student satisfaction and student performance (Bean & Bradley, 1986; Howard & Maxwell, 1982; Pike, 1991) although this relationship is likely to be complicated and bidirectional; 3) student satisfaction has been found to predict persistence at college/ university (Pascarella, 1985; Terenzini & Pascarella, 1977; Tinto, 1993). However despite the substantial research into student satisfaction Benjamin and Hollings (1995, 1997) argue that it is still largely misunderstood due to the lack of a global definition and little known about what factors impact student satisfaction.

The majority of research using university/ college students has focused on the inverse effects of subjective wellbeing: mental ill health, homesickness, and loneliness. A Royal College of Psychiatrists' report on the mental health of students in UK Higher Education (RCPsych, 2003) argues that university staff, and the students themselves, are expressing mounting concern over mental health issues amongst students in Further and Higher Education. Over the past 20 years increasing numbers of students and a more varied population (more mature students, part time students, students from lower SES) has affected the epidemiology of mental health problems within Higher Education. Two large scale studies have focused specifically on reporting depression and anxiety amongst students. In a study of over 3000 students at ten UK universities Webb, Ashton, Kelly, and Kamali (1996) report that between 12% and 15% of students scored at the cut off point for depression on the Hospital Anxiety and Depression (HADS) Questionnaire, with 17% to 25% of individuals' scores indicating moderate to severe anxiety. Using a sample of 2229 second year students from two separate cohorts (1998 & 2001) the University of Leicester Student Psychological Health Project (Grant, 2002) reported that 13% of students were reporting feelings of distress regarding depression and 12-14%

indicated moderate anxiety on the Brief Symptom Inventory (BSI). Further research focused on the first year of Higher Education indicates that approximately 50% of undergraduates in England experience some degree of depression at the start of their course (Furr, Westerfield, McConnell, & Jenkins, 1995)

Research has, however, indicated that wellbeing varies according to time at university, with a greater degree of psychological distress being reported during the transition and early stages at university. Aetiologically this is argued to be due to a disruption in lifestyle (Fisher, 1989) and the risk factors of living away from home such as isolation and lack of peer support (RCPsych, 2003). There has been a greater interest in the first year experience recently (Barefoot, 2000) specifically within America and Australia, but increasingly so in the UK, as institutions recognise the importance of the first year in shaping the individual's experience in Higher Education and retention decisions (O'Dell, 1996; Tinto, 1993). Many studies have thus focused on psychological distress during the transition to university, mostly in the form of homesickness.

Fisher & Hood (1987, 1988) report that a high proportion of first year students within their Scottish sample experienced homesickness, depression and anxiety during the first six weeks at university. Simultaneously participants within these studies experienced decreases in cognitive functioning (see chapter 3). Feelings of persistent homesickness and loneliness can lead to decisions regarding leaving university (Murtaugh, Burns, & Schuster, 1999, Pitkethly & Prosser, 2001, Pritchard & Wilson, 2003). Brewin, Furnham, & Howes (1989) report a lower figure of 39% of incoming students experiencing homesickness and concluded that although homesickness can be considered a common phenomenon it was, in most cases, short lived.

Within a study of 354 university students in the USA, Cutrona (1982) reported that three quarters experienced at least occasional loneliness within the first two weeks of their academic career, and over 40% of these reported that their loneliness was moderate to severe in intensity. Cutrona (1982) also noted that levels of loneliness generally decreased over time at university. Other studies have reported a lower mean level of loneliness amongst students during the first semester at university in comparison with Cutrona's (1982) work (Hamid, 1989; Hoglund & Collison, 1989) but there is no indication of when during the semester these measurements were taken, as Cutrona found loneliness levels generally decrease over time during the first weeks of university.

Given the multiple wellbeing issues facing students on arrival at university and the relationship between student wellbeing, persistence and performance, researchers concerned with studying the transition to university and the first year experience in Higher Education should aim to accurately evaluate each of these factors.

5.1.2 Scale Development

Review of the literature emphasises several factors that can impact student wellbeing: in particular factors relating to the transition to university (see Figure 5.1). The differing factors within student wellbeing guided the development of a measure with specific focus on relocation and adjustment.

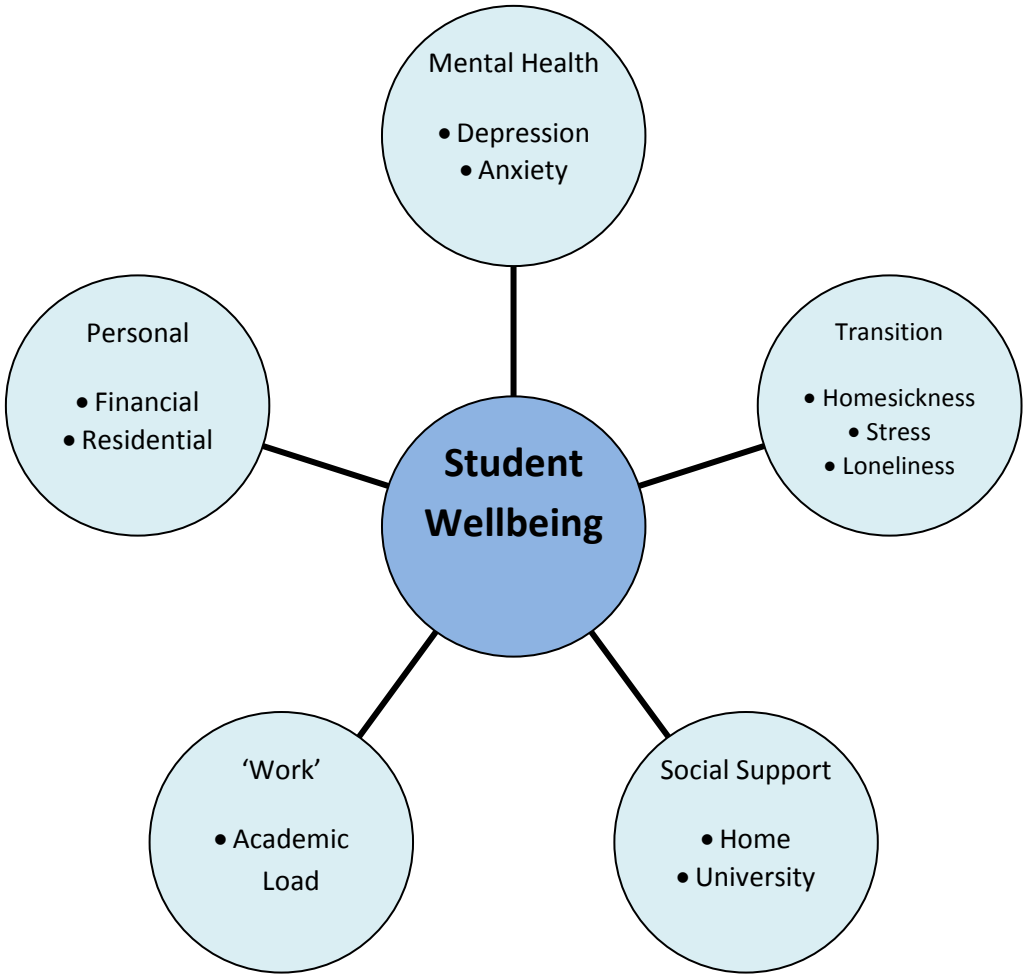


Fig 5.1 Factors that may impact student wellbeing

Due to the considerable literature on student homesickness, loneliness, depression and anxiety the following measure aimed to assess these aspects of student transition. Current measures on student homesickness and loneliness are long in nature. In order to increase participation and retention rates within a study, questionnaires should be as compact as possible (Boynton, 2004; Oppenheim, 1992). Most measures of depression and anxiety are aimed at mental ill health and diagnosis, without specific focus on students and the transition to university for

example the General Health Questionnaire (Goldberg, 1968), Becks Depression Inventory (Beck, Ward, Mendalson, Mock, & Erbaugh, 1961), Hospital Anxiety and Depression Scales (Zigmond & Snaith, 1983). Given the complexity of the transition to university and its outcomes this study aims to develop a questionnaire that captures all elements of the transition and student wellbeing (Figure 5.1), and includes issues of mental wellbeing that have been noted to effect incoming students.

Items were selected from available and widely used measures such as the BDI, DASS and HADS and reworded in line with the literature on student transition and adjustment. Most of the questions on homesickness and loneliness were taken from The Homesickness Questionnaire (Archer 1992) and the UCLA Loneliness questionnaire judged as being relevant for students (Russell, Peplau, & Cutrona, 1980) with a few university specific questions added (e.g. 'I have settled really well at University'). Depression, Anxiety and Somatic symptoms were selected to represent student stress and wellbeing from The Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983), The Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and The Depression Anxiety Stress Scales (DASS: Lovibond & Lovibond, 1995) and reworded specifically for students.

5.1.3 Sample Size Considerations

Sample size required for principle components analysis relies on the assumption that sample correlation coefficients become reliable estimates of population correlation coefficients only when the sample size reaches approximately 100. Therefore the recommendation for minimum sample sizes for correlation studies

are 100-200 (Comrey, 1978; Loo, 1983). However, this argument is not empirically based. Some studies have tested the relation between sample size and the stability of the sample solution based on the sample size to number of variables rule. Barrett and Kline (1981) found that sample size did not influence pattern stability and N = 50 was the minimum needed to reproduce the pattern. That said, Aleamoni (1973) concluded from real data matrices that as the sample size decreases error variance increases. Therefore the following validation studies aimed to collate sample sizes over 100.

5.2 STUDY 1

The aim of study 1 was develop a short questionnaire that could incorporate all areas of student wellbeing identified as important within the first few weeks at university.

5.3 METHODOLOGY

This was a cross sectional questionnaire study designed to develop the student well-being scales.

5.3.1 Participants

The sample included 74 second year undergraduates at a Scottish University comprising approximately half of Psychology students who were registered for a statistics module. Of those completing the survey 60 (81%) were female and 14 male (19%). Within this sample 45 (60%) were living in rented accommodation with others, whereas 11 (15%) were living in university accommodation. The final 25% could be classified as 'home' students (home owner or living with parents. The majority of the sample was of a Caucasian ethnic origin (97%), UK students versus other (95%) and non-disabled (89%). Most of the students were single (52: 70%) with only 2 (3%) being married; four (5%) had children.

5.3.2 Measures

The questionnaire package was designed into two versions (A & B). In version A the wellbeing scales were completed before any of the other measures, except demographics and happiness, whereas in version B the wellbeing scales were completed after all other measures except the general health questionnaire. This was in order to observe if there were any order effects occurring in the student wellbeing scales. The variables/ scales used within the validation of the student wellbeing scales were selected because of their known association with general wellbeing, therefore enabling a test of construct validity. Also measures were chosen because of their known psychometric properties as well as their high utilization in previous research. The entire questionnaire package can be found in Appendix 1.

5.3.2.1 Student Wellbeing Scales

A review of the literature on what affects undergraduate wellbeing when attending university and other existing welfare and wellbeing measures, led to the development of a 35 item scale which included 5 subscales of homesickness (N =6, e.g. 'thinking of home upsets me'), loneliness (N = 8, e.g. 'I feel part of a group of friends here'), depression (N = 10, e.g. 'I have difficulty concentrating'), anxiety (N = 7, e.g. 'I feel tense and wound up'), and somatic symptoms (N = 4, e.g. 'I suffer from dizzy spells'). Items were scored on a Likert scale running from 1 always untrue through to 5 always true. A large Likert scale was used on the advice of Sarason, Levine, Bashman & Sarason (1983) as this helps create greater diversity within the scores. Some items (randomly selected: 4, 5, 6, 9, 13, 16, 20, 21, 26, 29,

30 and 35) were reverse scored to ensure against blind marking. Higher scores equate to higher levels of well-being. α = .921 in study 1.

5.3.2.2 The Oxford Happiness Questionnaire

The Oxford Happiness Questionnaire (OHQ) was developed by Argyle, Martin & Crossland (1989) to provide a general measure of happiness. The short form measure includes 8 items each being scored on a six point Likert scale from 1 strongly disagree to 6 strongly agree. Items were added to give a total score with a range from 8 – 48 where higher scores indicate higher levels of happiness. With a sample of 171 undergraduates mean score indicated was 36.58 SD =8.47 (Hills personal communication, 2004). The OHQ 29 (from which the 8 items were selected via discriminant analysis) has demonstrated high scale reliabilities (α (168) = 0.9); intercorrelations of the 29 items range from -0.04 to 0.65 with a mean of 0.28 (Hills & Argyle, 2002). No effect in order of presentation was observed. Cronbach α for the short form OHQ in this study 1 = .75.

5.3.2.3 College Adaptation Questionnaire

The College Adaptation Questionnaire (CAQ) is a self report instrument consisting of 18 statements constructed by Crombag (1968) to assess how well students have adjusted to Higher Education. Respondents indicate on a seven point rating scale how well each statement applies to them. Eight statements indicate good adjustment and ten statements indicate lack of it. Total score for adjustment is the sum of the item scores after having reversed the items that indicate poor adaptation..

A higher score equals better adaptation with a range of scores from 18-126. Test validity studies at the Free University (Van Rooijen, 1984; Vlaander & Van Rooijen, 1981) with a group of (educational) psychology students indicated reasonable internal consistency and moderate to strong associations with test scores for transient depressive mood and trait depression. No overall sex, age or marital status differences were obtained in this study. Cronbach α in the current study was .91

5.3.2.4 Satisfaction with Life Scales

The Satisfaction with Life Scales (SWLS) constructed by Diener, Emmons, Larsen, and Griffen (1985) to assess the global satisfaction aspect in subjective well being is a self report instrument containing five items. Subjects are required to indicate how well a statement applies to them at the current time on a Likert scale of 1 strongly agree to 7 strongly disagree. No item is reverse scored and higher scores indicate more satisfaction in life with a possible range of scores from 5 - 35. The SWLS is shown to have favourable psychometric properties, including high internal consistency and high temporal reliability. Scores on the SWLS correlate moderately to highly with other measures of subjective wellbeing and correlate predictably with specific personality characteristics (Diener, Emmons, Larsen & Griffen; 1985). Cronbach α in the current study = .79.

5.3.2.5 Life Orientation Test

The Life Orientation Test (LOT) developed by Scheier & Carver (1985) to assess the construct of dispositional optimism is a 12 item self report measure scored

on a 5 point Likert scale from A (0) strongly agree through to E (4) strongly disagree. 8 items contribute towards a dispositional optimism score. Four are phrased in the positive direction (1, 4, 5, 11), four negative, and four filler items (2, 6, 7 and 10). The higher the score indicates high optimism. For 357 undergraduate males the mean score was 21.03 (SD = 4.56) and 267 undergraduate females the mean score was 21.41 (SD = 5.22) (Scheier & Carver 1985). One of the criticisms of the LOT is the third variable effect (Neuroticism and trait anxiety: Smith, Pope, Rhodewalt & Poulton, 1989). However, data from 4309 students found that associations between depression and aspects of coping remained significant even when effects of neuroticism, trait anxiety, self mastery, and self esteem were statistically controlled indicating adequate levels of discriminant and predictive validity (Scheier, Carver, & Bridges, 1994). Previous research has indicated high levels of internal consistency (α = 0.82) (Scheier et al, 1994). Within the current research items were added to give a total score with a possible range from 4 – 44. Within the current study Cronbach α = .84.

5.3.2.6 Academic Satisfaction

Developed by Swanson, Broadbridge & Karatzias (2006) to measure satisfaction with students' academic career and the university, this is a self report measure with four questions and no reverse scoring. Two of the items are concerned purely with students grading and academic work whereas the remaining questions tap into personal and social life satisfaction. The scale is scored on a 5 point Likert running from 1 strongly agree through to five strongly disagree, and a higher score indicates higher dissatisfaction with university life with a possible range of scores

from 4- 20. This measure has been shown to have acceptable internal reliability in previous research: α = .77 (Swanson et al. 2006). Cronbach α in the current study = .77.

5.3.2.7 General Health Questionnaire (GHQ 28).

Developed by Goldberg (1978) to screen for psychiatric disorders this self report instrument contains 28 Likert scaled questions scored as 0,1,2, and 3; no items are reverse scored. Subjects have to choose among four alternatives and to state which is more characteristic of how they felt during the last few weeks. Factor analysis has indicated that the GHQ 28 measures somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Several cut-off points have been established (Goldberg & Williams, 1988) however, for the purpose of this study where the sample is not a clinical population and the aim is not the identification of clinical cases totals are computed instead of relying on cut-off points. The measure shows good concurrent validity in comparison with patients' overall clinical assessment with high correlations of *r*= .70 to .83 (Vieweg & Hedlund 1983) and has been shown to be valid (*r* = .76) and reliable (*r* = .90) (Robinson and Price, 1982). Within the current studies items were added to give a total score with a possible range of 3 - 84. Cronbach α in the current study = .94.

5.3.3 Procedure

Students were approached in a core psychology lecture. After a brief presentation about the meaning of the research detailing their ethical rights

questionnaires were handed out and completed in the remaining 20 minutes of the lecture. Students could then hand them in completed or uncompleted on the way out. After completion a group email thanking them for their participation was sent to all students of the year.

5.3.4 Ethical Considerations.

Ethical permission was granted from the Stirling University Psychology Ethics Committee in March 2004. As this was cross-sectional in design no personal identifiers were required on the questionnaires thus confidentiality was assured. Consent was in the form of a tick box front sheet which was removed from the questionnaire once received. Participants were informed that they could leave out any questions they did not wish to complete.

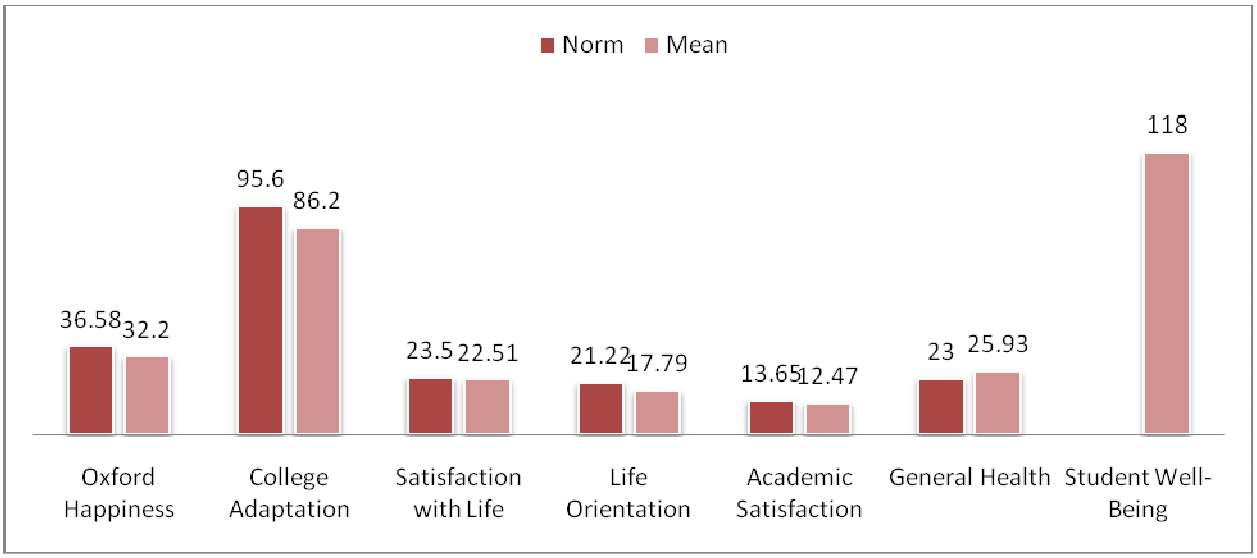
5.3.5 Data Analysis

Data analysis was in accordance to current validity and reliability assessments (see Kline, 1993). This involves item analysis, principle components analysis and internal consistency analysis (Cronbach α).

5.4 RESULTS

5.4.1 Descriptive statistics

Figure 5.2 displays the normative data (where available), mean from this study and maximum score for each scale.



Key: Figures derived from: Oxford Happiness Questionnaire Short Form; Hills (unpublished manuscript); College Adaptation, Van Rooijen (1986); Satisfaction with Life, Diener et al. (1984); Life Orientation, Scheier & Carver (1985); Academic Satisfaction, Swanson et al. (2006); GHQ28, Gibbons et al, 2004.

Figure 5.2 Norm and mean values for each questionnaire used within this study.

One sample *t*-tests on each of the demographic variables against normative data provided by original authors indicated significant differences on Oxford Happiness Questionnaire ($t(70) = -6.253$ $p= 0.001$), College Adaptation ($t(70) = -4.773$, $p= 0.001$, Life Orientation ($t(71) = -4.629$, $p= 0.001$ and Academic Satisfaction ($t(73) = -2.984$, $p = 0.004$). These results indicate that the present sample had lower levels of happiness, were less adapted to college, had less academic

satisfaction and were also significantly lower on dispositional optimism than normative data.

As there were two versions of the well being questionnaire cross tabulation statistics were conducted to ensure that the samples in versions A and B did not differ in males/ females, accommodation, employment, ethnicity etc to a significant level. All comparison statistics were none significant. Independent samples t-test were performed for each of the dependent variables comparing versions A and B, and there were no significant findings, therefore the samples for A and B can be treated as equal and analyzed as a whole.

Table 5.1: Descriptive and inferential statistics comparing versions A and B on each of the dependent variables

VARIABLE	A		B		*t*	*r*	95% CI	
	Mean	SD	Mean	SD				
Student Welfare	123.00	23.54	113.22	17.43	1.756	.175	-1.306	20.942
Age	20.50	3.31	21.29	6.04	-0.715	.084	-3.007	1.419
Oxford Happiness	31.87	6.52	31.70	6.48	0.111	.013	-2.915	3.258
College Adaptation	84.69	18.77	85.25	19.16	-0.123	.015	-9.573	8.458
Satisfaction with Life	22.98	5.28	21.53	5.85	1.117	.130	-1.135	4.026
Life Orientation	38.21	7.35	37.30	7.96	0.500	.060	-2.699	4.503
Academic Satisfaction	12.60	3.49	12.32	3.30	0.347	.040	-1.310	1.860
General Health Questionnaire	53.00	13.86	54.97	13.03	-0.623	.073	-8.276	4.335

Key: * $p = 0.05$, ** $p = 0.01$, *** $p = 0.001$

Independent samples *t* test found no significant differences between gender, accommodation type, marital status or dependents on any of the dependent variables.

Furthermore age was not significantly associated with any of the outcome measures. Therefore none of these variables need be considered as a confounding variable.

5.4.2 Psychometric Properties (construct validity) of the Well Being Scale

The inter-item correlation matrix was factor analysed using principle components analysis. Items were eliminated from the analysis if their factor loadings were less than .30 and 20 items were left (Kline, 1994). Most of the items eliminated were somatic symptoms. Principle components analysis was performed on the remaining 20 items. The number of components to be extracted for rotation was assessed using both the Scree test criterion (Cattell, 1966) and Kaiser's (1960) criterion of retaining all factors with eigenvalues of over 1. The separate component extraction methods produced two different solutions. Two components arose on inspection of the Scree plot whereas using Kaiser's (1960) criterion four components arose. Scree plot inspection is now the considered the best solution for determining the correct number of components to be extracted therefore rotation was restricted to two components (see Figure 5.3). Components were rotated using an oblique rotation method as it was hypothesised that the underlying factors are correlated. Direct Oblimin has been shown to be the most reliable measure particularly when sample sizes are smaller (Hakstian, 1971).

Item descriptive statistics and factor loadings including eigenvalues can be found in Table 5.2. Rotated components will be referred to as factors, although it should be remembered that principle components analysis was performed.

Table 5.2: Factor solutions for the 20 item Student Wellbeing Scales (SWS)

Items	Mean	SD	Factor Loadings 1	2
Factor 1: Psychological Wellbeing				
I worry about what is expected of me concerning my work	2.61	1.07	**.490**	.296
I feel downhearted and depressed	3.43	1.04	**.667**	.399
I am not particularly discouraged about my future	3.26	1.10	**.605**	.401
I find it hard to calm down	3.24	1.16	**.708**	
I feel tense and wound up	3.11	1.23	**.837**	.181
I am a lot more irritable lately	3.08	1.80	**.623**	.142
I feel 'run down'	2.78	1.19	**.755**	.209
I just can'*t* seem to get myself going	3.18	1.21	**.629**	.361
Worrying thoughts often go through my mind	2.78	1.15	**.615**	.356
I feel worthless	3.88	1.17	**.569**	.458
I have been unable to become enthusiastic lately	3.51	1.33	**.597**	**.515**
I feel more tired lately	2.53	1.23	**.824**	
I have difficulty concentrating	3.00	1.17	**.723**	.243
Eigenvalue = 8.845				
% Variance = 44.224				
Factor 2: Social Wellbeing				
I feel part of a group of friends here	3.74	1.23	.102	**.878**
There is so much going on here I rarely think of home	2.85	1.10	.296	**.503**
I have settled in really well at university	3.65	0.91	.287	**.736**
I lack companionship here	3.95	1.01	.368	**.565**
If I go home for the weekend I feel excited about the prospect of coming back to university	3.32	1.26	.237	**.666**
My social relationships at [university] are superficial	3.59	1.20	.109	**.762**
There are people I feel close to at [university]	3.86	1.10		**.829**
Eigenvalue = 2.323				
% Variance = 11.617				

Note. Components rotated using the Oblique methodology: Direct Oblimin

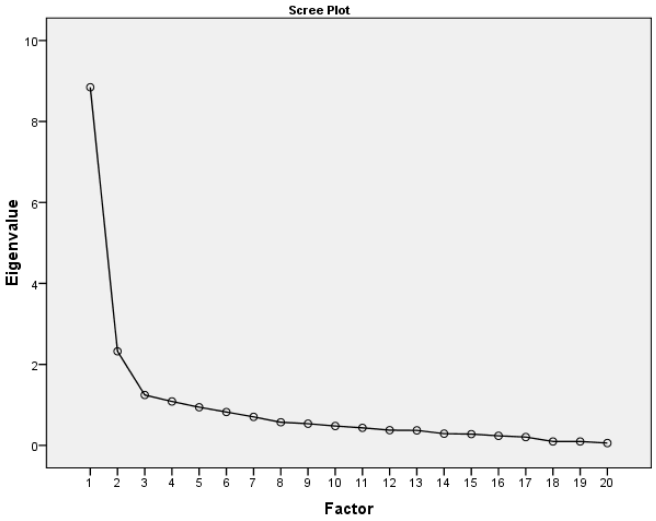


Figure 5.3: Scree plot for the 20 item Student Wellbeing Scale.

Using 20 items two factors arose on the component matrix. Within the unrotated factor solution all items loaded onto the first factor, which has subsequently been labelled the wellbeing factor. The second factor contained items from all areas of wellbeing with no clear pattern. Together these two factors explained 55.84% of the variance. After rotation items loaded across the two factors in a clear pattern with the exception of one item ('I have been unable to become enthusiastic lately') which appeared to load equally across the two factors (see Table 5.2). Items relating to depression and anxiety all loaded onto factor 1 and had the greatest eigenvalue of 8.845, whereas items related to loneliness and homesickness loaded onto factor 2 with an eigenvalue of 2.323. The two factors have subsequently been labelled 'psychological wellbeing' and 'social wellbeing'. The loadings of items on each of the factors are presented in Table 5.2

5.4.3 Convergent Validity

Correlation between the SWS and the other measures of interest are shown in Table 5.3.

There are strong correlations in the correct direction for the SWS with each of the measures. When the data is split according to version A and B weaker correlations appear in version B, who completed SWS before any of the other measures, these correlations are still significant but indicate a possibility of order effects. However it should be noted that all of these weaker correlations exist in the satisfaction with life scale, which indicates that this is the scale affected by order and not the SWS, which shows just as strong correlations with the rest of the measures.

Table 5.3: Correlation analysis of each of the measurement variables

	1 OHQ	2 CAQ	3 SWLS	4 OTL	5 AS	6 GHQ	7 SWS
1 Oxford Happiness		.676**	.468**	.697**	-.544**	-.667**	.704**
2 College Adaptation			.435**	.614**	-.695**	-.573**	.726**
3 Satisfaction with life				.469**	-.460**	-.585**	.507**
4 Orientation to Life					-.560**	-.613**	.693**
5 Academic Satisfaction						-.554**	.678**
6 General Health							-.827**
7 Student Wellbeing							
Mean	**31.79**	**84.94**	**22.31**	**37.71**	**12.47**	**53.92**	**66.88**
SD	**6.45**	**18.81**	**5.56**	**7.59**	**3.39**	**13.41**	**14.85**

Key: * $p = 0.01$. ** $p = 0.001$

Stepwise multiple regression predicting SWS from every other measurement variable resulted in the general health questionnaire explaining the highest amount of variance within the SWS (67.7%) College adaptation and Oxford happiness questionnaire both added to the accumulated R^2 (11.9% and 1.2% respectively).

Table 5.4: Regression analysis predicting SWS from each of the comparison (measurement) variables.

				95% CI for B		
		B	(SE)	Lower	Upper	*β*
Step 1						
	Constant	116.25	(4.57)	107.13	225.37	
	General Health	-0.956	(0.82)	-1.12	-0.79	-.823***
Step 2						
	Constant	73.119	(8.01)	57.11	89.13	
	General Health	-0.68	(0.80)	-0.84	-0.52	-.587***
	College Adaptation	0.34	(0.06)	0.22	0.45	.418***
Step 3						
	Constant	61.65	19.67	42.33	80.97	
	General Health	-0.61	0.86	-0.78	-0.44	-.526***
	College Adaptation	0.29	0.06	0.17	0.40	.355***
	Orientation to Life	0.31	0.16	0.01	0.62	.157*
		Variables not in the equation				
				Score		Sig
	Satisfaction (life)			.023		.746
	Happiness			.046		.618
	Satisfaction (academic)			.084		.316

Note: R^2 = .677 for step 1, ΔR^2 = .119 for step 2, ΔR^2 = .012 for step 3.
Key: * p = 0.05, ** p = 0.01, *** p = 0.001

5.4.4 Reliability Analysis

Construct and convergent validity has thus far resulted in the selection of 20 items measuring two theoretically distinct dimensions of student wellbeing. The quality of new scales is typically summarised by reporting reliability coefficients. Cronbach's Alpha reliability coefficient is the most common reliability measure (Carmines & Zeller, 1979, p.44. For research purposes, Smith and Glass (1987, p.106) suggest that moderate reliability coefficients, those after 0.50, are sufficient.

Other researchers recommend higher reliability coefficients (0.70 and higher; Bohrnstedt & Knoke, 1982, *p*.361) while highlighting that it is often difficult to obtain reliability coefficients beyond 0.80 (Nunnally, 1967, p.226).

Scale reliability for the full 20 items using an alpha model produced a high internal validity value of .932. The two factors when assessed separately maintain acceptable reliability coefficients: psychological wellbeing $\alpha = .916$; social wellbeing $\alpha = .872$.

5.5 STUDY 2

This study aims to further validate the 20 item student welfare scales developed in study 1. This was a cross sectional questionnaire study incorporated in a wider study of student wellbeing and peer mentoring (Chapter 7).

5.6 METHODOLOGY

5.6.1 Participants

The sample included 179 first year social science undergraduates from two separate universities. Both universities were campus, post 1960s universities based in England. Eighty two (N= 127) of the sample were female, and 68.6% (N= 109) residential students. The majority of the sample was Caucasian ethnic origin (86.5%), UK students (89.6%) and not declared disabled (89.9%).

5.6.2 Measures

For the entire questionnaire package refer to Appendix 4.

5.6.2.1 Student Welfare Scales (see above)

This study focuses on the 20 item student welfare scales developed in study 1. Cronbach α in study 2 = .82.

5.6.2.2 College Adaptation (See above)

5.6.2.3 The Perceived Stress Scale:

The Perceived Stress Scale (PSS) is a 14 item self report scale developed by Cohen, Kamarck, & Mermelstein (1983) to assess present (state) levels of stress. Participants are required to indicate how often they have felt each item, in the past month, on a 5 point Likert scale. 9 items indicate a perception of stress and 6 items indicate the opposite (reversed on analyses). Higher scores indicate higher levels of stress with a possible range of scores from 15- 75. Past research has indicated high internal consistency (α= 0.80) in the PSS and correlations in the predicted direction with life event scores, clinical symptomology, social anxiety etc (Cohen et al., 1983). One question specific to the area of academic stress was added: *'In the last month how often have you felt anxious about what is expected from you concerning your academic work'*. Cronbach α within the current study remained high: .72

5.6.2.4 Self Esteem

Current level of Self-Esteem was measured at both time points using Rosenberg's (1965) Self Esteem Scale (RES). The RES is a 10 item self report measure which requires the respondent to report feelings about themselves directly. The scale is scored using a four point response format (strongly agree, agree, disagree, strongly disagree), resulting in a score range of 10-40, with higher scores representing higher self esteem. Several studies have indicated the scale is a valid and reliable unidimensional measure of self-esteem. The RES has shown medium to high Cronbach α (0.77: Dobson, Goudy, Keith & Powers, 1979; 0.88: Fleming & Courtney, 1984). Negative relationships between RES and items representing low self regard have been reported by Fleming and Courtney (1984). For example, RES

scores have correlated negatively with anxiety and depression. The scale is not related to age, gender, work experience, marital status or grade point average (Fleming & Courtney, 1984). However, in a meta analysis conducted on 216 effect sizes, Kling, Hyde, Showers, and Buswell (1999) concluded that males do tend to score higher on the standard measures of global self esteem, but this difference is small with an average effect size of 0.21. Within this study there were no gender effects at either time point. Within the current study Cronbach $\alpha = 0.87$.

5.6.2.5 Social Support

Interpersonal Support Evaluation List (ISEL): Developed by Cohen, Melmestein, Kamarck & Hoberman (1985) to measure the functional components of social support. It is available in several versions however the short form (12 item) was adopted for the purpose of this thesis. There are three subscales within this questionnaire each with four items: appraisal (emotional) support, belonging support and tangible support. Items were scored from 1 (definitely false) to 4 (definitely true) Items were added after reversal of negatively worded items to give a total score with a range of 12- 44. For the 40 item inventory, reported internal reliabilities range from .88 (alpha coeff to .90 for the general population form of the ISEL. For the subscales test rest reliability and internal consistencey range from .70 to .80 with the subscales showing moderate correlations (Cohen et al. 1985). It also has good test-retest reliability (.70) over a six week interval for the overall score and the four subscale scores (Cohen et al, 1985). A study by Sarason, Sherin, Pierce and Sarason (1987) showed that the ISEL and the Perceived Social Support Scale (Prodicano & Heller, 1983) were all highly inter-correlated, suggesting that they all measure the same

construct. Within the current study Cronbach α indicated a high level of internal consistency; .89.

5.6.3 Procedure

Students were approached in a core social sciences lecture at both universities ten weeks into semester 1 of university. After a brief introduction regarding the purpose of the study and reminding the potential participants of their ethical rights and issues of confidentiality, questionnaires were handed out and completed at the beginning to ensure a greater return rate. Questionnaires took approximately 20 minutes to complete[7].

5.6.4 Ethical Considerations

Ethical approval was sought and granted form the University of Stirling, Psychology Department Ethics Committee in April 2004. Further approval was gained from Faculty Ethics Committees at the universities in question during the months of May and June (2004). As this was part of a longitudinal study there were specific issues of confidentiality and thus identifiers were required (date of birth and student initials). Identifiers were given on the consent form which was removed from the questionnaire package. Further to this, participants were informed that they could leave out any questions they felt uncomfortable answering and were debriefed with regards to the nature of the study after completion.

[7] Greater detail of study design, methodology and procedure is given in Chapter 7.

5.7 RESULTS.

5.7.1 Descriptive Statistics and Reliability Analysis

Using the new 20 item SWS measure, the mean score was 64.94 with a range between 34 and 98. This is comparable to the descriptive found in study 1. There was no significant difference in student wellbeing between the current sample and the sample in study 1: $t(230) = 0.952$, $p = .342$, 95% CI = -2.07 – 5.95.

No significant differences in gender were evident: $t(151) = 1.349$, $p = .179$. There was, however, a significant difference in age groups (traditional v mature students) whereby older students scored lower ($\overline{X}$ = 59.76, s.d. = 13.420) on levels of SWS in comparison to their younger counterparts ($\overline{X}$ = 66.59, s.d. 12.254): $F(1,152) = 5.175$, $p = 0.024$. This significance, however, decreases once accommodation type is controlled for (ANCOVA: $F(1,152) = 3.781$, $p = 0.054$).

Within this study reliability analysis was high with a Cronbach Alpha of 0.825 and split half analysis = 0.807. The two factors when analysed separately maintain acceptable alpha levels although lower than in study 1: psychological wellbeing $\alpha = .796$; social wellbeing $\alpha = .765$, indicating their usage as separate measures.

5.7.2 Item Analysis

Initial item analysis assessed the descriptive statistics and histograms of each of the items. If one item has little variation within it then it will add little variation to the whole measure and thus is not a plausible item within the whole questionnaire and should be removed (Boynton, 2004). All items showed a high level of variation

(variance range: 1.335 – 3.270 on a scale from 1-7) within them with the exception of item 1 (variance = .740).

In order to test the internal consistency of each scale item the mean, variance, sd and alpha were calculated for the whole scale with that item missing (e.g. when testing item 1, mean, variance and alpha are calculated for the rest of the scale once item has been excluded). This tests if any one item significantly impacts on the overall mean, variance or alpha. Secondly, item- total correlations were conducted to assess the level of relationship between particular items and the rest of the scale. Multiple squared *R* was also calculated by estimating the item from all other items (Kline 1994). Results can be found in Table 5.5

Table 5.5 Internal Consistency Using Item Analysis

	Summary for Scale: Mean = 61.691, SD = 12.72, Cronbach alpha: .825, Average inter-item Correlation:					
Variable	Mean if deleted	Variance if deleted	SD if deleted	Item-total correlation	Squared Multiple *R*	Alpha if deleted
Item 1	62.78	157.56	12.55	*.161*	.162	.825
Item 2	61.49	141.41	11.89	.513	.378	.810
Item 3	61.88	158.97	12.61	*.046*	.110	.831
Item 4	61.39	145.86	12.08	.406	.317	.815
Item 5	60.90	149.19	12.21	.390	.483	.818
Item 6	61.60	147.86	12.16	.380	.352	.817
Item 7	62.40	151.03	12.29	.234	.225	.822
Item 8	61.32	144.23	12.01	.465	.282	.813
Item 9	62.02	144.10	12.00	.465	.378	.813
Item 10	61.83	143.64	11.98	.513	.466	.810
Item 11	62.38	147.55	12.15	.472	.322	.814
Item 12	61.18	146.06	12.09	.519	.468	.810
Item 13	61.13	143.71	11.99	.469	.423	.814
Item 14	60.59	145.09	12.05	.492	.355	.811
Item 15	61.34	141.43	11.89	.521	.411	.808
Item 16	62.09	143.28	11.97	.350	.357	.822
Item 17	62.63	152.27	12.34	.234	.334	.826
Item 18	61.44	140.87	11.87	.565	.466	.808
Item 19	62.38	151.98	12.33	.329	.266	.819
Item 20	61.04	152.48	12.37	.248	.355	.823

As can be seen from the item analysis descriptive statistics and alpha are not overly affected by the deletion of any items, however the correlations highlight two items of very low consistency: item 1 and item 3 (one anxiety and one depression item). All the other items correlate between .234 and .565. All items except item 3 were significantly correlated although some were weak.

5.7.3 Psychometric Properties

Principle components analysis was repeated within study 2 using this separate sample in order to confirm the factors found in study 1. Scree plot analysis (Figure 5.4) again indicated 2 factors and loadings can be found in Table 5.6. As can be seen from Table 5.6 items loaded onto their respective factors as suggested from the rotation solution from study 1 with the exception of item 3 which did not load onto the psychological wellbeing factor but loaded (weakly) onto the social wellbeing factor. This finding plus the results from the item analysis indicate that this item may be redundant and should be removed from the scale.

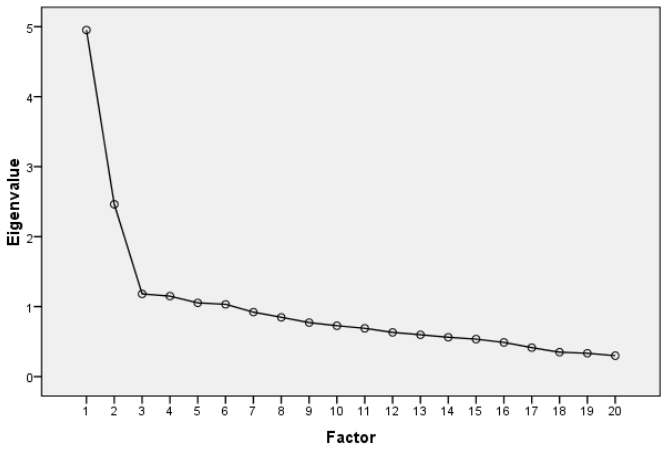


Figure 5.4 Scree plot for the 20 item student wellbeing scale (Study 2)

Table 5.6 Factor solutions for the 20 item student wellbeing scales (study 2)

	Items	Mean	SD	Factor Loadings 1	2
	Factor 1: Psychological Wellbeing				
1	I worry about what is expected of me concerning my work	2.16	0.86	**.293**	
2	I feel downhearted and depressed	3.51	1.47	**.568**	.251
3	I am not particularly discouraged about my future	3.09	1.22		**.131**
4	I find it hard to calm down	3.55	1.42	**.562**	.111
6	I feel tense and wound up	3.35	1.35	**.621**	
8	I am a lot more irritable lately	3.63	1.36	**.442**	.339
9	I feel 'run down'	2.92	1.41	**.641**	.110
10	I just can'*t* seem to get myself going	3.13	1.32	**.733**	
11	Worrying thoughts often go through my mind	2.59	1.22	**.566**	.191
14	I feel worthless	4.37	1.31	**.453**	.373
15	I have been unable to become enthusiastic lately	3.64	1.46	**.549**	.350
17	I feel more tired lately	2.33	1.29	**.565**	.246
19	I have difficulty concentrating	2.59	1.15	**.587**	
	Eigenvalue = 8.845				
	% Variance = 44.224				
	Factor 2: Social Wellbeing				
5	I feel part of a group of friends here	4.06	1.13		**.764**
7	There is so much going on here I rarely think of home	2.55	1.49		**.480**
12	I have settled in really well at university	3.76	1.15	.233	**.706**
13	I lack companionship here	3.81	1.43	.150	**.667**
16	If I go home for the weekend I feel excited about the prospect of coming back to university	2.85	1.82		**.597**
18	My social relationships at [university] are superficial	3.55	1.47	.300	**.660**
20	There are people I feel close to at [university]	3.90	1.20		**.588**
	Eigenvalue = 2.323				
	% Variance = 11.617				

Note. Components rotated using the oblique method direct oblimin

Suppressing items lower than .3 as suggested by Kline would lead to the removal of items 1 and 3 from the measure. This has little overall effect but does increase the overall α to .832 and increases the α level of the psychological wellbeing

component (where the two items were removed from) to .818. These items were retained because the SWS were used in full in chapter 7, however, in the future analysis would be run excluding these items.

5.7.4 Convergent Validity

Correlation analysis with the dependant variables of College Adaptation, Stress, Self Esteem and Social Support can be found in Table 5.7:

As shown by Table 5.7 all scales are strongly related in the expected direction specifically those scoring high on the SWS are also scoring high on college adaptation, social support, self esteem and low on levels of stress.

Table 5.7: Correlational analysis of each of the measurement variables.

		1	2	3	4	5
1	Student Wellbeing (SWS)		.64**	-.48**	.59**	.34**
2	College Adaptation			-.47**	.40**	.44**
3	Perceived Stress				-.49**	-.26**
4	Self Esteem					.20*
5	Social Support					
	Mean	**64.94**	**88.07**	**42.49**	**28.84**	**37.33**
	SD	**12.72**	**18.68**	**5.92**	**4.43**	**7.58**

Key: * $p = 0.01$, ** $p = 0.001$

5.8 GENERAL DISCUSSION

This chapter has detailed the psychometric development of a measure of student wellbeing. A two factor model (psychological wellbeing and social wellbeing) was shown to have a stable factor structure, excellent internal validity, and convergent validity.

5.8.1 Assessment of Student Wellbeing

Two dimensions were derived from this measure: one factor incorporated items of anxiety and depression and could be labelled psychological distress, whereas the second factor contained items relating to homesickness and loneliness and thus could be termed social distress. Both studies supported the factor structure although item analysis and further principle components analysis within the second study highlight two anomalies within the data set. It is possible that these two items could be removed from the measure. However, as the two items were loading at a much higher level within study 1 further research is required to confirm this.

Research into student wellbeing usually relies on multiple measures which could prove cumbersome. The questionnaire detailed within this study is shorter in length but encompasses several areas of potential student distress. Past empirical research indicates that students can experience a multitude of psychological stress, particularly during the transition to university, and this is mostly measured using separate scales of depression, stress, loneliness and homesickness. The high level of internal consistency at the overall level and at higher order factor level (2 factor solution) highlights the flexibility of this measure within student wellbeing research.

The biggest predictor of student wellbeing scores was that of the general health questionnaire, followed by college adaptation and orientation to life. None of the other measures were significant in the regression analysis. This was expected as according to Diener (1984) and Diener, Suh, Lucas, & Smith (1999) affect and satisfaction are independent factors within the theory of subjective well being one would expect them to be associated but not predictive. The relationship between General Health Questionnaire (GHQ 28) and student wellbeing scales (SWS) had a high effect size (r = .83) highlighting a large degree of overlap, however the general health questionnaire does not include items on homesickness and loneliness both important issues for students arriving at university for the first time. The GHQ 28 is also often used in the diagnosis of psychiatric disorders and thus is not necessarily directly applicable to the student population.

5.8.2 Limitations

Both studies were cross sectional and there is a clear need for further longitudinal research to further validate and refine the measure. Further to this, true measures of discriminant and predictive validity can only be acquired through longitudinal research. However, assessing the stability of a wellbeing construct using a student population may also depend on the time of measurement. Research has indicated that many students experience a degree of psychological and social distress on entering university in line with any other major transition or major life event. It would thus be expected that wellbeing would not remain a stable construct. However, levels of student wellbeing were stable across the two samples despite the use of different universities and different time points (sample 1 assessed during the

middle of their fourth semester; study 2 assessed before exams in their second semester at university). Given the literature on changes in wellbeing over time at university one might expect differences within the scores but this is not the case in the current study, although variance was greater within study 1 the two cohorts were not significantly different from one another.

Although both studies found almost identical factor solutions the stability of the components varies between the two studies. This may be due to the small sample sizes of both (indicating error) particularly within study 1. Although Barrett and Kline (1981) argue that the absolute minimal sample size rule is not empirically tested and their research using data simulation studies found a minimum of 50 was adequate other research has highlighted the increases in error variances as sample size decreased which was evident in the overall model of explained variance. In this case the model in study 1 (smaller sample) showed a much higher level of variance explained than that from the model in study 2 which appears to support this finding.

5.8.3 Conclusion

The two factor model produced from both samples indicated a highly reliable and internally consistent measure which could be used as a unidimensional measure or multidimensional measure when applying to the student population. However, longitudinal research is required with larger sample sizes to further validate the measure.

Part C: Evaluation of Peer Mentoring in Higher Education

Chapter 6
Availability of Peer Mentoring in UK Higher Education

ABSTRACT

Peer mentoring has increased in popularity in both USA and UK Higher Education, but definitions of mentoring are diverse and problematic. Little is known about the availability of mentoring within UK Universities and evaluative research is minimal and generally methodologically flawed. This current study aims to investigate the availability of peer mentoring in UK universities in the academic year 2003/04 and consider the possible benefits using student attrition and other performance indicators (HEFCE). Using data from postal surveys and web searches in 94 UK universities suggests that 34 (36.2%) UK universities provided incoming first year students with a formal peer-mentoring scheme and most of these were at a piloting stage (22, 64.7%) at the time of the study, highlighting the recent increase in popularity and perceived benefits. Fourteen of the piloting schemes were initiated for widening participation and /or retention reasons. Universities with established schemes had consistently lower dropout than expected in relation to their calculated benchmarks, and those piloting schemes had consistently higher dropout according to performance indicators taken in the academic year 2001/02. Universities with piloting and established schemes also differed significantly in terms of non-continuation statistics. Results are discussed in relation to the government's widening access targets in Higher Education and are important for providing baseline information and a context for the evaluation of peer mentoring in Higher Education.

6.1 Introduction

Attendance and retention in UK Higher Education have been increasingly important concepts since 1997 when the government established a target of 50% of all individuals under the age of 30 having access to Higher Education (DfES, 2003). In order to reach this target Higher Education needs to diversify (not simply increase) the student population by recruiting from previously 'under represented' groups which has led individuals to argue that dropout figures will also increase (Archer, Hutchings & Ross, 2003). The close association between prior academic achievement and retention has often been observed (House of Commons, 2001; NAO, 2002) therefore individuals with higher grades in A levels and Scottish Highers' are more likely to remain in university than their lower grade counterparts. Further to this Thompson and Corver (2000) note that mature students experience lower levels of completion (70%) in comparison to their younger counterparts (82%) within UK universities. Despite these findings the association between social economic status (SES) and completion remains unclear, as an individual's occupational code often goes unrecorded. It is, however, a popular belief that this association exists, possibly deduced from performance indicators and league tables where higher numbers of 'non traditional students' are highly correlated with higher dropout rates (Archer et al., 2003). This paper examines peer-mentoring schemes within universities as a response to retention issues, with reference to student withdrawal and the expanding Higher Education system within the UK.

Within this study peer mentoring will be defined as second, third, or fourth year students mentoring incoming first year students. Peer mentoring can be across any of the years; however, first year is of particular interest in this study.

6.1.1 Mentoring and Higher Education.

Mentoring has become increasingly popular within the USA (Jacobi, 1996) with many universities developing schemes in order to target 'at risk' students and problems with attrition. During the 1990's there was a surge of interest in mentoring within Higher Education. A review of the ERIC search data base conducted in 2003 indicated that 1979 articles contained the words 'Mentor*' and 'Higher Education'; Figure 6.1 displays how interest in mentoring has increased from 1973 to date, particularly within the last decade.

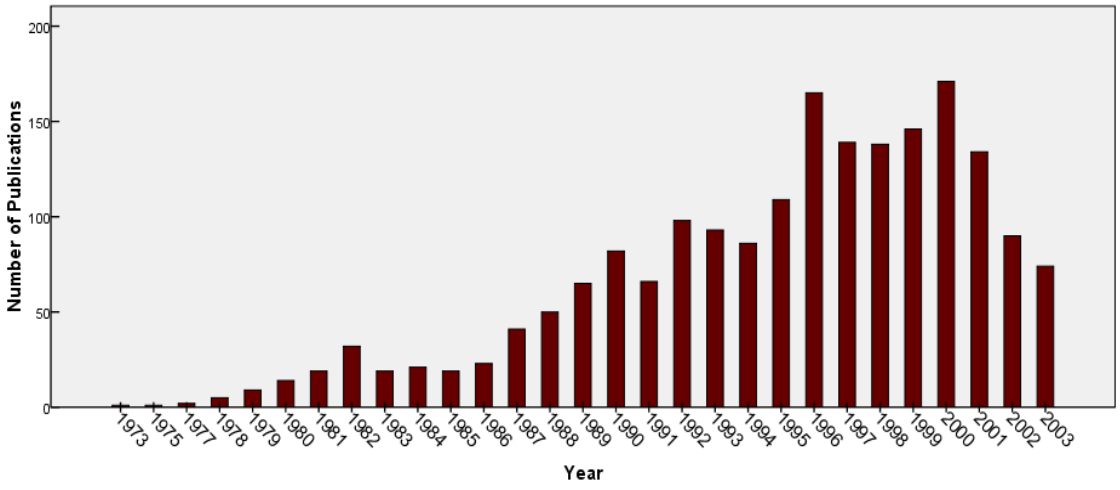


Figure 6.1: Review of the ERIC database carried out in 2003 on articles containing both the words 'mentor' and 'Higher Education' by year of publication.

Jacobi (1991) argues that mentoring in Higher Education has become a "retention and enrichment strategy" (p. 505). Although the business and management literature has consistently concluded that mentoring enhances job success and advancement, with mentored individuals progressing higher up the organizational ladder than their

non-mentored counterparts (Hunt & Michael, 1983). Can these same benefits be generalized onto formal peer mentoring programmes in Higher Education?

Mentoring in Higher Education can take several forms: professionals mentoring students often associated with placement degrees (nursing, teaching); faculty mentoring undergraduates; and more recently peer mentoring. The use of other students offering support is driven by the observation that may feel more comfortable approaching another student rather than academic staff and formal support services (McKavanagh, Connor & West, 1996; see literature review 1 for a full description of peer mentoring). Several universities within America have developed 'buddy schemes' (whereby current students are paired up with incoming students to offer advice, guidance and support) which concentrate on a range of issues including adjustment to university, career development, and leadership skills development. Many have been specifically developed to retain students or target students at risk of attrition by aiming to improve levels of academic success. Systematic evaluation of these programs, however, remains scarce and has methodological problems (Jacobi, 1991).

Research has, however, identified several positive effects of mentoring as well as linking schemes with university success and retention such as lower dropout and higher grades (GPA) amongst mentored students in comparison to their non-mentored counterparts (see literature review 1 for a full review). Given the many positive effects of mentoring that have been identified it is easy to see why there has been an increase in interest especially with regard to Higher Education and retention. However, one of the critical issues in the mentoring literature is a lack of a unified definition making the evaluation of a scheme as well as comparative research difficult due to differences arising amongst peer mentoring schemes.

6.1.2 Distinguishing Mentoring from Tutoring.

One of the major issues within the mentoring literature is the lack of agreement in definitions, and this inconsistency is evident in the diversity of schemes offered. Many of the American programmes overlap heavily with peer tutoring, where the outcome and emphasis is on learning support and subject learning: for example the Mentoring Transcript Program, which was developed and run within the University of San Diego (Cosgrove, 1986). This program was heavily focused on academic success as well as adjustment and the mentor was defined as a member of academic staff who was a resource to the student in areas outside academic classes. Miller (2002), however, argues that university schemes are variations around one theme that should be placed under an umbrella term of 'peer helping' which will include all the activities of peer mentoring, peer tutoring, peer counselling, peer coaching etc. Although the literature in peer tutoring is vast, little research has been conducted on peer mentoring per se. For example in reviewing the literature on peer tutoring, Topping (1992) identified 28 previous reviews and meta-analyses mostly conducted within schools. A distinction between mentoring and tutoring can be made in that tutoring often takes place in a group format whereas mentoring is one-to- one (Miller, 2002). Also peer tutoring relates to the transfer of academic information, whereas peer mentoring goes further by providing both academic and emotional support and works not only on the transfer of knowledge but also on the process of understanding, contextualizing that information and on individual well-being.

According to Kram and Isabella (1985), mentors serve two separate, yet equally important functions. Their typology consisted of 'career-enhancing functions' focused on sponsorship, coaching and offering challenging work and 'psychosocial functions' focused on role modelling and counselling. Although developed through

studies on young people, not necessarily in Higher Education, this typology can also be extended to tertiary level education with a much stronger emphasis on 'psychological functions' particularly within the first year of Higher Education. Table 6.1 links the typology of mentoring to Higher Education.

Table 6.1: Linking the Kram & Isabella (1985) typology with Higher Education

Career	Psychosocial
Career Enhancing Skills e.g.	Psychosocial Functions e.g.
➢ Coursework	➢ 'Hidden Curriculum'
➢ Writing (lab and essay)	➢ Social Support
➢ Confidence	➢ Emotional Support
➢ Learning strategies	➢ Role modelling

A further mentoring role, especially relevant for mentoring the 'non traditional student' is that of role modelling. Social Learning Theory (Bandura, 1977) emphasises the effect that observation and role modelling can have on learning and can strengthen expectations regarding the ability to perform tasks successfully. In relation to peer-mentoring, having seen their mentor succeed may help raise the confidence of the mentees.

Several authors have noted the importance of the first weeks at university in shaping an individual's decision to withdraw (e.g. Earwaker, 1992; Fisher & Hood, 1987, 1988; Van Tilburg, 1996) UK National statistics indicate that withdrawal is more likely to occur within the first year but many argue that it is in the first few weeks where most dropouts occur. The foundation of schemes aimed at promoting

early adjustment is that successful transition depends upon integration of students into university at an academic and social level; both considered key factors in the progression, commitment and achievement of students (Tinto, 1993). The literature on undergraduate adjustment also indicates that a lack of social support is a powerful factor in withdrawal (Lamonthe, 1995; Halamandaris & Power, 1996). Peer mentoring can be viewed as both an academic and a social support agent.

Much of the mentoring literature refers to its growing popularity, including within Higher Education, but no research to date has attempted to assess the frequency of schemes within USA and UK Higher Education. This paper aims to assess the prevalence of peer mentoring schemes within the UK. Such information is important due to the increasing popularity of peer mentoring, yet the lack of valid quality evidence for its benefits. A survey of the availability of UK Higher Education peer mentoring schemes will provide a baseline for future research. Establishing this baseline will also allow other universities to evaluate the benefits of developing peer mentoring schemes in relation to retention. The information yielded from such a survey will also provide useful information on the diversity and prevalence of mentoring schemes available within the UK. A survey of peer-mentoring schemes could also aid collaboration and communication between universities with such schemes in order to establish a code of best practice for peer mentoring.

Peer mentoring is both important and problematic; in order to successfully implement and establish such schemes within Higher Education it is important to understand the context of UK Higher Education.

6.1.3 AIMS and OBJECTIVES

The main aim of this research was to identify the number of peer mentoring schemes available in UK universities within the academic year 2003/2004 and discuss their impact on retention. This would allow the development of a database of available schemes and best practice.

Also this research aims to identify what types of schemes are available, i.e. peer-mentoring with a social support element or peer tutoring with an academic teaching element. It also asked how long they had been running and the reasons for developing a scheme. Given the recent interest in widening participation and retention of students it is expected that the more recent schemes would have been developed for retention and / or widening participation reasons.

This research also aims to assess the relationship between duration of scheme and retention using performance indicators of non-completion. It is hypothesised that universities with established peer mentoring schemes will have significantly better retention than others once benchmark criteria have been considered.

A further aim is to assess the relationship between type of university and level of student diversity in relation to the availability of peer-mentoring schemes. Anecdotally there is an association between these variables whereby newer universities have greater student diversity; however, no statistics are currently available on this.

The first year student experience is deemed important and the first few weeks of university life, particularly so. The focus of peer mentoring schemes within this survey is therefore on 2nd and 3rd year undergraduates mentoring incoming first year undergraduates as they embark on their academic careers. Peer tutoring schemes

rarely focus on adjustment issues, but focus on academic achievement. Therefore projects labelled as peer assisted learning or peer tutoring will be excluded. However, schemes that have an element of academic peer mentoring within them but focus largely on social adjustment will be included within the analysis. Also peer counselling projects (such as nightline) will be excluded.

6.1.4 Research Questions:

1. How many universities within the UK have a peer mentoring scheme? How many of these schemes are piloting (1-2yrs) and how many are established (3+ yrs)?
2. Is the duration of scheme associated with the type of university within which it is found?
3. How many schemes fit the full criteria of a peer mentoring scheme as set out by this paper? Were the identified schemes set up for widening participation/ retention reasons or for some other reason? Is there a relationship between type of scheme, reasons for initiating the scheme and the duration of the scheme?
4. How many universities have conducted an internal evaluation of their schemes and in general what have been their conclusions?
5. Are there significant differences in the performance indicator of non-completion between universities without a peer mentoring scheme, those currently piloting a scheme and those universities with an established scheme once type of university has been controlled for?

6. Is type of university related to student diversity and can the presence of peer mentoring moderate this relationship.

The following set of criteria should be met within this study: mentors should be voluntary; training should be available to mentors, matching of mentors and mentees and available to the whole university

6.2 METHODOLOGY

This study adopted a mixed method approach to assess the availability of peer mentoring schemes in UK Higher Education. A questionnaire based survey was carried out to establish what peer support schemes were available, followed by telephone interviews to obtain more information where peer-mentoring schemes or peer tutoring were evident. Web searches were carried out specifically for universities who failed to respond but also to assess department/ faculty level schemes which may not necessarily be known to university welfare or careers services. The research also uses national Higher Education statistics provided by HEFCE for the years 2000-2001 (reports 2002- 2003) in order to conduct comparative analysis between universities with and without peer mentoring schemes.

Universities within the UK were identified with the use of the UK Universities and Colleges website (http://www.scit.wlv.ac.uk/ukinfo/alpha.html). The following universities shared the same website and were thus treated as one: The De Montford universities, London and its separate colleges, and Lincolnshire and Humberside. University sector colleges and specialty universities/colleges such as the University of London, Institute of Education were excluded as the focus of this study was on the mainstream universities. The UK campus of foreign institutes (2) and professional and postgraduate institutions were also excluded (4) as the main interest is with the undergraduate transition to university. In total there were 94 UK universities included in the survey (UK = England, Wales, Scotland and Northern Ireland).

6.2.1 Measures

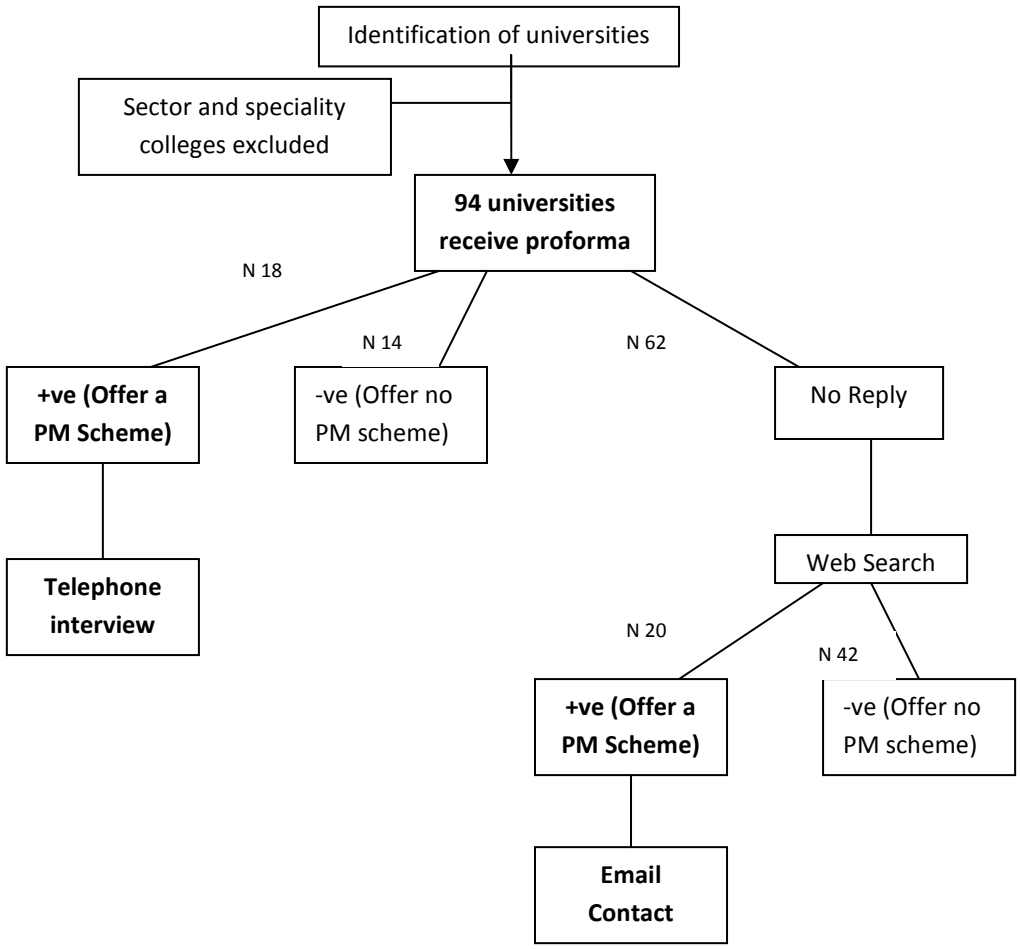
The research took place in 2 phases:

1. **Phase 1**: A short proforma based on key aspects drawn from the literature was constructed by the author and used to assess peer support activities: including peer mentoring, peer tutoring, ambassador work (introduction of students to campus within week 1 at university) and peer counselling (often called Nightline). Because the focus of this paper was on peer mentoring the other peer support schemes were not analysed further, their inclusion on the proforma was purely for helping universities to distinguish between their schemes.
2. If a university had indicated the presence of a peer support scheme they were asked briefly to describe it. This allowed the author to ensure the scheme fitted the criteria of peer mentoring as adopted by this study and specifically that the scheme was not peer assisted learning.
3. Further questions focused on the duration of the scheme and funding of the scheme (see Appendix 2 for full proforma).

Phase 2: A telephone-based, closed interview was conducted with all individuals who responded to Phase 1 stating that they had a scheme. The main questions of interest were: 1) reasons for initiating the scheme, 2) the duration of the scheme, and 3) whether an internal evaluation had been conducted (please refer to Appendix 2 for complete interview schedule).

For a diagrammatic demonstration of this procedure including the number of universities taking part at each stage see Figure 6.2

Figure 6.2: Procedure followed for this study



Research was conducted over three months from October to the end of December 2003. After initially identifying an address from the University website, the proforma and a stamped addressed envelope was forwarded to the Support and Welfare services. Universities who completed and returned the proforma were

followed up with a short telephone interview if they had indicated that the university ran a mentoring scheme, to provide more in depth data. Non-responses underwent extensive website searches using the following key words: Mentoring, Peer mentoring, Student Ambassadors, Peer guide, Buddy and Widening Participation. For any further mentoring schemes identified using the web search, the coordinator was contacted via email and the proforma, and written interview questions were forwarded to them. Non-responders of this phase underwent further web searches in order to gather as much information as possible regarding mentoring schemes. Limitations of the sample can be found in the discussion.

6.2.2 Evaluation of the Quantitative Data:

Indicators selected for this study reflect diversity in institutions (HEFCE 1999). The performance indicators used within this research are from the HEFCE Annual Reports 2002 through to 2003. These reports follow students who enter education in the academic year two years prior e.g. the 2003 report follows students entering Higher Education in the academic year of 2001. The reports do not consider students who withdraw in their second and third year (or fourth year for Scotland); however, most withdrawals (between 80 & 90%) occur within the first year (HEFCE 1999). Table 6.2 lists the performance indicators selected for this study:

Table 6.2 Performance indicators used within quantitative analysis within this study.

Performance indicator	Description
% Non-completion	The proportion of any given entry cohort of full time first-degree undergraduates who had not completed their degree course and does not include people who have transferred.
Adjusted sector benchmarks	Benchmarks make an allowance for both the subject mix of the institution and the qualifications required for entry and provide a predicted percentage non completion. It is difficult to compare institutions whose benchmarks are very different, as they will have quite different characteristics. Benchmarks are not targets but are a reflection of the universities' characteristics[8].
'Benchmark - [minus] Non completion'	Calculates whether non completion is lower/ higher than expected and thus allows comparisons across universities. If the resultant figure is negative then universities have a higher withdrawal rate than expected with regard to their benchmark specifications. For example if a university has a benchmark non completion rate of 14% and an actual dropout of 17% then their resultant 'benchmark – non completion' score will be -3.
Student Diversity	Calculates the actual mix of students using the access data from HEFCE: Σ % lower SES, % state school, % mature students, % from low participation neighbourhoods[9]/ 4. Higher figures equate to higher levels of student diversity.
% Qualify	The proportion of students who are still in the institution or who have obtained a qualification.

6.2.3 Type of University

Given the anecdotal link between student diversity, withdrawal and university type is it important to assess these characteristics within the different types of universities. Information gained from http://encyclopedia.thefreedictionary.com established definitions of types of university. Research into the university's history,

[8] For further information on University Benchmarks refer to Higher Education Statistics Agency (HESA), HEFCE and Jackson and Lund, 2000)

[9] Low Participation Neighbourhoods: Calculation of Higher Education participation rates of people entering a Higher Education institution or a Further Education college aged 18-19. Students are allocated to their neighbourhoods on the basis of their postcode. Those students whose postcode falls within wards with the lowest participation are denoted as being from low participation neighbourhoods (HESA)

accessible from individual websites, provided data for the university type. The following definitions are based on the date when the university was established:

Table 6.3: Definitions of university type

University Type	Definition
OLD	Founded before the 19th century
RED BRICK	Founded in the industrial cities of England in the Victoria era and achieved university status before World War II.
GLASS PLATE	Founded in the 1960's following the Robbins Report on Higher Education
NEW	Former Polytechnics or colleges given the status of universities by the UK government in 1992

6.2.4 Procedure

Figure 6.2 provides a detailed flow diagram of the procedure followed.

6.2.5 Ethical Considerations

Ethical permission was sought and gained from the Stirling University Psychology Department Ethics Committee in October 2002. Given that this was a large scale survey, and data base, there were particular ethical concerns regarding the distribution of information. Any information gained from internet searches is within the public domain; however, information gained via mailing and telephone interviews falls under the data protection act. Therefore individual identifiers (the universities) remained anonymous within the write up and analysis of the current study. Any personal details were destroyed after study completion.

6.2.6 Data Analyses

Due to the large standard deviations within the performance indicators, medians and ranges are reported. Non- parametric statistics were conducted due to the variability and small size of samples.

Analysis was carried out in three stages. The first describes the number of peer mentoring schemes available in UK universities, why these schemes were set up and who for. This section also looks at associations with the type of university analysed via Chi square analysis and also any association between duration of scheme, type of scheme and reasons why it was set up in the first place. Due to small sample numbers this is descriptive in nature. The second section focuses on differences in non-completion between universities with no peer mentoring scheme, those that have a piloting scheme and universities with an established scheme. As non-parametric tests do not allow for covariate variables and universities with very different benchmark criteria should not be directly compared (HEFCE) an additional variable (benchmark – dropout) was calculated to allow for this comparison. The final stage describes the universities involved within this research: their numbers of 'at risk'[10] students and non-completion in accordance with the type of university. Further to this student diversity was correlated with benchmark- dropout for all universities involved and then separately for universities with a scheme, universities piloting and universities who do not offer a scheme in order to assess any moderating effects of peer mentoring on the relationship between student diversity and withdrawal.

[10] 'At risk' students are defined as those that are considered 'non-traditional' in the university setting. Individuals from lower SES, low participation neighbourhoods, mature students, part time students, and individuals with disabilities.

6.3 RESULTS

6.3.1 Background

Six universities within this analysis were excluded either because their website was unavailable at the time of research (2 universities) or individual data was not available (4 universities)

In total data from all 94 universities were used within this analysis. Universities were primarily categorised by type, as one would expect differences in entrants and student diversity between the old universities and newer ones. Within this population there were 7 Old universities (7.5%), 19 Red brick (20.2%), 24 Glass plate (25.5%) and 44 New universities (46.8%).

6.3.2 Research Question 1: Peer mentoring schemes- what is available?

Out of the 94 universities surveyed, 34 (36.2%) were currently offering peer mentoring schemes. Twenty two (64.7%) of these schemes were in their first year at the time of data collection, indicating that the scheme was launched in the academic year of 2002 or 2003. Six (17.6%) had been running between 3-5 years and only four (11.8%) were longer-established schemes, with the longest being nine years. Further to this 5 implied that they would be setting up a peer support scheme within the next 5 years.

6.3.3 Research Question 2: Is there an association between scheme duration and university type?

Table 6.4 demonstrates the association between scheme duration and type of university. As can be seen, established schemes are more likely to be found in glass plate and older universities whereas piloting schemes are more common within the new universities.

Table 6.4: Number of peer mentoring schemes: duration of scheme x type of university

	Duration			
Type of University	***None***	***Piloting***	***Established***	***Total***
Old	3	2	2	**7**
Red Brick	10	6	2	**18**
Glass Plate	14	4	6	**24**
New	33	10	0	**43**
Total	**60**	**22**	**10**	**92**

* The length of two schemes is unknown

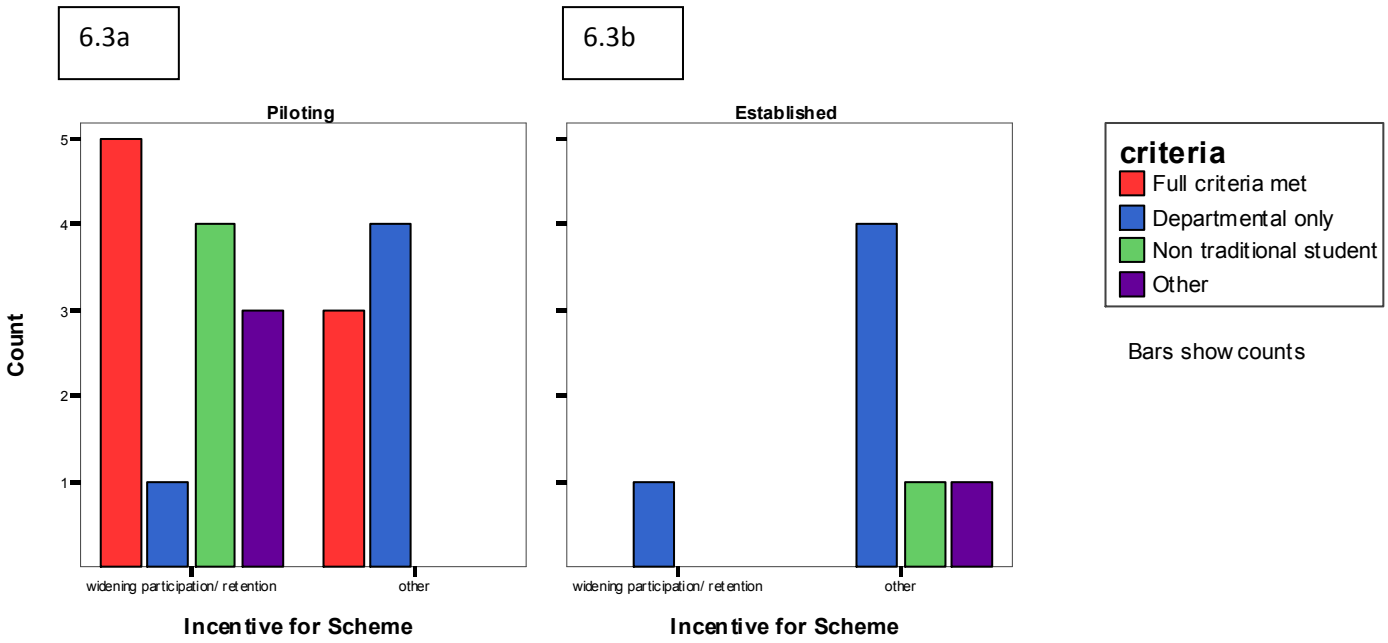
The highest proportion of established schemes can be found within glass plate universities with no established schemes within the new universities. The highest proportion of 'no schemes' and 'piloting schemes' can be found within the new universities.

6.3.4 Research Question 3: Types of scheme available and reasons for establishing a peer mentoring scheme

Although several universities indicated mixed reasons for initiating a peer mentoring scheme only the individual universities' main reasons are analysed.

Using information gathered via interviews and web searches it was found that 61.7% (N = 21) of the schemes were initiated for widening participation reasons. These reasons include increasing the intake of and decreasing withdrawal amongst 'non-traditional' students, and individuals from low participation neighbourhoods. Reasons also included the retention of students in general, especially where withdrawal is perceived as a problem by the university and/ or department concerned. Also only 13 (38.2%) of the peer mentoring schemes were available to the whole student body, 13 (38.2%) were only available at a departmental or faculty level and 6 (17.6%) only to the non-traditional student. Using the criteria set at the beginning of the study only 8 (23.5%) were considered to be a full peer mentoring scheme as 19 (55.8%) were not available to all students and 5 (14.7%) did not meet the specified criteria, i.e. they involved payment of mentors, no training for mentors or not matching mentors to mentees. All universities with any peer mentoring scheme were included within the analysis as the numbers were too small to conduct any meaningful analysis without.

The three-way interaction displayed in Figures 6.3a and b show the number of schemes initiated for widening participation reasons versus other reasons, and the number of schemes falling into each criteria category, for those schemes that were in the piloting phase (a) and those within the established stage (b)



* Criteria 'other' includes: payment of mentors, no mentor training, no matching of mentors and mentees

* Incentive 'other' includes anything that wasn't retention/ widening participation orientated.

Figures 6.3a & b: three way interaction of number of schemes falling into categories of duration of scheme, reasons for initiating the scheme and whether or not full criteria were met.

As can be seen from Figures 6.3a and b more recent schemes were more likely to have been set up for widening participation and/or retention reasons. Out of the 15 schemes initiated for widening participation and retention reasons, 14 were piloting (93%). In contrast, only half (7 of the 14 schemes) that were set up for reasons other than retention and widening participation were piloting at the time of questioning. The relationship between duration of scheme and reasons for initiating the scheme was significant: Fishers Exact, $p = 0.014$. Figures 3a and b indicates that university wide schemes and those offered to the 'non-traditional' students were more likely to have been initiated for widening participation/ retention reasons. Whereas schemes only available at departmental and/ or faculty level were more

likely to have been initiated for reasons other than retention and widening participation. Table 6.5 provides some reasons regarding establishing a peer mentoring scheme.

Table 6.5: Reasons for establishing a peer mentoring scheme.

Reason	Example	N
Retention	◦ Decreasing levels of withdrawal	14
Widening Access	◦ Targeting 'non-traditional students' only	4
Information	◦ Point of contact during the first difficult weeks	5
Social Support	◦ Identifying isolated students early/ expanding pastoral care system	4
Welfare	◦ Improving overall student service provision	2
For mentors	◦ Personal development strategy	2
Academic	◦ Formalize the learning process	3

Note: Universities could give multiple reasons. Information not always available.

6.3.5 Research Question 4: Internal evaluations of the Peer Mentoring Schemes available

Of the 21 universities who completed a telephone interview, 12 had conducted internal evaluations with 6 more planning on evaluating the scheme within the next year. Most of these internal evaluations were conducted via questionnaires to the mentees, although two questioned the mentors and a further two questioned both mentors and mentees. All evaluations concluded that the scheme was 'broadly successful'. Some of the benefits identified by internal evaluations can be found in Table 6.6

Table 6.6: Benefits of peer mentoring within university for both mentor and mentee

Mentors	N	Mentees	N
➢ Personal Development	4	➢ Role Modelling	1
➢ Time Management	2	➢ Social Support	5
➢ Interpersonal Skills	4	➢ Academic Support	2

Note: Evaluations not always conducted or information not always available.

Via a survey of both mentors and mentees one university stated that 90% found it extremely useful and its survey of 179 mentees noted that 10% believed they would have left if it was not for their peer mentor. This university concludes that "Peer Mentors were having a significant effect on withdrawal". Six universities note the increasing usage of schemes paralleled by the increasing numbers of volunteers who say they "feel the scheme had helped them to adjust and wanted to help others do the same". Problems with the schemes are also noted including coordination, timing, screening, payment, training, and dedication of the mentors. The main worry for nine of the universities was that the mentee would not initiate the relationship with the mentor.

6.3.6 Research Question 5: Are there significant differences in non completion between universities with no peer mentoring scheme, those currently piloting and those with an established peer mentoring scheme?

Non-parametric analysis was used to compare the differences in benchmark-dropout between universities with no peer mentoring scheme, those that were piloting in the year 2003, and universities who ran an established scheme. Analysis was conducted for the academic years 2000 and 2001. Follow up analysis was

conducted in the form of Mann Whitney U Test with a Bonferroni correction applied for multiple testing. Results can be found in Table 6.7. Figure 6.4 demonstrates the levels of dropout in relation to benchmark criteria with reference to the expected level of zero throughout four years (1998-2001) and categorised by duration of peer mentoring scheme.

Table 6.7: 2 year comparison between universities with no peer mentoring scheme, universities piloting and those with an established peer mentoring scheme on the performance indicators of non- completion with follow up post hoc analyses.

	NONE (N = 62) 1			PILOTING (N = 22) 2			ESTABLISHED 3			$\chi 2$	SIG	POSTHOC ANALYSIS		
	$\overline{x}$	Med	Range	$\overline{x}$	Med	Range	$\overline{x}$	Med	Range			1 v 2	1 v 3	2 v 3
All 2000	0.46	1	-7 > 6	-0.50	0	-5 >2	1.70	2	0 >3	**10.65**	**0.005**	$p = 0.104$	$\mathbf{p = 0.012}$	$\mathbf{p = 0.001}$
All 2001	0.03	0	-8 > 5	-0.82	0	-6 > 3	0.70	1	-2 > 3	**6.89**	**0.032**	$p = 0.038$	$p = 0.326$	$\mathbf{p = 0.014}$

Note: All = Total entrants. Med = Median. Bonferroni correction applied within the post hoc analysis for each year: 0.05/3 = 0.016. 0 indicates a level of dropout that matches the universities benchmark calculation, negative implies higher dropout than expected and positive implies lower dropout than expected.

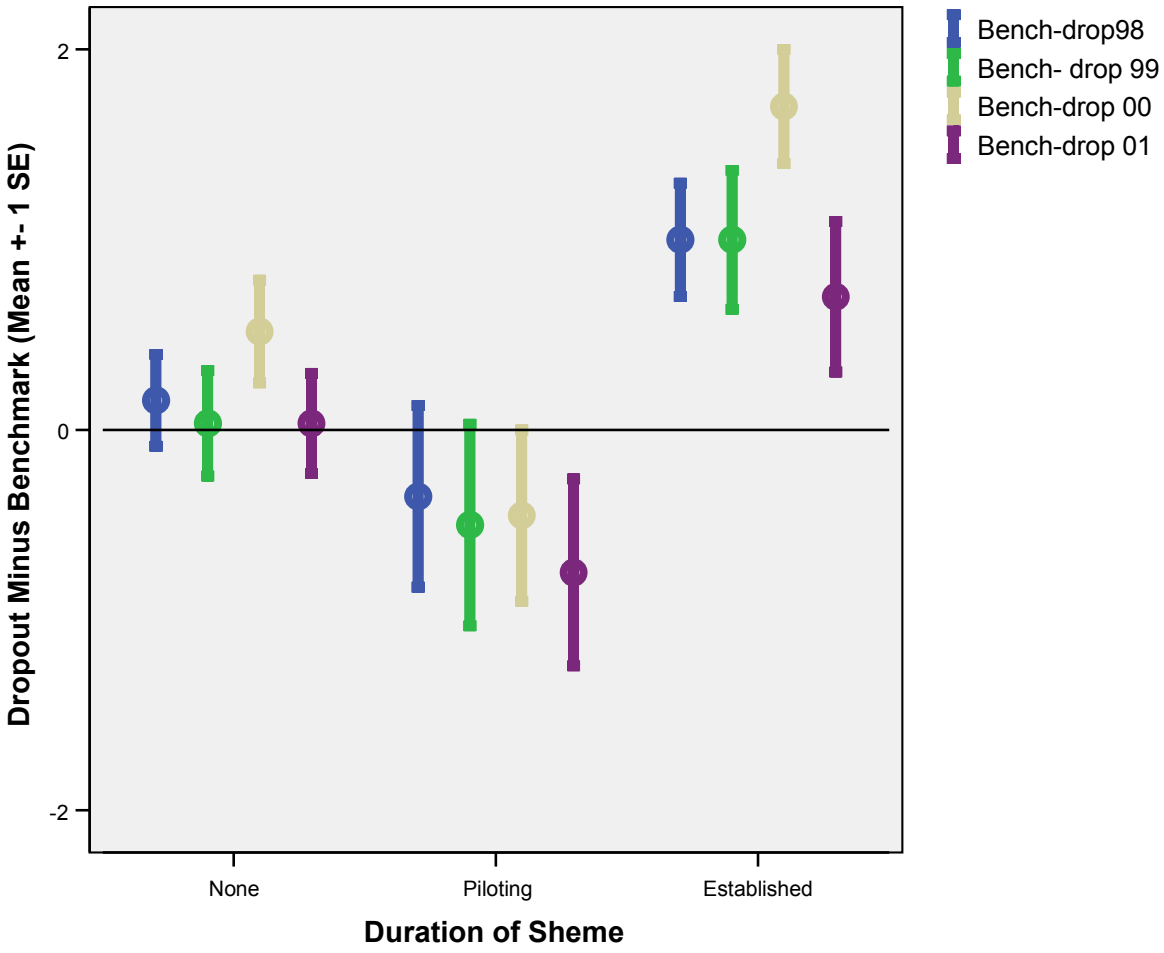


Figure 6.4: 4 year comparison between universities with no peer mentoring scheme, universities piloting and those with an established peer mentoring scheme on the performance indicators of non-completion (controlling for benchmark criteria) for all entrants, with follow up post hoc analyses.

Table 6.7 and Figure 6.4 conclude that in the case of total entrants into Higher Education there are significant differences between universities with a peer mentoring scheme and those without on levels of non-completion in the years 2000 and 2001. Post-hoc analyses indicate that universities with established schemes have significantly lower non-completion than expected in comparison to piloting schemes which have higher non-completion than expected in accordance with their

benchmark criteria. Universities with no peer mentoring scheme are not significantly different from universities with a piloting scheme but are significantly different from universities with an established scheme for the year 2000. Established scheme universities have significantly lower levels of non-completion.

6.3.7 Research Question 6: Is there a relationship between student diversity and university type and can this relationship be moderated by peer mentoring?

Table 6.8 displays the means and standard deviations of the percentages of mature students, state school attendees, and individuals from low SES and low participation neighbourhoods (LPN) attending university comparing the types of universities. Table 6.8 also includes the results of one-way ANOVA showing significant differences between the different types of universities. Post hoc analyses revealed that for the % mature students, % in low SES and % from LPN , 'old', 'redbrick' and 'glass plate' were significantly different from new universities to the $p = 0.001$ level but not significantly different from one another. The case is the same for percentage who qualify (complete their degree), however, the significance is lower. Therefore when comparing 'old' and 'red brick' with new universities there are significant effects to the 0.01 level, however, the difference in qualification (completion) rates between 'glass plate' and 'new' universities is at the 0.05 level. In the case of % State School attendees all universities were significantly different from one another with a steady increase in the percentage of state school attendees from old to new universities.

Table 6.8: Means, standard deviations, F values and Post Hoc Tests comparing each type of university on the percentage of mature students, percentage from state school, percentage of low SES and percentage from low participation neighbourhoods (LPN).

1: OLD	2: RED BRICK	3:GLASS PLATE	4:NEW	SIG
N = 7	N = 18	N = 24	N = 43	

Entrants	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F	η_p^2	Post Hoc
% Mature	**08.71**	3.82	**13.16**	7.69	**16.29**	8.41	**30.83**	10.99	25.80**	.486	4 v 1,2,3 > p=0.001
% State	**67.57**	12.99	**81.00**	11.47	**86.38**	8.03	**94.00**	5.14	27.37**	.477	All comparisons p = 0.001
% Low SES	**15.00**	5.69	**20.89**	6.52	**24.13**	6.67	**34.82**	10.57	20.09**	.401	4 v 1,2,3 > p=0.001
% LPN	**09.29**	4.35	**10.11**	3.90	**11.83**	5.14	**17.23**	6.48	10.84**	.263	4 v 1,2,3 > p=0.001
% Qualify	**92.14**	4.30	**90.21**	3.54	**89.21**	4.39	**86.84**	4.12	5.60**	.158	1v4: p=0.002, 2v4: p=0.004, 3v4: p=0.025

The homogeneity of variances was violated in the case of low SES, therefore Dunnetts *T* is read for the Post hoc analyses.

Key: State= Students that attended state school, LPN = students who are from a low participation neighbourhood * p = 0.01, ** p = 0.001

6.3.8 The moderating effect of peer mentoring on the student diversity – withdrawal relationship

Correlation analyses were conducted between student diversity and withdrawal for the whole sample. Following this the data was spilt by duration of scheme and the same analyses conducted. Resulting *r* values were then subjected to tests of difference in order to assess moderating effects (Preacher, 2002).

Table 6.9 indicates the relationship between student diversity and withdrawal (benchmark – dropout) for all universities and then further categorised into the availability of mentoring.

Table 6.9: Relating student diversity to withdrawal for the whole sample and further categorised into duration of scheme.

Student diversity x bench-dropout	All	None	Piloting	Established
R	-.277	-.157	-.630	.102
Sig	**0.007**	0.232	**0.002**	0.779

Correlation analysis indicated a significant association between the two variables for the whole population, however, when the data was split by duration of scheme this association only remained for universities with a piloting scheme. Calculation for the test of difference between two independent correlation coefficients indicate a significant difference between 'none' and 'piloting'; z = -2.201, p = 0.028, but no significant difference between 'none' and 'established'; z =

0.14, $p = 0.889$. The difference between 'piloting' and 'established' was approaching significance; $z = 1.445$, $p = 0.070$. This indicates a moderation effect of peer mentoring on the relationship between student diversity and withdrawal.

6.4 DISCUSSION

Peer mentoring has increased in popularity within the USA and UK (Johnson, 1989) but little is known about its availability and effects in Higher Education. This survey has looked into the availability of peer mentoring in UK universities with a main focus on: the reasons for initiating a scheme, duration, and any possible effects according to the HEFCE performance indicators of non-completion. 94 UK universities were included in this analysis; this excluded all sector and further education colleges. Most of the universities involved were 'new universities' (46%).

Out of the 94 universities questioned 35 were currently running a peer mentoring scheme as defined in this study within the academic year of 2002/2003. The diversity of such schemes, however, mirrors previous findings within American literature reviews (Jacobi, 1991, for example), with only eight fitting the full criteria put forward for this survey (available to the whole university, mentors are voluntary, training available and matching of students). Given the increasing pressures on widening participation, and evidence from official statistics that these students are more at risk of withdrawing, 6 of the schemes available were purely for 'non-traditional students'; this included low SES, mature and part time students. A further 16 of the schemes had been introduced within an individual department with the rest (only 13) being available to the whole university. Several universities indicated that they had a peer mentoring scheme, but when looked at closely this did not fit any definition of peer mentoring and was considered to be peer tutoring more so than mentoring. This finding highlights and supports literature concerning the problem with defining mentoring and specifically the high level of overlap between tutoring,

mentoring, counselling and coaching (Topping 1992). This lack of concise definition within the umbrella term peer support makes evaluation and comparison across schemes difficult.

The reasons given for initiating schemes such as these reflect the impact of governmental policies on the university: for example a high proportion of universities (N = 21, 61.7%) initiated a peer mentoring scheme in response to widening participation targets. Of interest is that several universities (nine within 2002/2003) had cross-institution mentoring schemes whereby undergraduates mentor secondary school children close to their final exams with the specific aim of 'encouraging' non-traditional students to attend university. This reflects recent attention on school- university links as well as universities' interest in increasing recruitment as much as widening participation. It should be noted that access schemes differ qualitatively by institutional type; therefore the outreach programs (such as school links) are more typical of the newer universities (Morgan- Klein; personal communication). In opposition to university wide schemes those that were operating in one department or faculty only expressed the 'need to decrease withdrawal' or wanted to 'increase the level of support given to [their] students'. The initiation of these projects may, however, equally evidence the enabling effects that policies provide, not least because access to funding in order to run such schemes was probably made more readily available for these projects.

The results also indicated, and support Johnson's (1989) observation, that there is an increasing trend towards peer mentoring schemes being initiated within the last few decades. For example 20 of the 35 schemes identified were within the piloting phase during the academic year 2002/03. Johnson's paper was, however, set in a different policy context – not including post 1992 universities. In the current

study, most of the piloting schemes were evident within the 'new'/ post 1992 universities. Of interest is that universities piloting a scheme were more likely than universities with an established scheme to have initiated peer mentoring in response to widening participation and retention issues, thus highlighting the level of perceived need for schemes. In contrast to universities with piloting schemes, none of the universities with established schemes were initiated for widening access and/ or retention reasons, but more to provide an added level of support to the students involved. Some of the universities with an established scheme highlighted the additional underlying reason for developing their scheme as being part of personal development planning for the mentors themselves. The number of schemes specifically initiated for the 'non-traditional' student, together with the increasing numbers piloting, may demonstrate an increased pressure on universities to widen access and lower non-completion rates, as well as an increased interest in peer mentoring and its overall benefits. Given, however, that not all universities replied to the initial survey, and thus much of the research relied on web searches, it is impossible to say if this is the true figure regarding the number of schemes available. Also given that the concepts of peer mentoring and peer tutoring are often used interchangeably it is not known if any of the peer assisted learning/ peer tutoring programs were in fact peer mentoring as well. Future research and follow up of this survey should focus on all Higher Education institutions, including further education and sector colleges and will include schemes that appear to be academically orientated (peer assisted learning, peer tutoring) in any analyses. This would also provide a comparative analysis between the different types of schemes available to students in further and Higher Education.

As expected, and in support of previous research, student diversity and student withdrawal depends heavily on the type of university. The 'old' universities have lower levels of non-traditional students, but they also have the lowest levels of student withdrawal, whereas the newer universities are in the opposite position with high levels of student diversity. This supports the fact that the newer universities are more accommodating to the 'non-traditional' student (Morgan-Klein 2003a). However, newer universities also have significantly higher levels of student withdrawal and thus this result is not unexpected. The consistently higher dropout and benchmark criteria in the newer universities are also predictable. Benchmarks are calculated using several criteria one of which is entrance grades. Newer universities typically require lower grades for entrance onto a degree course and withdrawal is more likely among entrants with lower grades (HEFCE Report 1996). Although these concepts are not new there has been little specific evidence on this relationship and these differences must be considered within the following discussion about peer mentoring and its effects on student withdrawal.

One of the main objectives of this survey was to assess if peer mentoring had any benefit with regards to student non-completion. Given that the last available national statistics were for the year 2000/2001, when the current pilot schemes were unavailable, this analysis focused on any differences between established, piloting and non peer-mentoring universities instead of just looking at peer mentoring versus non peer- mentoring. This allows one to assess if universities who now have a scheme had higher than expected dropout rate which may indicate a reason for developing the scheme.

When benchmark criterion is accounted for, analysis found significant differences in the dropout statistics between universities with and without peer

mentoring schemes for the student population as a whole for the years 2000 and 2001. As hypothesised, universities with an established mentoring scheme were faring better than their counterparts in the academic year 2001/02. Of further interest is that piloting universities had the highest levels of dropout once benchmark had been taken into account suggesting that these low figures were a motivation to develop schemes. This finding is in support of the hypothesis that universities with established peer mentoring schemes would have a lower than expected drop out rate, but universities who were setting up and piloting a peer mentoring scheme may have been doing this in response to a higher than expected dropout rate. Piloting peer-mentoring schemes are more likely to be found within the newer universities, which also naturally have the higher dropout rates and levels of widening participation. These findings indicate that piloting universities are possibly reacting to their low figures and participating by establishing a new support scheme. Future research could follow these universities in order to assess any possible change in non-completion rates that could be a result of peer mentoring. A scheme that has been running for over 3 years should be established enough to witness some positive effects on student dropout and this is supported by the findings.

6.4.2 Limitations

There are several limitations to this research that could subsequently affect the findings. Primarily the categorisation into 'None', 'Piloting' and 'Established' resulted in groups of varying sizes, with the number of established schemes being very small. This makes it very difficult to carry out further analysis focusing on established schemes. Possible future research could analyse all educational

institutions that appear in the performance indicators i.e. sector colleges and further education, as well as universities.

Due to the differing university policies and the fact that many do not make an 'official' note of cases of withdrawal within the first few weeks of university, all withdrawals before December in the first year are removed from the HEFCE statistics. But it could be during this transition period that peer mentoring is at its most useful as it may aid adjustment to an academic career and buffer the possible stress of the move to university. However, the exact number of students leaving universities within the first few weeks remains unknown. Students who leave due to unsuitability of the course or university will more likely than not re-enrol somewhere else and therefore won'*t* be considered in the overall dropout statistics. Many students, however, will drop out due to unforeseen circumstances or unpredictable reasons. Regardless of the large number of withdrawals, research illustrates the high proportion of students experiencing stress, homesickness and depression (e.g. Earwaker, 1992), but HEFCE statistics do not consider this subset of students. Therefore although an effect in the performance was witnessed between the three groups a larger effect may have appeared if these statistics had been available. Future research could focus on the possible mediating effects of peer mentoring between the transition to university and later student well being.

A further complication with evaluating such schemes using performance indicators is that not all students have a peer mentor and indeed not every peer mentor is satisfactory. Many of the established schemes were only available within certain departments making it hard to establish if it has had an effect, as performance indicators tend to use all departments and students. Also 6 schemes were for the 'non-traditional' student but of these 4 were for international students only, a

subsection of students the performance indicators do not consider. Of the other two one was for mature students and the other for students with physical disabilities. It would have been interesting had there been more mature student schemes to specifically look at the mature student statistics.

6.4.3 Conclusion

Although mentoring has a long history the idea of peer mentoring in UK Higher Education is relatively new and is growing in popularity with a 57% increase in the year 2003. It appears that the belief in the benefits of peer mentoring is continuing with a further six universities upon questioning indicating that they would be launching a peer mentoring scheme within the next five years. This could also be linked with the greater interest in enhancing the first year experience. More importantly the universities with peer mentoring schemes, upon questioning, indicate perceived benefits of the schemes, stressing their importance in addressing the latest governmental and financial pressures. The performance indicators of UK universities appear to support this claim: lower levels of dropout among the universities who have an established scheme, even when the type of university is taken into consideration, were demonstrated within this survey. It is argued that peer mentoring would have the greatest benefits at the beginning of the first year, indeed the first weeks at university have been identified as critical in shaping students' decisions to persist. Although this cannot be directly measured, due to the limitations with HEFCE statistics mentioned above, this survey has observed the impact of peer mentoring on dropout statistics over the year. In 2001, when considering the student

population as a whole, students from a university with an established mentoring scheme were less likely to drop out of university.

Future studies should take a more in-depth look at the individual peer mentoring schemes and the students' perception and attitudes towards peer mentoring, to evaluate the effectiveness of scheme more comprehensively.

Chapter 7
Peer Mentoring as a Retention Strategy within Higher Education: A Controlled Comparative Evaluation of Residential Students.

ABSTRACT

Although peer mentoring is becoming increasingly popular in UK Higher Education, good quality theoretically driven evaluative research is limited. The following study aimed to bridge this gap by providing a controlled comparison of student outcomes in two UK universities with and without a mentoring scheme. A total of 176 first year undergraduates from two different universities completed questionnaires at two time points: during the first week of university and again ten weeks later. Results indicated that at time point two the peer mentored (PM) individuals perceived greater levels of social support at university and were less likely to want to leave university than their non peer mentored (NPM) counterparts. Four times as many NPM students had seriously considered leaving in comparison to PM students (22.5% and 3.8% respectively) Results are discussed in relation to Tinto's theory of student retention, the benefits and practicalities of peer mentoring within UK universities and the methodological limitations within this study.

7.1 Introduction

Despite its growing popularity (see chapter 6) peer mentoring within Higher Education lacks an evidence base for the benefits it is believed to yield. This chapter focuses on the evaluation of a mentoring scheme using part of Tinto's model of student withdrawal and the stress buffering hypothesis.

Several models have been developed in the USA to explain student withdrawal but none as yet have been developed within the UK. The most cited and researched model within the USA is that of Vincent Tinto (1975). Tinto argues that integration at both academic and social levels is a key element in students' withdrawal decisions above and beyond the individual's personal attributes and background characteristics (e.g. pre-entry ability, gender, social economic status) all of which have been previously identified as important variables in student withdrawal.

Despite its popularity and support within the USA literature (Tinto, 1993; Braxton, 2000) Tinto's model has received little substantiation within the UK. It has been argued that the model is limited within UK literature because of differences in government policy and culture. However, little research within the UK has been based on Tinto's model of student retention or reviewed the importance of integration and adaptation to university life. The current study investigates the key elements of integration on withdrawal decisions in a UK population.

UK research has highlighted several reasons for leaving based on multi institutional studies. These include factors of satisfaction and wellbeing (poor quality student experience, lack of peer support, personal problems) alongside more practical

issues of wrong choice of course and finances (Yorke, 1999; Davies and Elias, 2003).

7.1.1 Peer Mentoring in Higher Education

Mentoring in Higher Education has arguably become a "retention and enrichment strategy for undergraduate education" (Jacobi, 1991; 505). It is therefore argued that mentoring in Higher Education should be incorporated into a model of student retention.

Using Tinto's model of student attrition (Tinto, 1975), mentoring may contribute to integration to university which would enhance student retention. Thus far no research has linked mentoring with Tinto's model of retention but Jacobi (1991) proposes that empirical research should use this approach to focus on the impact of mentoring on retention with a mediating variable of integration. She also argues that out of the three broad mentoring functions (see literature review 1 for a description of the mentoring functions), social support (emotional and psychological support) would lead to a greater level of integration. Mentors, whether they are university staff or peers could encourage a degree of belonging and acceptance as well as friendship. Direct assistance and professional development may also have a role within the mentoring relationship especially when it applies to promoting understanding of a new institutional culture for students. When considering the increasing numbers of non-traditional students within UK Higher Education, role modelling could also provide an important factor in integration. Seeing a successful student or staff member from a similar background may instil a certain level of confidence.

Another potential theoretical model of mentoring in Higher Education is the social support buffering hypothesis. The transition to university is a potentially stressful situation for students which can ultimately lead to ill health and withdrawal from university (Fisher & Hood 1987, 1988). The provision of social support from a mentor may buffer the stressful situation and lead to a more successful transition into university. During the transition to university a mentor can provide appraisal (emotional), belonging and tangible support. In fact these three functions of social support correspond to two of the three mentoring functions, where appraisal and belonging relate to the emotional function of mentoring and tangible support is consistent with the function of professional development.

7.1.2 Peer Mentoring within UK Universities

Mentoring schemes within university take different forms. It can be staff to student mentoring or, as more commonly associated specifically with transition and retention, peer mentoring. Topping (1996) defines peer mentoring as "a one-to-one supportive relationship between the student and another person [staff/ student] of greater ability and experience". Within research in Higher Education this is generally seen as a second, third or fourth year undergraduate supporting incoming first year undergraduates, orientating them to their new environment, advising them on the "hidden curriculum"[11] often observed within universities and guiding them through the transition to university.

[11] The concept of hidden curriculum expresses the idea that education does more than simply transmit knowledge, as laid down in the official curricula but include other skills/ competencies e.g. time management (refer to Jackson, 1968)

As with the USA literature, descriptions of UK schemes vary a great deal within and between universities. Jacobi (1991) argues that with this diversity it is difficult to assess the common ground between these schemes, which makes them difficult to evaluate. Little evaluative research into peer mentoring has been done in the UK despite the growing popularity within UK universities; any evaluation that has been conducted on these schemes is generally internal and thus relatively subjective and open to bias. Of the evaluations conducted positive conclusions are often reached, but none of the evaluations' to date have a theoretical underpinning and all lack what, according to Jacobi, is needed in the mentoring literature – the use of empirically valid and reliable measures.

7.1.3 Why Is Mentoring Important- Student Transition to Further and Higher Education

The first year in Higher Education has received considerable research interest as it is thought to be a critical stage for non-completion (Astin, 1993; Johnson, 1994; Pascarella & Terenzini, 1991; Tinto, 1996). Within the UK, 1/3 of Higher Education students will leave their programme of full time study within 12 months of enrolling (Yorke, 2002). Tinto (1995) demonstrates that 75% of withdrawals attribute the decision to leave to problems within the first year. Some argue that it is the first few days that are pivotal (Earwaker, 1992). The transition from school to college or university is considered a challenge academically, socially and emotionally (Chickering & Reisser, 1993). Incoming students have to adjust to a new learning style and environment but they are also often segregated from familiar surroundings and more importantly, familiar people. Even if an individual decides to live at home

they will face similar transition issues in relation to academic lifestyle and making new friends. Some argue that for these individuals, adjusting to university life is harder as the competition between home and university becomes more complex (Tinto, 1993; Earwaker, 1992). American literature has consistently shown that individuals living in halls of residence fare better on measures of integration and persistence in university than individuals who remain living out with the campus (Astin, 1984; Chapman & Pascarella, 1983). High levels of homesickness (Fisher et al, 1988, 1989), loneliness (Cutrona, 1982), and depression (Furr, Westefeld, McConnell & Jenkins, 2001) have been reported within the first year of Higher Education all of which could affect an individual's integration and thus retention.

7.1.4 Social Support and the Buffering Hypothesis.

A student's response (completion or withdrawal), to the transition to university could be related to levels of social support, both perceived and received. Social support has been shown to be an important buffer between stress and negative outcomes in both physical and psychological health (e.g. Brown, Andrews, Harris, Adler & Bridge, 1986; Cohen & Wills, 1985; Wallston, Alagna, DeVellis & DeVellis, 1983). Social support has also been identified as a key buffer between the stress/psychological distress relationship in university students (Demakis & McAdams, 1994; Reifman, Dunkel- Schetter 1990) especially during the transition phase between leaving home and settling into university (Compas, Wagner, Slavin, & Vannatta 1986, Goplerud, 1980.) In fact social support has been identified as one of the most important protective factors for first year undergraduates' adjustment to university (Lamonthe 1995). In support of Lamonthe's conclusions, Halamandaris &

Power (1999) found high negative correlations between social support and loneliness in a Scottish University. Halamandaris et al. (1999) also concluded that students high on social support and low on loneliness had a greater hope of success in adaptation to university. Perceived social support accounted for significant extra variance in adjustment after personality variables were taken into account. However, this research was not conducted with first year students and no analysis was conducted on differences between the years of study.

Tao, Dong, Pratt, Hunsberger, and Pancer (2000) argued that social support within the first year of study may undergo substantial changes throughout the early transition period to university. In a study of 390 first year students in China, Tao et al. (2000) found that perceived social support remained stable from time point 1 (4th week at university) to time point 2 (15th week at university). When focusing on sources of social support Tao et al. (2000) reported that parents and university teachers provided the highest levels of support at time 1, however, by time 2 parental support remained the highest, but peer support was the next highest. This study did not however, look at first week in university and changes from perceived home support to perceived university support. Given that Earwaker (1992) argues that students have to 'start from scratch' with a new social support network it might be predicted that perception of support will decrease from the period immediately pre-university to university. Tao et al. (2000) also reported that more perceived social support correlated significantly with better adjustment to university and was in particular closely associated with social adjustment, feelings of attachment to university and higher self-esteem. Additionally any changes that occurred did so simultaneously i.e. changes in social support were concurrent and positively related to changes in adjustment. Although this study did not look at causality, or changes

over time it suggests that a loss of social support could lead to a decrease in college adaptation. This study did not, however, address why social support patterns changed in distinctive ways over time.

It is possible that within the case of Higher Education, peer mentoring acts as a social support mechanism. On arriving at university for the first time many undergraduate students will have to deal with a lot of new information about the course of study and academic processes as well as friendships. Many students worry about making friends and what is expected of them academically before they arrive (Earwaker, 1992) and those that fail to develop close friendships tend to report higher levels of psychological distress such as homesickness and loneliness. Peer mentoring may provide a 'friendly face in a sea of strangers' and academic information that could allow the incoming first year students to settle in quickly.

Following Jacobi's (1991) proposals, and using Tinto's (1975) model of student retention, it is therefore hypothesised that peer mentoring will provide social support which will have an impact on intention to leave, with integration acting as a mediating variable for students at universities in the UK.

7.1.5 Self Esteem

Within Tao's et al's. (2000) study social support was highly correlated to both adjustment and self esteem. Self esteem is defined by how much value one places upon the self. It is a global measure where high levels of self esteem indicate high levels of favourable global evaluations of the self. These evaluations can be accurate or under/ over estimated. As self esteem is a perception and not a reality it is very difficult to measure objectively and without relying on a methodology of self-

report measures. Mruk (2006) argues that self esteem should be viewed in terms of both competence and self-worth as the "two factor approach to defining self esteem seems to be more comprehensive theoretically because it is capable of handling material from either of its two factor counterparts" (p. 27). For a while self esteem was considered to be pretty stable much like a personality construct or intelligence, however, as research has continued, self esteem has emerged as a more complex construct and it has been observed that an individual's self esteem can fluctuate during certain situations (Greenier, Kernis, & Waschull, 1995). In a study of 244 students who were asked to give a retrospective account of life events on two separate occasions 4 weeks apart, Tafordi & Milne (2002) found that failure affects a sense of 'self competence' and that negative life/ social events affects reports of self liking. This supports the earlier work of Epstein (1979) who asked 270 college students for one experience in their life time that produced the greatest change in levels of both positive and negative self competence. Epstein concluded that there were three types of experiences in adulthood that consistently appeared in the participants' reports: 1) dealing with a new environment, 2) responding to a challenging problem that requires a person to acquire a new set of responses and 3) gaining or losing significant relationships. The transition to university may therefore affect levels of self esteem depending on how individuals react to the situation. Low self esteem has been linked with several negative factors for example, Leary & MacDonald (2003) note that,

> "People with lower trait self esteem tend to experience virtually every aversive emotion more frequently than people with higher self esteem. Trait self esteem correlates negatively with scores on measures of anxiety (Battle, Jarrat, Smith & Precht, 1988; Rawson, 1992), sadness

and depression (Hammen, 1988; Ouellet & Joshi, 1986; Smart & Walsh, 1993), hostility and anger (Dreman, Speilberger & Darzi, 1997), social anxiety (Leary & Kowalski, 1995; Santee & Maslach, 1982; Sharp & Getz, 1996), shame and guilt (Tangney & Dearing, 2002), embarrassability (Leary & Meadows, 1991; Maltby & Day, 2000; Miller, 1995), and loneliness (Haines, Scalise & Ginter, 1993; Vaux, 1988), as well as general negative affectivity and neuroticism (Watson & Clark, 1983)" (p.404-405)

7.1.6 Self Esteem and Social Support

Several studies have indicated a strong link between social support and self esteem, for example in a study of 373 young adults attending college Caldwell & Reinhart (1988) reported that higher levels of self esteem were correlated positively with emotional support on the Inventory of Socially Supportive Behaviours (ISSB), however no relationship was found between self esteem and the other factors of the ISSB- Tangible Aid and Guidance. Riggio, Watring, & Throckmorton (1993) studied social skills, social support and psychosocial adjustment in 136 undergraduate volunteers during the first weeks of university. They reported that self esteem was significantly related to social skills but not breadth of social support nor self reported amount of social support. However, both social skills and perceived social support accounted for significant degrees of variance in self-esteem. This study also reported the strong positive relationship between self esteem and college adaptation, life satisfaction and wellbeing. Kantanis (2000) conclude that during a student's

transition to university a lack of social networks can undermine an individual's self- confidence and self esteem, and the development of a friendship network at the university was essential to a successful academic transition.

7.1.7 AIMS and OBJECTIVES.

Given the increased popularity of peer mentoring, and a lack of clear and objective evaluation, this study aims to evaluate the impact of peer mentoring using a theoretically structured approach. In order to do this a controlled comparison of students at a university with an established peer mentoring scheme and a university with no such scheme was conducted using several theoretically derived measures as outcome factors. This research is carried out at different time points investigating pre-transition to university (measured retrospectively in week 1) (T0), first week at university (T1) and ten weeks later (T2).

There were two main aims within the current study: Part A) To evaluate the benefits of a peer mentoring scheme with regards to wellbeing and adaptation to university when compared to a university without a peer mentoring scheme and Part B) within the peer mentoring university: to assess the utilization of the peer mentoring scheme. Within this study there are two main hypotheses: 1) between the two universities students with peer mentors will be better adjusted than those without and 2) within the peer mentoring university students who find adjustment to university difficult will require more social support, and are more likely to seek out and use a peer mentor at both time points. Further specification of objectives, hypotheses and research questions can be found in Table 7.1

Table7.1: Main objectives, hypotheses and research questions for this study.

	Objectives	Hypothesis	Research Questions
1a	To assess levels of student stress and coping within a peer mentored university in comparison to a non-peer mentored university	On entering university, students who have a peer mentor will have greater levels of coping and lower levels of transitional stress	Does having access to a peer mentor help individuals cope with the stress of transition to university?
1b	To assess levels of wellbeing, college adaptation and intention to leave within peer mentored university in comparison to the non peer mentored university	Students who have a peer mentor will have a greater level of wellbeing and college adaptation, lower levels of stress, and will be less likely to want to leave university	Does having access to a peer mentor help students to adapt to, and become more involved in university life, leaving them less susceptible to leave during their first semester?
1c	To test the potential moderating effects of peer mentoring over time.	Peer mentoring will act as a buffer to changes in social support, negative affect and self esteem during the transition to university	Can peer mentor schemes buffer these effects of transition to university on levels of social support, negative affect and self esteem?
1d	To test the social support buffering hypothesis	Peer mentoring will act as a buffer within the stress-outcome relationship	Can peer mentoring buffer the relationship between stress and outcome variables of college adaptation, self esteem and negative affect?
2	To assess students utilization of a peer mentoring scheme during first year at university	An individual's level of adjustment will predict continued use of the peer mentoring scheme	Are individuals who are having difficulty adjusting to university more likely to continue seeing their peer mentor? How will levels of adjustment predict seeking out support from a peer mentor?

7.2 METHODOLOGY

7.2.1 Design

This was a controlled questionnaire survey comparing adaptation, well-being and intention to leave in first year undergraduates from two universities, one with a peer mentoring scheme and one without a scheme. Data was collected at two time points, five days (Time 1 = T1) and ten weeks (Time 2 = T2) into university. The main variables of interest at T1 focused on pre-transition (referred to as baseline) and the transition to university: student's perceived social support at home before the transition to university, transitional stress, self esteem, and coping. At T2 the variables of interest were: social support from university friends and peer mentor, college adaptation, well being and intention to leave.

7.2.2 Sample

From an earlier survey of peer mentoring schemes at UK universities, 6 universities were initially selected for the current study. Three were selected on the basis of having an established peer mentoring scheme (5 years +) and having a scheme generally available to all students (i.e. not focused within one department or on one particular type of student: e.g. mature students and/or internationals). Two universities did not have a peer mentoring scheme and one was mixed (less than half the students had a peer mentor). The six selected universities were contacted and invited to take part. Of these the two most closely matched universities (one with a mentoring scheme and one without), using demographics and other criteria (age of university, style [campus v town]), were selected for data collection (peer mentoring University; PM: and non-peer mentoring university; NPM). Both universities were

located in England (one in the north and one in the south. Universities were matched in respect to type of university (glass plate/ post 1960's) and being campus based. There were differences in the student make-up of the two universities, notably the number of entrants and student diversity (see Table 7.2).

Table 7.2: University Demographics and Characteristics.

Index	University		
	Peer Mentoring	Non-Peer Mentoring	χ^2
Total Entrants	1561	2702	
% Mature Entrants	4.49	23.88	338.887***
% LPN	9	9	NS
% Social Class IIIM, IV, V	15	24	37.340***
% Dropout Young	3	8	37.641***
% Dropout Mature	11	11	NS

Note: Young (traditional) aged students are individuals who are aged 20 and below on entry to university, Mature students are those aged 21 and above.

Statistics source: HEFCE (2003)

The non-peer mentoring university had a higher percentage of mature students and students from lower SES within their student make up than the peer mentoring university. Also a significant association was found between university and young entrant withdrawal with young entrant students from the non- peer mentoring university being 2.823 times more likely to dropout from university.

The mentoring scheme within the current study followed the model of University of Wales, Bangor's Peer Guide Scheme (Bangor, 2009). Peer mentors were second and third year students who mentored incoming first year students. They met at Welcome Week after which point continued contact between mentees and mentors was voluntary.

Student participants were selected on the basis of attendance at a Welcome Week lecture from social science departments who agreed to allow time for the study to be conducted. All incoming first year students were eligible for attending welcome week lectures: although it is not compulsory it is highly recommended. A total of 229 participants from the Faculty of Social Sciences at both universities completed the Time Point 1 questionnaire; 112 participants were from the NPM University and 117 from the PM University. The age of the entire sample ranged from 17 to 51 with 10.5% (28) being mature students. Over 80% of the sample was female (183: 83.6%), white (195: 85.5%) and non-international (197: 87.9%). Time point 2 students were selected from the same populations, attending a core module lecture (thus one would expect the same students to be attending both T1 and T2 lectures) ten weeks into the first semester at university. A total of 109 participants completed both time points with 53 from the NPM university and 56 from the PM university. Attrition rates within the research from T1 to T2 were 49% (n= 61) for the PM and 45% (n = 59) for the NPM.

7.2.3 Measures

At T1 a ten page questionnaire package was used to measure student social support, stress and coping. This included a mix of pre transition (baseline) measures (before coming to university) and transition items (relating to the first week of university). Included within this was a compilation of background information and standardized and validated questionnaires as well as more open-ended questions on the transition to university and student wellbeing, using the Student Wellbeing Scales discussed in Chapter 5. In particular, for the peer mentoring university only,

participants' evaluation of the peer mentoring scheme was a focus within the package. At T2 a nine page questionnaire was used to measure student social support, wellbeing and adjustment, which included a compilation of standardised and validated questionnaires, as well as scales designed specifically to assess individuals' intentions to leave. Again within the peer mentoring university extra questions were asked regarding the peer mentoring scheme. Table 7.3 provides an overview of variables measured at different time points. T1 questionnaire can be found in Appendix 3 and T2 questionnaire can be found in Appendix 4.

Table 7.3: Measures collected at time point 1 and 2.

Time of interest	Pre-Entry	Entry	Week 10
Measurement period	Baseline (Retrospective)	T1	T2
SCALES		Transitional Stress	Stress
		Coping with Transition	
	Social support ISEL (Home friends)		Social support ISEL (university friends)
	Social Support and satisfaction with home friends	Social Support and satisfaction with University friends	Social Support and satisfaction with University friends
		Self Esteem	Self Esteem
		Peer mentoring Items	Peer Mentoring Items
		Index of General Affect	Index of General Affect College Adaptation Student Wellbeing Scale Intentions to leave

7.2.3.1 Demographic Variables:

Age was scored as a continuous variable and later dichotomised into traditional (17-20) and Mature students (21 +; within Higher Education individuals entering the first year who are over 21 years of age are considered to be mature). Gender and whether home (UK) or international (EU and others) students were scored as dichotomous variables (male/ female, yes /no, respectively). Ethnicity was categorised into white, black, Chinese, Indian, Pakistani and other; accommodation into halls of residence, rented with others, rented alone, with parents and home owner. Both of these were dichotomised further into 'white and other' and 'halls of residence and other' in order to conduct statistical analysis. Disability was coded as 'none', 'declared' and 'undeclared'.

Entry Variables (Time Point 1)

7.2.3.2 Transitional Stress:

Stress during the transition to university was measured using a 10 item scale. The scale was derived from previous research (Phillips, unpublished MSc) which involved two universities (88 first year students) and assessed participant's level of wellbeing and social support during the transition to university. Items for the *transitional to university scale* were developed from the following open ended question: what did you find stressful about the transition to university? Comments were later categorised using thematic analysis to create a 10 item scale. No psychometrics were available for this measure, however, within the current research high internal consistency has been shown and this measure correlates in the correct direction with similar constructs of wellbeing. Within the current study respondents

were asked to state their level of stress regarding particular situations prominent within the first week of university on a 5 point Likert scale (1= not at all stressful to 5 extremely stressful). Items included, for example, registration, finding their way around, loneliness and meeting people. Items were added to provide an overall total with scores ranging from 10 – 50. Internal consistency for this questionnaire was $\alpha = 0.76$.

7.2.3.3 Coping with Transition:

Coping was measured using selected items from the Coping in Stressful Situations questionnaire (CISS; Endler & Parker 1990). Using a five point Likert scale the 48 item inventory measures three main factors of coping strategies (16 items each): Task-focused; dealing with the problem at hand e.g. 'I schedule my time better', Emotion-focused; concentrating on the resultant emotions e.g. 'I become very tense', and avoidance e.g. 'I window shop'. Principle component analysis computed from a sample of 730 Scottish doctors and farmers confirms the three factor structure in both genders and across the two different occupations (Endler et al., 1990). Intercorrelations of CISS factors with personality factors of the NEO-Five Factor Inventory and self reported psychological distress scale GHQ-28 provided predictive validity for CISS in the transactional model of stress (Cosway, Endler, Sadler & Deary 2000). The CISS itself is very long, and not all items are applicable to this population, therefore 10 items were selected that were most relevant to transition and Higher Education (4 task focused, 3 emotion focused and 3 avoidance) and worded to fit the current context. Coping was scored on a 4 point likert scale from 1: Very True to 4: Very Untrue. Total scores were calculated for each of the

factors, altogether (number of strategies adapted with avoidance reverse scored) and also catagorised as positive and negative. Positive strategies (n=6) involved integrating and socialising (e.g. 'Tried to be with other people') within the new environment and linked mostly to 'task-focused' and emotion-focused' coping. Negative strategies (n=4) were those that involved 'thinking of home a lot' and 'becoming overwhelmed with the situation' and related mostly to avoidance type coping. For the complete scale totals were calculated (range of scores 10-40). Cronbach α in this study indicated a low level of internal consistency = .45.

Outcome Variables (Time point 2)

7.2.3.4 Student Well-Being Scale:

Student wellbeing was measured using a 20 item 7 point Likert scale devised for the current study. This short scale measures depression, anxiety, homesickness and loneliness. For full details on its development refer to chapter 5, for a summary of the scales reliability and validity refer to Chapter 5. Within this study Cronbach α = 0.83.

7.2.3.5 The Perceived Stress Scale:

In order to assess students' current levels of stress at Time 2 The Perceived Stress Scale (PSS: Cohen, Kamarck, & Mermelstein, 1983) was used. This is a 14 item self report scale, however in the current study one question was added which was specific to academic stress: *In the last month how often have you felt anxious about what is expected from you concerning your academic work'*. For full details on

the scales reliability/ validity refer to Chapter 5. Within this study Cronbach α = 0.72.

7.2.3.6 Adaptation to University Life:

Students' adjustment and adaptation to university life was assessed using an 18 item, 7 point Likert self report measure: College Adaptation Questionnaire (Crombag, 1968). For full details regarding the scale's reliability/ validity refer to Chapter 5. Within this study Cronbach α = 0.91.

7.2.3.7 Intention to Leave

In order to provide a proxy measure of student dropout, individuals were asked at T2 whether they had thought of leaving university. Although measured on a 7 point Likert scale this variable was dichotomised in the current study into 'Low Intention' (individuals scoring 1-2) and 'High Intention' (individuals scoring 3-7) due to the large floor effect evident i.e. a large proportion not wanting to leave university.

Measures taken at Time 1 and Time 2:

7.2.3.8 Social Support:

Social support was measured using several items. Firstly perceived levels of social support were assessed using a widely used and validated measure the Interpersonal Support Evaluation List (ISEL: Cohen, Melmestein, Kamarck &

Hoberman, 1985 – full details of the scale's validity/ reliability can be found in Chapter 5). Using this scale individuals were asked at T1 to retrospectively rate their perceived support from home friends and family before attending university. At time point 2, ten weeks into the first semester, individuals were asked to assess their current level of perceived social support. Within this study Cronbach $\alpha = 0.75$ at time point 1 and 0.89 at time point 2.

Secondly students were requested to rate their perceived social support from home friendships and university friendships as well as their satisfaction with these friendships on a 10 point Likert scale (1 = low, 10 = high).

7.2.3.9 Peer Mentor Support.

Thirdly for the mentoring university only, peer mentor support was assessed within Study 3 using a 20 item 4 point Likert scale which was constructed for the current research. Measures of mentoring functions available are aimed at organizational, career focused, informal, traditional mentoring and are thus not directly applicable to university, formal, peer mentoring schemes which have a greater focus on social and emotional support. Items for this measure were selected and reworded to represent mentors (rather than general support) from the ISEL (see 4.4.4.1 for the ISEL) and were taken directly, or adapted from, a questionnaire developed by Noe (1988) on the functions of mentoring. Items were added to provide a total score with a potential range between 20 and 80 where the higher score equated to higher levels of perceived mentor support. Cronbach α in this case was .91.

7.2.3.10 Self Esteem:

Current level of Self-Esteem was measured at both time points using Rosenberg's (1965) Self Esteem Scale (RES). The RES is a 10 item self report measure which requires the respondent to report feelings about themselves directly. The scale is scored using a four point response format (strongly agree, agree, disagree, strongly disagree), resulting in a score range of 10-40, with higher scores representing higher self esteem. Several studies have indicated the scale is a valid and reliable unidimensional measure of self-esteem. The RES has shown medium to high Cronbach α (0.77: Dobson, Goudy, Keith & Powers, 1979; 0.88: Fleming & Courtney, 1984). Negative relationships between RES and items representing low self regard have been reported by Fleming and Courtney (1984). For example, RES scores have correlated negatively with anxiety and depression. The scale is not related to age, gender, work experience, marital status or grade point average (Fleming & Courtney, 1984). However, in a meta analysis conducted on 216 effect sizes, Kling, Hyde, Showers, and Buswell (1999) concluded that males do tend to score higher on the standard measures of global self esteem, but this difference is small with an average effect size of 0.21. Within this study there were no gender effects at either time point. Within the current study Cronbach $\alpha = 0.86$ at time point 1 and 0.87 at time point 2.

7.2.3.11 Affect:

Current level of affect was measured using the Index of General Affect from the Index of Well Being Scale. Developed by Campbell, Converse & Rodgers (1976) this questionnaire measures levels of general affect and life satisfaction. The Index of

General Affect consists of eight polar opposite items e.g. interesting – boring, enjoyable- miserable where individuals respond to the statement 'life is' on a 7 point Likert scale between the two. Items were added and higher scores indicate a higher level of negative affect with a potential range of scores from 7 - 56. The scale has been shown to have a high level of internal consistency (α = 0.89). Within study 3 within this thesis Cronbach α =.94 & .95 (at T1 and T2 respectively).

7.2.3.12 Peer Mentoring: peer mentoring students only.

Individuals at the peer mentoring university were asked several questions regarding their experiences of peer mentoring.

Time point 1: Questions included when they first met their peer mentor (first day, second day, third day, not met yet) and where (Halls, Departmental meeting, organised by mentor, other and not met yet). Individuals who had met their peer mentor were also asked on average how much they had seen their peer mentor within the first week (less than 15 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, 4+ hours).

Time point 2: Individuals were asked if they still saw their peer mentor (Yes/ No) and were asked to indicate how much contact they had had with their peer mentors since Welcome Week (none, occasional chats, twice, 3-4 times, once a week, 1+ times a month).

Both time points: Individuals were asked to indicate whether they accessed their peer mentor for advice on a list of 15 potentially stressful situations within the first weeks of university on a dichotomous scale of yes/ no. Items included registration,

personal problems, university information, departmental information, showing around etc. For analysis this was also split into 'personal issues' and 'academic issues'. Individuals were also asked to indicate their level of satisfaction with their peer mentor at both time points on a scale of 1 – 7 (1 being totally unsatisfied and 7 being totally satisfied).

7.2.4 Procedure

Time point 1 procedure:

The time point 1 questionnaire was handed out 5 days after arriving at university for the first time for the NPM students and 8 days into university for the PM students.

Students were approached by the researcher within a welcome lecture. After receiving general information regarding the study and being informed of their rights with regard to completing the questionnaire, participants were given twenty minutes to complete the questionnaire, and handed them back to the researcher afterwards. Nobody refused to take part. To ensure confidentiality and assist matching at time 2 participants were requested to write their initials and date of birth on the front page of the booklet. Questionnaires could then be coded in order to match up with time point 2. After completion of the study these details were discarded.

Ten weeks into university the same students were approached during a Faculty core lecture to ensure greater return rates. After information regarding their rights for completing the study and a reminder to complete the date of birth and initials information, students were given twenty minutes to complete the

questionnaire and hand back to the researcher before leaving. There was 100% return rate from people attending the lecture; however, it is unknown what proportion of students were attending the lectures at both universities.

7.2.5 Ethical Considerations

Ethical approval was sought and granted from the University of Stirling, Psychology Department Ethics Committee in April 2004. Further approval was gained from Faculty Ethics Committees at the universities in question during the months of May and June. Specific considerations for the current study were that of confidentiality. Given the personal nature of the questions and the need for a follow up (and thus matching of questionnaires) students were informed that nobody affiliated with their university or department would see their answers. In order to match up questionnaires and maintain confidentiality students provided their initials and date of birth on the consent form. Each questionnaire was then assigned a unique ID and consent forms were removed and kept in a separate place. A further issue with entering into a lecture is that of pressure to consent. Students were informed that completion of the study was entirely voluntary and there would be no negative repercussions for not taking part. Students were also informed that they were able to leave out any questions they felt uncomfortable answering. All students were provided with a sheet of local numbers to contact such as the university nightline.

7.2.6 Analyses

7.2.6.1 Data transformations

Exploratory data analyses identified any univariate and multivariate outliers, which were investigated individually. In total 2 outliers were removed, each from the College Adaptation Scale. Testing for normality indicated several markedly skewed distributions. Any variables with a significant skew/ kurtosis were subjected to Non-parametric analysis where possible. Transformations were used sparingly. In the case of the ISEL, which was used in the regression, square root [sqrt] transformation significantly improved the distribution and thus the transformed variables could be used within regression analyses. The intention to leave dependent variable could not be subjected to transformations. Because of a floor effect any transformations produced worse distributions. Thus this variable was dichotomised into intention/ no intention to leave for the regression analyses. Due to multiple testing the Bonferroni Correction was calculated where necessary in order to guard against family wise error. The number of individuals living in halls of residence differed significantly between the two universities. Given the background literature on differences in integration, satisfaction and student wellbeing between residential and commuter students (see Tinto 1995), and the very small number of 'not living in halls' individuals within this data set, this made factorial ANOVA unacceptable as it reduces the power of the statistics. Analyses were therefore conducted on individuals living in halls of residence only, throughout the study.

7.2.6.2 Data Analyses

This study involved several steps within the analysis. Firstly demographic differences between the two groups were assessed using 2- way chi square. Independent samples t-tests and Mann Whitney U (reported as *z*) were applied to test for differences between PM and NPM, within each DV, across the two time points. In order to assess the mediating model of peer mentoring, the 3 regression analyses steps suggested Baron and Kenny (1986) were applied. Testing the moderating variable of PM (presence/ absence) followed two sets of analyses. Primarily, in relation to previous research which highlights the stress of transition to university, changes in self esteem, general affect and social support from week 1 to week 10 at university were assessed alongside the potential moderator of mentoring. Assessing moderation in this way involved 2 x 2 mixed factorial ANOVA's (self esteem, general affect). As all social support items were negatively skewed moderation could not be assessed, therefore change scores from time 1 to time 2 were calculated and differences between mentored and non- mentored were tested using independent sample t-tests. Secondly, in order to assess the stress buffering hypothesis, a series of three hierarchical regressions were conducted with college adaptation, self esteem and negative affect as outcome measures. In the case of self esteem and negative affect entry levels were controlled for. In order to assess the peer mentoring items, Wilcoxon analysis (reported as *z*) was applied to investigate changes over time; correlations (*r*) and non parametric correlations (τ) were conducted to investigate any relationships between peer-mentor social support and the dependent variables. These were followed by linear regressions in order to predict some of the outcome variables from peer mentoring items.

Power calculation for assessing the difference between 2 independent groups for time 1 with unequal sample sizes of $n_{(NPM)}$ = 112 and $n_{(PM)}$ = 117, *d* = 0.50 (medium: Cohen 1992) and α = 0.01 (allowing for multiple testing) indicated the level of power as: 1 – β = 0.89. Power calculation for time 2 with unequal sample sizes of $n_{(NPM)}$ = 53 and $n_{(PM)}$ = 56, *d* = 0.50 (medium: Cohen 1992) and α = 0.01 (allowing for multiple testing) indicated the level of power as: 1 – β = 0.51.

7.3 RESULTS

The total sample size for time point 1 was 229 (NPM: 112 & PM: 117). Return rates overall at time point 2 were 47.4% (n = 53) for the non- peer mentoring university and 47.8% (n = 56) for the peer mentoring university.

7.3.1 Descriptive Statistics

The mean age of the total sample (those completing time 1 and time 2) from both universities was 19.81 years ranging from 17 – 33 years. There were no significant differences between the two universities in the demographic variables of Age, Gender, Ethnicity, International students, and Marital Status, as shown in Table 7.4

Table 7.4: Frequency, percentage, χ^2 and significance of demographic variables comparing universities with peer mentoring (PM) v non peer mentoring (NPM)

Variables	PM (%)	NPM (%)	χ^2	Sig
Mature students	14 (12.4)	10 (8.5)	0.950	.330
Gender (females)	85 (80.1)	101 (87.1)	1.930	.165
Marital status (single)	86 (76.8)	99 (83.2)	1.417	.234
Ethnicity (white)	99 (88.4)	97 (81.5)	1.333	.248
Foreign student (yes)	10 (9.17)	17 (14.4)	1.480	.224
Disabled (no)	78 (85.7)	89 (93.7)	3.458	.177

Descriptive statistics for the variables of interest at both time points for all participants, irrespective of university, are provided in Table 7.5 alongside comparative descriptive statistics from studies using student populations. As can be seen from Table 7.5 significant differences were found between the current sample

and comparative statistics. The current sample are significantly more adapted to university but have significantly lower levels of self esteem and significantly higher levels of stress. Their levels of social support are equivalent.

Table 7.5 Descriptive statistics for the variables of interest at both time points and from all participants and for comparative data.

Time	Variables	**Current Study Descriptive Statistics**				**Comparison**		
				95% CI				
		Mean	SD	Lower	Upper	Mean	t	sig
T1	Coping	26.00	3.81	25.51	26.96			
	Stress	28.88	6.38	28.22	30.79			
	Negative Affect	18.56	8.20	17.44	20.99			
	Self Esteem	29.22	4.77	28.37	30.44			
	Social Support	40.19	5.56	39.67	41.84			
T2	College Adaptation	91.94	17.17	90.40	97.75	84.43	4.413	**<0.001**
	Wellbeing	67.21	11.32	66.04	70.55			
	Stress	25.09	5.87	24.05	26.15	23.43	3.162	**0.002**
	Negative Affect	18.35	8.54	15.60	18.82			
	Self Esteem	28.99	4.46	28.16	29.99	30.10	2.596	**0.011**
	Social Support	37.79	7.83	36.29	39.30	36.57	1.617	0.109

Note: Comparison figures derived from: College Adaptation; Halamandaris et al (1999), Perceived Stress Scale; Cohen et al. (1983), Self Esteem; Williams & Galliher (2002), ISEL 12 (social support); Cohen et al. (1985). Partial questionnaires were used in the case of Coping and Negative Affect so no comparative data available.

Part A: Comparison of a Peer Mentoring University with a Non-Mentoring University

7.3.2 Research Question 1a: Does having access to a peer mentor help individuals cope with the stress of transition to university?

A series of independent sample *t*-tests were conducted in order to test the differences between peer mentored university students and non- peer mentored students with regard to the time 1 outcome variables. The Bonferroni Correction was

applied in order to control for family wise error, therefore the threshold for significance levels (one tailed) is now $p \leq 0.016$

There was no difference between PM and NPM students in terms of the transitional stressors. Mean stress levels measured 5 days into university for the NPM students were 28.98 (S.D. = 6.32) and for the PM students 28.79 (S.D. = 6.46) out of a maximum of 50. The two samples scores were of very similar distribution and not significantly different from one another; t (294) = 0.219, p = 0.413, r = 0.01. The highest stressors for students at both universities within the first week of term were, in rank order, finances, self doubt, and meeting people (for the list of stressors measured in this study refer to Appendix 4a).

When asked how they coped with the transition to university and during their first few days at university, individuals from the PM university reported a significantly greater number of positive coping strategies than their NPM counterparts t (216) = 3.158, p = 0.001, r = 0.20. Mean levels of positive coping on the CISS for the NPM students were 25.19 (S.D. = 3.36) and for the PM students 26.78 (S.D. = 4.06) out of a maximum of 40. Table 7.6 summarises the descriptive and inferential statistics for each of the individual coping items. There were significant differences in three of the items: keeping busy, seeking advice and being with other people.

Table 7.6: Descriptive and inferential statistics for each of the individual coping items comparing mentored and non mentored individuals.

	Peer Mentored		Not Peer Mentored		*t*	*p*	*r*	95% CI	
	Mean	SD	Mean	SD				Lower	Upper
Kept busy	3.06	.606	2.87	.760	2.010[b]	***.046***[a]	.14	.004	.363
Phoned home [R]	2.50	.997	2.25	.928	1.934	.054	.13	-.005	.500
Sought advice from previous students	2.50	.857	2.24	.944	2.131	***.034***[a]	.14	.019	.493
Focused on problem solving	2.42	.792	2.39	.810	0.340	.734	.02	-.176	.240
Tried to be with others	3.44	.659	3.17	.700	3.026	**.003***	.20	.096	.454
Became anxious [R]	2.70	.967	2.57	.925	1.017	.310	.07	-.120	.377
Followed a course of action	2.33	.774	2.29	.875	0.306	.760	.02	-.185	.253
Worried [R]	2.59	.938	2.57	.931	0.636	.526	.01	-.167	.326
Got control of situation	2.81	.703	2.64	.796	1.666[b]	.097	.11	-.030	.365
Thought of home a lot [R]	2.53	.996	2.46	1.042	0.553	.881	.03	-.193	.343

Note: Bonferroni correction applied therefore ASL ≤ 0.005. * p = 0.005, ** p = 0.001.
[a] ***= approaching significance***
[b] = Levene's test significant thus variances not assumed line read
[R] =Reverse scored therefore low score = higher levels.

7.3.3 Research Question 1b: Does having access to a peer mentor help students to adapt to, and become more involved in, university life leaving them less susceptible to leave

A series of independent samples *t* tests were conducted on the variables wellbeing, stress, and college adaptation measured 10 weeks into university. The Bonferroni Correction was applied therefore α level of 0.016 will be accepted as significant. Table 7.7 provide measures of central tendency, variation, test statistics, sample size, significance and effect sizes.

Table 7.7: Means, standard deviations, *t* value, significance and effect sizes for non peer mentoring university in comparison to the peer mentoring university on levels of stress, wellbeing and college adaptation measured at T2.

	Peer Mentored		Not Peer Mentored		*t*	*p*	*r*	95% CI	
	Mean	SD	Mean	SD				Lower	Upper
Stress	26.50	6.47	28.24	5.31	-1.326	.188	.111	-3.795	0.754
Wellbeing	68.17	10.63	66.33	12.14	0.829	.409	.070	-2.563	6.223
College Adaptation	95.73	16.13	88.96	18.67	1.994	***.049***[a]	.166	0.038	13.498

Note: Significance to 2 tailed hypothesis. Bonferroni correction applied: therefore 0.05/ 3 = ASL ≤ 0.016.* $p = 0.01$, ** $p = 0.001$. [a] **= approaching significance**

As can be seen from Table 7.6 there were no significant differences between PM and NPM students on the measures of stress or wellbeing 10 weeks into university. However, the difference in college adaptation was approaching significance where individuals who had a peer mentor were more adjusted to university life than their non mentored counterparts.

Mann Whitney U indicated a significant difference between PM and NPM students on levels of intention to leave university; $p = 0.002$, $r = 0.30$: PM students ($\overline{X}_{pm} = 1.67$, S.D. = 1.143, Median = 1) were significantly less likely to want to leave university than their NPM counterparts ($\overline{X}_{npm} = 2.69$, S.D. = 1.817, Median = 2). When categorised into intention / no intention to leave, to control for the floor effect observed in the intention to leave distribution, 2 way chi-square analysis showed a significant association between NPM/PM and intention to leave χ^2 (1) = 8.763, $p = 0.003$. Odds ratio calculation indicated that NPM students were 4.162 times more likely to want to leave at T2 than their PM student counterparts. Twenty two percent (N = 11) of the NPM university had had serious thoughts of leaving university (a score of 5, 6, or 7) in comparison to 3.8% (N = 2) of the PM university. For the NPM university there was a significant difference between proportion of individuals who have seriously thought of leaving (22%) and national dropout statistics for the NPM university (9%: HEFCE, 2003): χ^2 (1) = 7.345, p = 0.007 (with adjusted expected counts). For the PM university there was no significant difference between the proportion of individuals who have seriously thought of dropping out (3.7%) and national dropout statistics for the PM university (4%: HEFCE, 2003): χ^2 (1) = 0.128, p = 0.721 (with adjusted expected counts)

In order to test the possible mediating effect of college adaptation in the peer mentoring- intention to leave relationship a series of 3 regressions (linear and binary logistic) were conducted. According to Baron and Kenny (1986) mediation is suggested if the following conditions are met: i) the independent variable (mentoring) predicts the mediator (College Adaptation); ii) the independent variable affects significantly the dependent variable (intention to leave); and iii) the mediator significantly affects the dependent variable when the independent variable is

controlled for. Full mediation is suggested when the relationship between the IV and the DV has been reduced to non-significance after the mediator is controlled for.

For step 1 linear regression indicated that PM/NPM significantly predicted college adaptation (b = .192, t(104) = -1.994, p = 0.049, r^2 = 0.037). At step 2 binary logistic regression indicated that peer mentoring significantly predicted intention to leave (b = .078, wald(1) = 7.587, p = 0.006. At step 3 binary logistic regression revealed that college adaptation significantly predicted intention to leave (b = .078, wald(1) = 21.543, p = 0.001), whilst the relationship between peer mentoring and intention to leave was reduced to non-significance when college adaptation was controlled for, thus indicating mediation (b = 3.849, wald (1) = 3.287, p = 0.070). Although initial analysis indicated a meditational relationship the Sobel test (Preacher & Leonardelli, 2001) failed to confirm this as it was only approaching significance (z = 1.829, p = 0.067).

7.3.4 Research Question 1c: Can a peer mentoring scheme moderate changes in social support, self esteem and general affect from T1 to T2?

7.3.4.1 Social Support

As all measures of social support were negatively skewed (except ISEL T1) full moderation could not be tested, therefore, changes in social support for each of the four measures were computed. The computed differences met the parametric assumptions thus four independent sample t tests were conducted and results can be found in Table 7.8. The only significant effect evident is that of satisfaction with university friends where PM students' perceived a far greater increase in satisfaction in comparison to their NPM counterparts.

Table 7.8: Means, standard deviations, *t* values, significance and effect sizes for peer mentored university in comparison to non-peer mentored university on each of the change scores (T1-T2) for social support.

	Mentored		Non- mentored		*t*	*p*	*r*	95% CI	
	Mean	SD	Mean	SD				Lower	Upper
Uni Friends	0.46	2.10	-0.33	2.74	1.654	.101	.162	-0.158	1.748
Satisfaction with Uni Friends	2.65	1.56	1.84	1.54	2.613	**.010***	.251	0.194	1.498
ISEL	-1.06	7.11	-3.84	9.89	1.598	.114	.163	-0.677	6.247
Home Friends	-0.42	2.44	-0.63	2.93	0.385	.701	.038	-0.850	1.259

Note: positive result indicates an increase in social support from T1 to T2 on all variables. ISEL = Interpersonal Support Evaluation List. Bonferroni correction applied therefore 0.05/4 = ASL ≤ 0.016. * $p = 0.016$, ** $p = 0.001$

7.3.4.2 Self Esteem

In order to assess changes in self-esteem, differences between the groups and any interaction (moderation), a 2 x 2 mixed factorial ANOVA, with a within subjects variable of time and a between subjects variable of NPM/PM was applied. For the dependent variable self-esteem there was no main effect of time; F (1,103) = 1.426, p = 0.235, η_p^2 = 0.014 or PM/NPM; F (1, 103) = 0.260, p = 0.611 η_p^2 = 0.003. However, the interaction was significant; F (1, 103) = 4.283, p = 0.041, η_p^2 = 0.040. Simple effects analysis indicates that the NPM students' level of self-esteem dropped significantly (t (52) = 2.261, p = 0.028, r = .299) between week 1 and week 10 of the first semester at university. The PM students' self-esteem, however, remains relatively stable (t (51) = -.633, p = 0.503, r = .088), thus indicating a moderating effect of the presence of a peer-mentor.

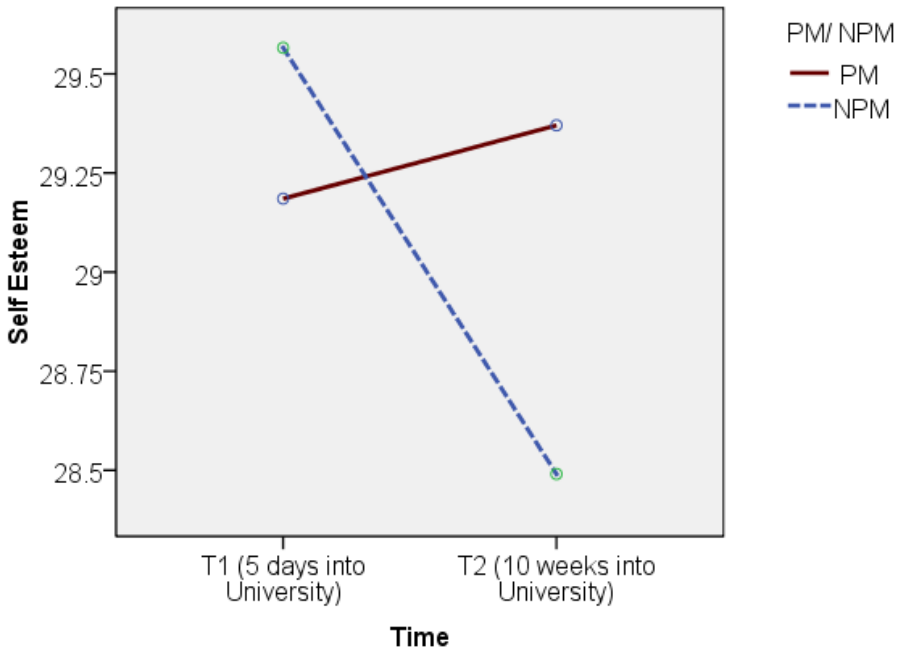


Figure 7.1 Interaction effects of time and peer mentoring on levels of self esteem

7.3.4.3 General Affect

For the dependent variable General Affect there was no main effect of time; F (1,98) = 0.461, p = 0.499, η_p^2 = .016; or PM/NPM; F (1, 98) = 2.365, p = 0.127, η_p^2 = .024 but the interaction was significant; F (1, 98) = 6.068, p = 0.016, η_p^2 = .058. Simple effects analysis indicate that the NPM students' level of General Affect experienced a slight decrease from time 1 to time 2 but this was not significant (t (47) = -1.009, p = 0.318, r = .145). The PM students', however, experienced a significant increase in positive General Affect measured from time 1 to time 2: t (51) = 3.095, p = 0.001, r = .400, thus indicating a moderating effect of the presence of a peer-mentor. Univariate tests showed there was also a significant difference between the two universities at time 1: t (211) = -2.088, p = 0.038, r = 0.142, where NPM were scoring higher on negative affect; and at time 2: t (99) = 2.524, p = 0.013, r = 0.245, where PM were scoring higher on positive affect

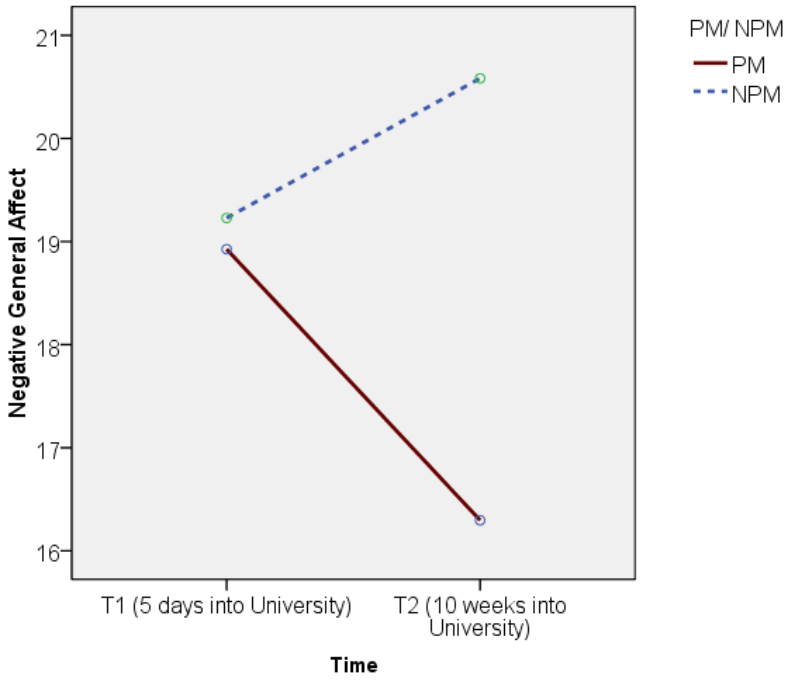


Figure 7.2: Interaction effects of time and peer mentoring on levels of positive general affect.

7.3.5 Research Question 1d: Can peer mentoring buffer the relationship between stress and outcome variables of college adaptation, self esteem and negative affect?

Three hierarchical multiple regression analyses were conducted in order to assess the stress buffering hypothesis with college adaptation, self esteem and general negative affect as dependent outcome variables. In accordance with Baron and Kenny (1986) moderation is apparent when an interaction between the predictor and moderator is evident.

Hierachical regression analysis testing the moderating effect of mentoring within the stress- college adaptation relationship found that stress had a significant main effect on college adaptation whereby individuals experiencing high levels of transitional stress were reporting lower levels of adjustment. The direct effect of mentoring was approaching significance as was the interaction. Figure 7.3 indicates that peer mentoring has little effect for individuals experiencing high levels of transitional stress.

Table 7.9: Social Support Buffering Hypothesis with an outcome variable of College Adjustment.

		Unstandardized Coefficients		Standardized Coeffecients			95% Confidence Interval for B	
Model		B	SE	Beta	*t*	Sig	Lower	Upper
1	(Constant)	112.74	7.54		14.95	<.001	97.82	127.73
	Stress	-0.70	0.25	-0.26	-2.80	.006	-1.20	-0.20
2	(Constant)	120.62	1.66		13.93	<.001	103.45	137.79
	Stress	-0.67	0.25	-0.25	-2.68	.008	-1.16	-0.18
	Mentoring	-5.85	3.27	-0.17	-1.79	.076	-12.32	0.63
3	(Constant)	149.53	23.48		6.37	<.001	102.96	196.09
	Stress	-1.66	0.79	-0.62	-2.11	.038	-3.21	-0.10
	Mentoring	-25.11	14.92	-0.72	-1.68	.095	-54.69	4.47
	Interaction	0.65	0.49	0.69	1.32	.189	-0.32	1.64

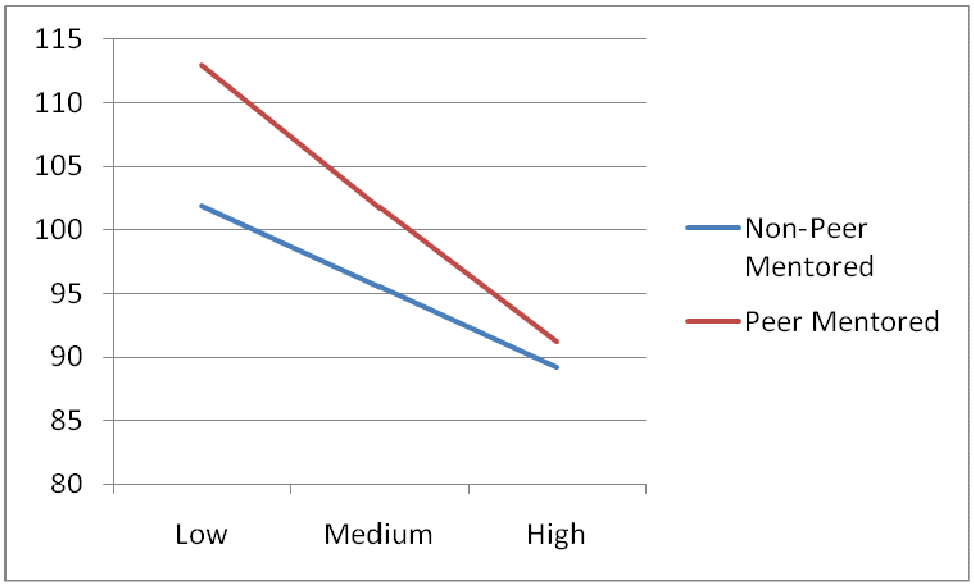


Figure 7.3: Moderation in the stress – college adaptation relationship.

Hierachical regression analysis assessing the moderating effects of mentoring within the stress- self esteem relationship, controlling for entry level self esteem, indicate no direct effect of transitional stress on self esteem measured 10 weeks into university. However, the main effect of mentoring was approaching significance with mentored individuals exhibiting higher levels of self esteem once entry level self esteem was controlled for. There was, however, no significant interaction (see Table 7.10 and Figure 7.4)

Table 7.10: Social Support Buffering Hypothesis with an outcome variable of Self Esteem.

Model		Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
		B	Std. Error	Beta	*t*	Sig.	Lower	Upper
1	(Constant)	9.53	1.71		5.58	<.001	6.14	12.92
	Esteem (1)	0.66	0.06	0.75	11.52	<.001	0.55	0.77
2	(Constant)	11.57	2.98		3.89	<.001	5.67	17.47
	Esteem (1)	0.63	0.07	0.72	9.59	<.001	0.50	0.76
	Stress	-0.04	0.05	-0.06	-0.84	.404	-0.14	0.06
3	(Constant)	12.63	2.99		4.23	<.001	6.70	18.56
	Esteem (1)	0.64	0.07	0.73	9.84	<.001	0.51	0.77
	Stress	-0.03	0.05	-0.05	-0.66	.513	-0.13	0.07
	Mentoring	-1.10	0.57	-0.12	-1.91	.059	-2.23	0.04
4	(Constant)	13.44	5.15		2.61	.010	3.22	23.66
	Esteem (1)	0.64	0.07	0.73	9.69	<.001	0.51	0.77
	Stress	-0.06	0.14	-0.09	-0.41	.684	-0.34	0.23
	Mentoring	-1.59	2.63	-0.18	-0.61	.547	-6.81	3.63
	Interaction	0.01	0.09	0.07	0.19	.847	-0.16	0.19

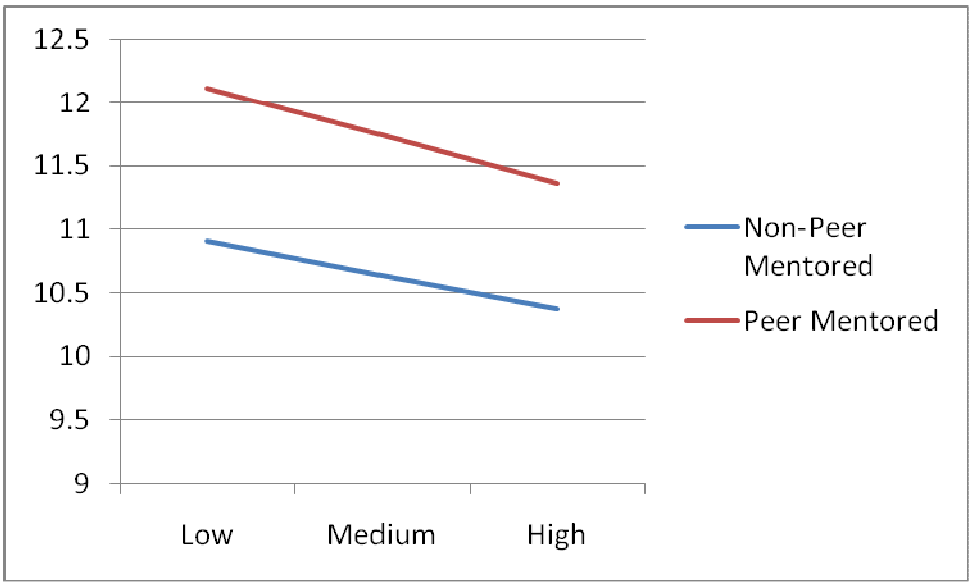


Figure 7.4: Moderation in the stress - self esteem relationship

Hierachical regression analysis assessing the moderating effect of mentoring within the stress- negative affect relationship controlling for entry level negative affect indicated no significant main effect of stress. Mentoring had direct effect on negative affect with mentored individuals reporting significantly lower negative affect than their non- mentored counterparts. However once the interaction term was added into the equation this effect was reduced and the interaction was also not significant. See Table 7.11 and Figure 7.5.

Table 7.11: Social Support Buffering Hypothesis with an outcome variable of General Negative Affect.

		Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
Model		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound
1	(Constant)	7.01	1.78		3.94	<.001	3.48	10.55
	Affect (1)	0.59	0.09	0.57	6.90	<.001	0.42	0.76
2	(Constant)	6.29	3.25		1.93	.056	-0.16	12.74
	Affect (1)	0.58	0.09	0.56	6.28	<.001	0.40	0.77
	Stress	0.03	0.11	0.02	0.27	.790	-0.20	0.26
3	(Constant)	1.03	3.58		0.29	.774	-6.07	8.14
	Affect (1)	0.59	0.09	0.56	6.58	<.001	0.41	0.77
	Stress	0.00	0.11	0.00	0.01	.991	-0.22	0.22
	Mentoring	4.11	1.36	0.24	3.01	.003	1.40	6.81
4	(Constant)	-6.14	9.65		-0.64	.526	-25.30	13.02
	Affect (1)	0.58	0.09	0.56	6.46	<.001	0.40	0.76
	Stress	0.25	0.33	0.20	0.76	.451	-0.41	0.91
	Mentoring	8.99	6.25	0.52	1.44	.154	-3.42	21.40
	Interaction	-0.17	0.21	-0.36	-0.80	.426	-0.58	0.24

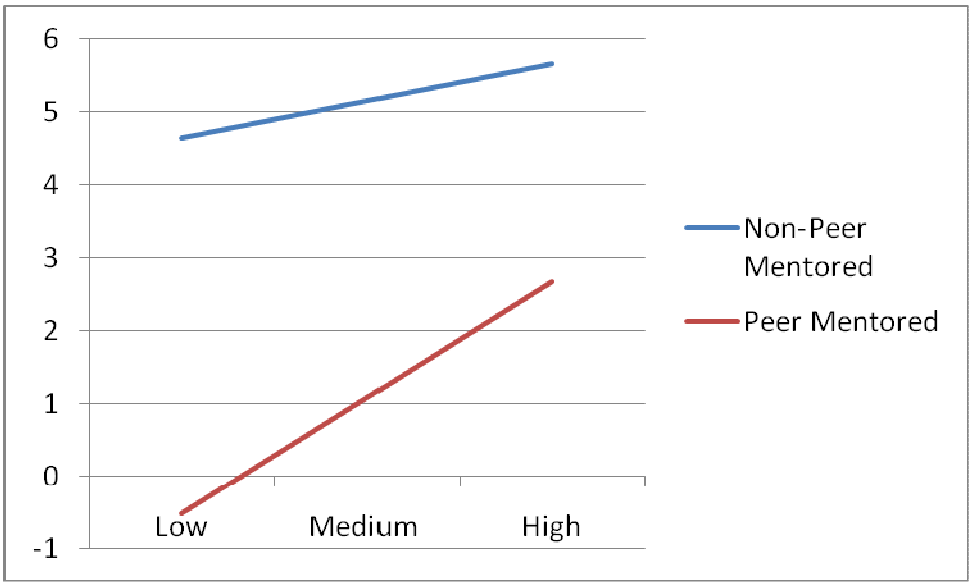


Figure 7.5: Moderation in the stress- negative affect relationship.

Part B: Evaluating Peer Mentoring within the Peer mentoring University.

7.3.6 Research Question 2: How do students utilise the peer mentoring scheme at entry and during the first term at university?

Most students met their peer mentor within the first day of university (61% n = 60) and over 80% (n = 79) of these meetings took place in the student's halls of residences. Over 50 % (n=56) had experienced over one hour contact time with their peer mentor during Welcome Week (as measured at T1) and this was mostly initiated by the peer mentor (80%, n=72).

At Time 1 45.5% stated they wanted more support from their peer mentor. However, a two way Chi square analysis indicated no overall association between the amount of contact and wanting more support: χ^2 (2) = 1.902, p = .386, Ø = .154. Table 7.12 displays the observed and expected counts for the association between amount of contact and wanting more support from a mentor. Of the 26 individuals

who spent 4+ hours with their peer mentor 38.4% (10) stated that they still wanted more support.

Table 7.12: Chi Square Test of Association between contact time and wanting more support from a peer mentor at T1.

CONTACT TIME	More Support from Mentor?		Total
	Yes	No	
< 1 hour	18 (15.3)	19 (21.7)	37
2 – 3 hours	5 (7)	12 (10)	17
+ 4 hours	10 (10.7)	16 (15.3)	26
Total	33	47	

Note: expected counts in bracket

By Time 2 (10 weeks into university) 53% (n = 31) no longer had contact with their peer mentors and a further 17% (n = 10) only saw them occasionally (low contact). However, 17% (n = 10) continued to see their peer mentors for over 1 hour per week (high contact). For those who continued to see their PM there was also a significant increase in peer mentor satisfaction from T1 ($\overline{X}_1$ = 3.88, SD = 1.69) to T2 ($\overline{X}_2$ =4.70, SD = 2.95): t (40) = -3.138, p = 0.003, r = 0.45, where 7 corresponds to highly satisfied. For all peer mentored participants there was a significant decrease in the amount of support that comes from the peer mentor from T1 ($\overline{X}_1$ = 3.72, SD = 2.45) to T2 ($\overline{X}_2$ = 2.02, SD = 1.77): t (53) = 5.008 p =0.001, r = 0.56, where 9 corresponds to a lot of support.

Table 7.13 displays descriptive and inferential statistics for level of contact on each of the dependent variables. As can be seen there were no significant differences between the three contact groups on any of the measures of interest except that of mentor social support. Post hoc analysis indicated that differences in levels of peer mentor support were between 'no contact' and 'low contact' (p < 0.001), between 'no contact' and 'high contact' (p < 0.001) and between 'low contact' and 'high contact' (p = 0.029) where individuals in the 'high contact' group

perceived the greatest level of support from their mentors and individuals in the ‘no contact’ group perceived the lowest level of support from their mentors.

Table 7.13: Descriptive and inferential statistics comparing different peer mentor contact groups on each of the dependent variables.

Time	Variable	ALL (inc NPM)		No Contact		Low Contact		High Contact		*F*	*p*	η^2
		Mean	SD	Mean	SD	Mean	SD	Mean	SD			
1	Coping	26.00	3.81	27.29	3.68	26.73	2.40	26.00	3.85	0.481	.621	.020
	Stress	28.88	6.38	28.33	7.28	29.94	6.66	29.00	4.66	0.294	.747	.011
	Affect	18.56	8.20	17.93	7.61	22.19	10.64	19.44	6.50	1.321	.276	.048
	Self Esteem	29.22	4.77	29.83	6.66	28.88	3.22	28.33	3.16	0.339	.714	.013
	Social Support	40.19	5.56	40.37	5.11	41.00	3.95	41.67	4.12	0.290	.750	.011
2	College Adaptation	91.94	17.17	97.00	14.16	94.12	16.52	90.40	20.12	0.684	.509	.045
	Well Being	67.21	11.32	67.35	10.30	70.18	10.28	66.90	9.71	0.504	.607	.027
	Stress	25.09	5.87	26.53	7.19	26.13	5.03	28.22	5.60	0.239	.788	.012
	Affect	18.35	8.54	16.42	7.63	15.75	7.07	17.30	8.56	0.127	.881	.022
	Self Esteem	28.99	4.46	29.48	5.61	29.06	4.02	29.70	4.00	0.063	.939	.002
	Social Support	37.79	7.83	39.06	6.89	39.35	5.95	41.10	6.66	0.366	.695	.005
	Mentor Support	39.50[a]	11.38	32.04	7.46	43.88	9.39	52.80	8.50	25.076	**<.001*****	.527

Note: a = includes PM university participants only.

Table 7.14 indicates the main topics of discussion between mentors and mentees at both time point 1 and time point 2 broken down by category of contact (none, low and high)

Table 7.14: Percentage of 'personal' and 'academic' topics discussed with peer mentor at Time 1 and Time 2 and the amount of contact individuals had with their PM.

	Topics Discussed	Time 1 % (n)	Low %	High %	Time 2 % (N)	Low %	High %
Academic	Registration	12.2 (9)	6.7	20	4.5 (2)	6.3	0
	Module choice	2.2 (2)	0	0	6.7 (3)	11.8	10
	Course information	13.3 (12)	40	0	8.9 (4)	17.6	10
	Finding way around	70 (63)	86	100	44.4 (20)	23.5	60
	SU information	24.4 (22)	20	40	17.8 (8)	5.9	20
	Uni information	49.4 (44)	73.3	100	33.3 (15)	35.3	30
	Departmental information	1.1 (1)	0	0	2.2 (1)	5.9	0
Personal	**Finances**	**10 (9)**	**13.3**	**0**	**2.2 (1)**	**0**	**0**
	Accommodation	**52.2 (47)**	**66.7**	**80**	**44.4 (20)**	**58.8**	**40**
	Homesickness	**6.7 (6)**	**14.3**	**20**	**8.9 (4)**	**23.5**	**0**
	Loneliness	**1.1 (1)**	**6.7**	**0**	**4.5 (2)**	**29.4**	**0**
	Personal	**8.9 (8)**	**13.3**	**0**	**17.8 (8)**	**12.5**	**30**
	Course suitability	**3.3 (3)**	**6.7**	**0**	**6.7 (3)**	**17.6**	**0**
	Dropout	**0.0 (0)**	**0**	**0**	**4.4 (2)**	**11.8**	**0**
	Other	45.6 (41)	33.3	20	37.8 (17)	47.1	70

Table 7.14 shows that the main topics for discussion at both T1, and T2 were issues of accommodation, university information and finding ones way around. Contact with peer mentors diminished between the two time points and this is mirrored by the decrease in numbers of individuals seeking peer mentors for advice. The 15 issues were categorised into personal issues (7 items) and academic issues (7 items) ('other' was left out). Higher levels of support were sought out for personal issues, and more so for the individuals who have low contact as opposed to individuals with a high contact. The number of acadeimc issues discussed decreased from T1 (Med = 3, range = 1-6) to T2 (Med = 0, range = 0-3): z = -4.578, $p < 0.001$, n = 34, r = 0.55. However, discussions with a peer mentor regarding personal issues remained low and stable at both time points (Med_1 = 0, range = 0-3; Med_2 = 0, range = 0-3; z = -1.611, p = 0.107, n = 34, r = 0.19).

There were also significant differences between the different contact groups on the number of personal issues discussed with their PM: χ^2 (2) 10.92, p = 0.004. Follow up analysis indicated that these differences lie between 'no contact' and 'low contact': z = -3.23, p = 0.001, n = 35, r = 0.54 and 'no contact' and 'high contact': z = - 2.42, p = 0.016, n = 28, r = 0.46. There was, however, no significant difference between 'low contact' and 'high contact' groups: z = -1.25, p = 0.211, n = 27, r = 0.24.

Table 7.15 investigates the relationships between the number of academic and personal issues discussed and outcome variables at both time points.

Table 7.15: Non-parametric correlation analysis (τ) between the number of personal and academic items discussed with peer mentor and each of the dependent variables

		Time 1		Time 2	
Time	Measurement	Personal 1	Academic 1	Personal 2	Academic 2
	Social support 1	-.116	.118	.144	-.140
T1	Coping	.148	**.240****	.081	.068
	Stress 1	.010	-.088	-.005	-.074
	Social support 2	-.184	.039	**-.288***	.168
T2	Stress 2	.031	-.059	.162	.075
	Adaptation	-.053	.127	**-.283***	.154
	Well being	-.221	-.041	**-.272***	.032
	Mentor Social support	.112	.130	**.444****	-.131
	Leaving	.150	.057	**.465****	.034

Note. * $p = 0.05$, ** $p = 0.01$, *** $p = 0.001$

As can be seen from Table 7.15 the number of personal items and academic issues discussed with their peer mentor at T1 was related in a positive way to coping with the transition to university, whereby those with better coping were more likely to discuss academic issues with a peer mentor. However, the number of personal issues discussed with a mentor at T2 was related negatively to college adaptation and wellbeing. Also the greater the number of personal issues discussed with a peer mentor at both time points was related to a greater intention to leave.

In order to measure if the intention to leave, poor college adaptation, low wellbeing and low perceived social support predicted whether or not an individual would discuss personal items with a peer mentor, stepwise binary logistic regression with discussion of personal issues with a peer mentor (Yes: N = 11/ No: N = 34) becoming a dependent was conducted and the results can be found in Table 7.16.

Table 7.16: Regression analysis predicting discussion of personal issues at T2 with peer mentors from the outcome variables: social support, wellbeing, college adaptation and intention to leave.

		95% CI for exp *b*		
	B (SE)	Lower	Upper	exp *b*
Step 1				
Constant	5.185			
	(2.882)			
Wellbeing	-0.96	.883	.990	-.908*
	(.044)			

Variables not in the equation

Variable	Score	Sig
Social support	.436	.509
College Adaptation	.004	.949
Leaving (categorised)	1.518	.218

Note: R^2 = .13 (Cox & Snell), .19 (Nagelkerke). Model χ^2 (1) = 5.960, p = 0.015. * p < 0.05. ** p < 0.01

As can be seen from Table 7.16, negative wellbeing was the only variable that significantly predicted whether an individual would discuss personal items with a peer mentor with a 75% correct classification rate. Social support, college adaptation and intention to leave at T2 did not account for any significant additional variance in the dependent variable of discussion of personal issues with a peer mentor. Therefore, individuals who had lower levels of overall wellbeing were significantly more likely to turn to their peer mentors to discuss personal issues.

7.4 DISCUSSION

This study has focused on peer mentoring within Higher Education with a specific focus on aiding the transition and integration into university. Using a controlled comparative methodology three main findings were observed. Firstly, peer mentors were accessed by many within the first few days at university and continued to remain a support for a sub group of individuals who appeared to be having difficulty adjusting to university. Secondly, the PM cohort was significantly higher in levels of coping than the NPM cohort (measured at T1) and college adaptation (measured at T2). They were also 4 times less likely to want to leave university than their non peer mentored counterparts. Thirdly peer mentoring 'buffered' the negative changes in social support, negative affect and self esteem over time. Each of these outcomes is discussed in greater detail below.

7.4.1 Does having access to a peer mentor help individuals cope with the transition to university?

Analysis indicated a significant difference between the two samples on levels of positive coping at time point 1, i.e. individuals from the peer mentored university were more likely to utilise positive coping strategies rather than maladaptive coping strategies. Practical coping is highly encouraged by peer mentors within the first few days including socialising, guidance and advice. Many of the coping items directly relate to those encouraged by peer mentors for example coping items include 'asking advice from previous students' and 'tried to be with other people' etc. It could be that

having a peer mentor encourages the adoption of such positive coping strategies or that the availability of peer mentors during the first week enables students to keep occupied and encourages integration of students into university. This may be achieved by merely 'being available' and persuading students to attend various events during the Welcome Week activities.

7.4.2 Does having access to a peer mentor help students to adapt to, and become more involved in university life, leaving them less susceptible to leave?

Results indicate that the PM students were on average more adjusted to university at T2, measured using the college adaptation scale, than their non peer mentored counterparts and this difference was marginally significant. One of the overall aims of peer mentoring is to be accessible within the first few days at university to show individuals around and introduce them to both the university environment, people in the Department and fellow class mates. The literature argues that withdrawal decisions are consolidated within the first semester and often the first 6 weeks (Earwaker, 1992; O'Dell, 1996; Yorke, 1999) and this decision is mostly predicted by integration at both academic and social levels (Braxton, 2000; Tinto, 1993). Therefore it appears that this should be an important area for a peer mentoring scheme to focus on. Although the difference was only approaching significance the overall power of the current study in the second half was low and given the debate regarding the strictness of Bonferroni corrections (Howell, 2007) it is possible a type II error occurred. Replication of the study with a larger sample size may provide greater insight into PM/NPM differences. Further to this the relative importance of peer mentoring, when considered alongside other potential predictors, was not tested

within the current study. Therefore, although peer mentored individuals reported greater levels of adaptation to university, it is unknown how peer mentoring interacts with other variables such as transitional stress and distress. More interactive analysis could be studied more in depth in future research.

One of the variables of greatest interest is that of withdrawal, as many peer mentoring schemes are initiated for retention issues. The NPM students were over 4 times more likely to indicate serious thoughts of withdrawal from university and these levels of intention to leave differed from the dropout statistics provided by the national statistics for the NPM University only. This indicates that in the NPM intention to leave exceeds the expected dropout rate provided in the performance indicators (HEFCE, 2003) whereas within the PM university the proportion of individuals indicating intention to leave matched the expected dropout for that university. Following Tinto's theory of student dropout this result could be due to the higher number of students living at home and thus not integrating into university life. This current study, however, focused on resident students only and this difference between universities remained. Thus the differences between PM and NPM in dropout cannot be explained by accommodation differences in the university. However, there are several other reasons for the differences in dropout. Although the universities were matched in as many ways as possible the peer mentoring university did have lower levels of dropout in general. Matching was achieved using national statistics (HEFCE), however these national statistics do not summarise departmental dropouts and it is possible that the differences in wanting to leave were due to natural differences in subject of study, availability of resources, other support offered by the universities and the make-up of the student body and general ethos of the university. In research such as this it is difficult to control for all possible factors.

7.4.3 Can peer mentor schemes buffer these effects of transition to university on levels of social support and self esteem?

Due to the degree of separation from pre university friends and the need to establish new social networks (Paul & Kelleher, 1995; Paul, Poole, & Jakubowyc, 1998) many students will experience a decrease in social support and related adjustment difficulties and "friendsickness" (Crissman Ishler, & Schreiber, 2002; Paul & Brier, 2002; Tao et al., 2000). In relation to this many students experience disruption and a greater degree of psychological symptomology on entering university (Fisher & Hood, 1987, 1988) as well as decreases in self esteem (Caldwell & Reinhart, 1988; Epstein, 1979; Kantanis, 2000; Tao et al., 2000). It is thus important to consider whether peer mentoring can be considered a key source of social support and thus buffer these effects. Analysis indicated a significant interaction between time and peer mentoring on levels of self esteem, whereby PM University showed no significant change in self esteem and the NPM University showed a decrease. Moderation effects within the changes of self-esteem, social support and negative affect indicates that having a peer mentor can positively improve the experience of arriving at university. By decreasing levels of stress and encouraging integration, peer mentors may augment levels of self-esteem, general wellbeing and social support.

Measurement of sources of social support during transition is complex. In this study, overall perceived social support decreases from before entry to university (measured retrospectively at time 1) to university support measured at time 2. Students may be leaving behind an established social support system and have to

start a-fresh. Developing a new social network and support system equivalent to that of pre university friendships etc may take a long time. During the first few weeks at university many individuals will be trying to cope with breaking away from old social support networks and developing new ones. Hence perceived social support is expected to be low and to rise steadily over time at university. Although both PM and NPM students experienced a perceived decrease in social support over time, this was not significant for the peer mentored students, but at time point 2 the non peer mentored had less perceived support from university friends than their peer mentored counterparts. Extra support from a peer mentor may introduce new students to one another, helping them feel more at ease within the university social environment.

In order to test the social support buffering hypothesis three additional hierarchical regressions were conducted. In this case mentoring was conceptualised as a social support mechanism and was predicted to buffer the effects of the stress – strain relationship. Within each of the analysis mentoring was not found to be a significant moderator, but did continue to have direct effects within the stress – negative affect relationship. Additionally the direct effects were approaching significant within the stress- college adaptation relationship and the stress- self esteem relationship after controlling for time 1 measures and transitional stress. This may indicate that mentoring becomes part of a social network rather than being considered in the cognitive appraisal of perceived social support. Participants within these studies may have continued to receive support from old friendship networks during the transition. The moderating effect of support may not be evident within the current study as research has indicated that the consistency of evidence for the buffering hypothesis relies on certain methodological constraints (Cohen & Willis, 1985). Included within this is the need to measure the support as perceived

availability rather than just presence/ absence. This may be beneficial to consider within future research.

7.4.4 How do students utilise the peer mentoring scheme at entry and during the first term at university?

Results suggested that the peer mentoring scheme was utilised and perceived in a positive way by most of the students. Many researchers have indicated the first few days to be critical in mapping out a student's experience of Higher Education (Astin, 1993; Earwaker, 1992; Tinto, 1993) and over 60% of first year undergraduates in this study saw their peer mentor within the first day, with over 80% of these meetings taking place in the student's halls of residence. Peer mentors mostly showed their mentees around university, told them what to expect of the course and university life as well as giving 'real life' student advice. These aspects were considered important and the most helpful with regards to the peer mentoring scheme. Ten percent continued to see their peer mentor on a regular basis by time two measurement 10 weeks into the course. Although the reasons are not stated this maybe a subgroup who have not integrated so well or have a number of personal issues and need the continued support. Alternatively their peer mentor may be integrated into their social network. This was indicated in Budney, Paul, & Bon's (1998) and Salinitri's (2005) research into formal mentoring within Higher Education; in both cases there was a continued association between mentors and mentees and the development of longer-terms friendships amongst some of the dyads.

Although many stated that they would not discuss personal issues with a PM, 20% at time point 2 did so. Indeed talking to a peer mentor regarding personal issues increased significantly overall between time 1 and time 2. This could indicate an actual increase in personal problems from time 1 to time 2 or highlight a subgroup that find the PM scheme useful and may have gained enough trust in their individual PM to discuss these issues. It is also possible that issues such as homesickness, loneliness and wanting to leave will increase in intensity over time among the vulnerable few. While peer mentors offer broad guidance and advice to the majority of students they may play a vital role in providing personal support to the minority who find adjustment to university difficult. Lowe and Cook (2003) found that most of the students in their study successfully managed the transition to university; however, a significant minority (20-30%) consistently reported academic and personal problems throughout the first year at university. These individuals can experience university as negative and may be at serious risk of withdrawing. Perhaps this group may be a useful target for mentoring. Amongst the students in a formal mentoring scheme in America Budney et al. (1998) found that most participants were reporting greater use of mentoring for academic transitional stress, but 58.8% also indicated that mentors helped with personal issues. Of course it is difficult to estimate the number of students who were dealing with these issues themselves and not discussing it with their peer mentors or the number of students who used the peer mentoring scheme but still went on to drop out- these are both areas of interest for future research.

Talking to a peer mentor about both personal and academic issues was positively related to approach style coping strategies adopted for dealing with the transition to university. Given that peer mentoring activities within the first week at

university overlap strongly with positive coping strategies as measured by the CISS this relationship is not unexpected. For example peer mentors are heavily involved with showing individuals around university and introducing them to other members on the course within week one. This links closely with coping strategies of 'keeping myself busy' and 'tried to be with other people'. However, by time point 2, talking to a peer mentor about personal issues was positively related to wanting to leave university and negatively related to college adaptation, wellbeing and social support. As stated above it is possible that individuals who are still discussing personal issues with peer mentors are those individuals who are having difficulties within university life and find this form of support particularly helpful. Individuals who want to leave university and/ or who are not adjusted to university life may be turning to their peer mentors for advice and support. Although data from this study does not allow us to substantiate this statement, lower levels of wellbeing in this study did significantly predict the utilization of the peer mentoring scheme to discuss personal issues. It is, however, difficult to estimate how many individuals are having difficulty adjusting to university life and are utilizing the peer mentoring scheme on a regular basis but have remained in university because of support received from their peer mentor. Craig's (1998) research into a formal peer mentoring program in Australia indicated that 3 out of the 20 mentees interviewed suggested that they were still on the course because of the support they received from their peer mentors. It is also unknown how many individuals who initially accessed the peer mentoring scheme have since left and how many may do so in the future. Given that intention to leave measured at time point two was also related in a positive manner to discussing personal issues at time point one it could be that individuals who have high levels of intention to leave also have long term personal problems, although there is no evidence for this from

the current study. However, this assumption is supported by the lack of significant differences between time 1 and time 2 in the 'personal issues' variable which indicates individuals using the scheme to discuss personal issues at time point 1 are also doing so at time point 2. Interestingly it was not the individuals who saw their peer mentor on a regular basis (1+ hour/week) by week 10 but those who saw them occasionally who appeared to be discussing personal issues with peer mentors. This could indicate that individuals with a high level of access to mentors had simply developed a friendship and remained in close contact. Whereas individuals not seeing their peer mentors on such a regular basis may view them as outside their friendship circle and as a separate area of support. A more detailed qualitative study of the relationship between mentors and mentees would help our understanding of the mentor-mentee relationship.

7.4.5 Demographic Differences between Universities

One limitation within this research was the usage of two universities with demographic differences. The key difference was the distance from home for students and thus the number living in halls of residence. Almost 50% of the NPM university students lived off campus whereas only 4 % of the PM university students lived off campus. Tinto argues that those not living on campus will have a greater difficulty of getting involved and thus adapting (Tinto, 1993). Residential students only were the focus within the current study, however, the general student make up may have an impact on the ethos of the university.

There were also differences in withdrawal rates with the NPM students being 2.823 times more likely to dropout from their course of studies in the first year,

however both universities overall dropout figures were within their calculated benchmark range for non- completion (see chapter 4 for a definition on benchmarks). Further to this the difference in withdrawal increased to an odds ratio of 4.16 when focusing on the intention to withdraw within the current study. Twenty two percent (significantly exceeding the 9% HEFCE dropout rate) from the NPM university had serious thoughts of withdrawing versus 3.8% (just under the 4% HEFCE dropout rate) from the PM university. Although universities were matched on some variables and statistical analysis controlled for other differences between universities it is unlikely that a true comparison with fully matching universities is possible. It is important to note that the current study was based on very small numbers and thus needs replicating with a larger sample size.

7.4.6 Limitation within Peer Mentoring Research in General.

One limitation within peer mentoring research is the variability of peer mentor commitment; therefore it is difficult to directly measure a mentees experience of the scheme. Ten individuals stated that they never met their peer mentors or that the mentors showed a lack of interest. Amongst the group of individuals who had never met their peer mentor it is difficult to differentiate the students who felt no need for a mentoring system and thus did not want to meet up (mentee initiated no contact) from the students who may have wanted to meet their mentors but the mentors initiated no contact. The experience of peer mentoring and its effects are notoriously difficult to measure objectively and although there were few significant differences between the two universities with regards to college adaptation and wellbeing it may be that the measurement of peer mentoring per se was not sensitive

enough. The specific scheme researched within this study followed the model of Manchester University's defined 'buddy' scheme in that peer mentors were mainly there within welcome week after which point they could continue to keep in contact with the mentees if they so wished. In order to find any specific evidence for the benefits of peer mentoring and possible mediating moderating factors it would be beneficial to observe a longer running scheme in more detail.

7.4.7 Future Research

A recommendation for future research is to assess students over the transition to university. In order to do this baseline measurement of self esteem, social support, worries and stress should be taken before students enter university.

Extending the research to pre-university allows one to focus on the proportion of students who withdraw from university within the first few days or who do not even turn up at all. This could also help to answer questions on specifically how peer mentors can help, and how best to focus mentoring efforts.

7.4.8 Recommendations for Policy and Practice

Given the large effect size found when comparing the two universities on intention to leave and the moderating effect of peer mentoring over time on levels of social support and self esteem, peer mentoring can be recommended as a strategy for retention. Peer mentoring appears to be a useful and beneficial scheme to the majority of incoming first year students and can continue to remain so for a significant minority who may be having difficulty adapting to university. As the

literature on student withdrawal highlights that the first few days at university are critical, and therefore could be a critical time point for peer mentors to be available. Literature also states that withdrawal decisions can be predicted from integration into university, a finding that is supported within this research, indicating that the biggest role peer mentors could play is that of integrating students into university life as quickly as possible.

Chapter 8
Levels of Psychological Distress in a Sample of First Year Students in Relation to Expectations from a Peer Mentoring Scheme

ABSTRACT

Many researchers have highlighted that the transition to university is a considerable life change stressor. It involves emotional, social and academic challenges and for many includes a significant move away from home. Fisher & Hood's (1987, 1988) research indicated that all incoming students will experience some form of psychological distress. All universities provide support services for students which are often underutilized; however a more informal and often untapped resource of information and support is other students. This study focuses on the attitudes among first year undergraduates towards the development and introduction of a student to student peer mentoring scheme within their university. This study was cross sectional where 158 first year undergraduates completed a questionnaire booklet mailed to their homes near the end of the year. Results indicated a positive response to the introduction of a peer mentoring scheme within the university with many students indicating that orientation, help and advice would be the greatest support from someone with experience. Nobody indicated that they would not ask a peer mentor anything if one was available. Individuals experiencing higher levels of stress and homesickness are more likely to indicate a greater usage of a peer mentoring scheme if one existed.

8.1 Introduction

The transition to university is complex and contains academic, emotional and social challenges (Chickering, 1969). Many university counsellors have noted that the first few days at university are critical for decisions in dropping out (Earwaker, 1992). Students are required to break from their established routines and social networks and try to build new ones in a different environment. This chapter will focus on students perceived well-being during their first year at university and their perceived need for peer mentoring as a means of social support.

8.1.1 Transition to University

The transition to university is considered by many as a major life change (Chickering 1969; Earwaker 1992; Gopelrud, 1980; Lu, 1994). It has been argued that a high proportion of students experience some level of psychological distress during the first weeks at university (Fisher & Hood, 1988, 1989). Lu (1994) describes the transition to university as not dissimilar to many stressful life events, but for students there is the added factor that many starting undergraduate life are still in their late teens.

Additionally students go through an academic transition. Baker, McNeil, & Siryk (1985) argue that many students are unprepared for university. Students may have high expectations of university life which can lead to dissatisfaction at university if these expectations are not met. In Baker et al.'s (1985) study of 308 undergraduates across 2 universities in the USA, dissatisfaction was highly related to lower levels of support from friends and staff and a greater consideration of withdrawal/ deferral.

Adjustment to differences in teaching, learning and feedback can be exacerbated by issues of relocation for many students. Within the UK (particularly England) many students move away from home to attend university. Orientating oneself to a new environment can be challenging enough but most incoming undergraduates will also not know anyone in their first days at university. Individuals may leave behind a familiar social network and will thus need to develop new social links. However, it is important to note that although many students identify meeting new people as a stressor it can also be a positive challenge (Earwaker, 1992). Many researchers have concentrated on the level of distress and need for adjustment of students living away from home, however some argue that remaining living at home and commuting can be worse for adjustment in the long run (Astin, 1993; Christie & Dinham, 1991; Tinto 1996). Tinto argues that if students maintain contacts and commitments outwith the university environment they integrate less well into the university community thus making them more vulnerable to withdrawal decisions. Christie and Dinham (1991) support this argument by concluding that maintaining external friendships may inhibit the transition and adjustment to university and will also hinder social integration. They argue that not only does living in halls (i.e. in university accommodation) provide several social opportunities but that maintaining old friendships at the previous level can cause conflict. Carney and McNeish (2002, 2003) also argues that students living at home have more difficulty integrating into university and campus life. This new entrant evaluation from Glasgow University found 'home' students reporting missing out on several opportunities and activities that appeared to be orientated to the residential students at during the first semester of university.

8.1.2 Social Support and Loneliness.

Social support has been identified as a key buffer to stressful situations (Cohen & Wills, 1985). However, during the transition to university students will not only have to deal with the move and starting a new course but may at the same time experience a decrease in social support. They will be developing new friendships whilst simultaneously deciding whether, and how to, remain in contact with old friends (Shaver, Furnham, & Buhrmester, 1985). Such changes in social support could lead to dissatisfaction. Dissatisfaction with quality of friendships (Cutrona, 1982; Wiseman, 1997) and lack of intimacy (Wheeler, Reis & Nezlek, 1983; Wiseman & Lieblich, 1989) are both linked with loneliness. A long history of research indicates that social isolation is detrimental with regard to mental health (Faris & Dunham 1960). However, it may not be the absolute lack of social contact per se that is related to mental health problems, but a decrease in the level of social contact (Jacobs, 1971; Lowenthal & Haven, 1968).

To assess changes in social contact, Corty and Young (1981) questioned 72 undergraduates, over seven days, on the amount of waking hours spent in social contact, levels of loneliness and psychopathology. Their results indicated no relationship between social contact and loneliness. However, the measure of social contact used in this study did not indicate with whom, of what importance the relationship was to the individual or the amount of time with particular people. Corty and Young (1981) argued that they were measuring changes in social contact and loneliness but this was difficult from the methodology employed. They did state that individuals who had recently undergone a loss or bereavement scored higher on loneliness.

Jones (1981) conducted a similar study controlling for quality of social contact. Sixty USA students were required to state the length of the interaction, relationship to other person, degree of intimacy and the emotional quality of the interaction. Jones concluded that 'the experience of loneliness has less to do with the objective characteristics of the lonely person's social milieu than with the process by which loneliness affects how people perceive, evaluate, and respond to interpersonal reality' (Jones 1981 pg 296). Further to this Russell, Peplau and Cutrona (1980) reported that lonely college students tend to have a lower number of close friends and their social network differs significantly from that of their non lonely counterparts. Sarason, Levine, Basham and Sarason (1983) report on the high negative correlation between received social support and loneliness. Additionally Stokes (1985) found that "network density" was negatively related to loneliness and that this included the frequency of social support received and number of confidants. Following on from this Levin & Stokes (1986) studied six social network/support variables in 124 undergraduates and found that less received social support and lower percentage of relatives within that social support were the only predictors of loneliness.

Several pieces of research on social support and loneliness fail to recognise the importance of perceived support and satisfaction with a social support network. Levin & Stokes (1986) argue that self-report measures are inherently difficult, and thus using the more objective measures of network density aims to control possible biases in perception reporting due to various personality variables and affective states. They see perceived social support as simply a confound, however, in the stress buffering literature it is seen as an important independent variable in itself, i.e. perceived support may be more important than actual support. Also Peplau &

Perlman (1982) define loneliness as a psychological state resulting from a discrepancy between an individual's ideal and perceived social support, indicating that it doesn't *t* matter how much support one receives, it is the satisfaction with that support that is important in buffering stressful events. Jones and Moore (1987) addressed this issue by measuring several factors of social support, including satisfaction with the support, one week into the college semester and again eight weeks later. From their sample of 142 college students they reported that loneliness was highly related to several aspects of social support and more specifically satisfaction with support. Indeed satisfaction was the best predictor of subsequent loneliness. Of even more significance was that measures of social support at time point one predicted levels of loneliness at time point two and in general initial social support was a better predictor of subsequent loneliness than initial loneliness predicting subsequent social support. This study has implications for incoming undergraduates whose existing social networks may become less satisfactory due to a lower level of face to face contact with previous friendships and also having to simultaneously deal with developing a new network.

Literature on loneliness, homesickness and stress in students and others all indicate the importance of social support for direct and moderating effects on ill health. Stress in and out of college (Cushman, 1997) and lack of support (Mackie, 2001) are both important indicators in the student attrition literature. All UK universities provide a wide range of student support services such as careers, welfare and counselling. However, one study by McKavanagh, Connor, and West, (1996) found a level of reluctance to access these services alongside a general lack of knowledge of them in students in Australia. In a further study Connor and McKavanagh (1997) argue that not accessing these support services at the

appropriate time can have negative consequences such as students withdrawing from university, transferring or not achieving their fullest academic potential. One way to address this is to access underutilised support networks i.e. that of other students, who can be an invaluable source of information for new students (Gerdes & Mallinckrodt, 1994; McKavanagh et al. 1996).

8.1.3 Peer Mentoring Schemes

Although research has been conducted on the success of peer mentoring schemes (refer to Chapter 1 and 7 for a fuller account of this literature) little work has been done on people's perceptions of characteristics that make a successful mentoring relationship or what an individual would like and expect from a mentor which is an important consideration for initiating new schemes.

In a study of 144 undergraduate students in America Rice and Brown (1990) found that when asked what areas they would be confident in as a mentor, students indicated a significantly higher level of confidence when topics focused on leadership and interpersonal skills and least confident when the focus was on career and academic skills. When asked to consider themselves as mentees students showed equal interest in all four skills (means ranging from 1.62- 1.73 on a scale of 1 = high interest to 5 = low interest). Therefore as mentees they would expect a mentor to be prepared to talk about the four functions yet they lack confidence to do this if they were to become a mentor themselves. Bowman, Bowman and Delucia's (1990) research with 24 peer mentees on a graduate course in America found that the most commonly discussed topic with a mentor was coursework (54%), although there was a substantial minority (29%) who also discussed emotional and personal issues.

8.1.4 AIMS and OBJECTIVES

This current research aims to provide more information on perceptions and expectations of mentoring within a sample of UK Higher Education students with a specific focus on first year students, transition and adjustment to Higher Education. The main aim of this study is to assess attitudes towards a peer mentoring scheme in a university without such a scheme, and perceived need for such a scheme. Specific questions were:

1. How had current students found the transition to university?
2. How might a peer mentor help during week 1?
3. How would a peer mentor scheme be utilized throughout the university year?
4. What support would students expect from a peer mentoring scheme?
5. What are the perceived important characteristics of a good mentor?
6. How do students feel a mentor will help at university?

8.2 METHODOLOGY

8.2.1 Design

This was a cross-sectional postal survey focusing on first year students' perceptions of need for peer mentoring within a Scottish University without such a scheme. The questionnaire package also included outcome measures of loneliness, social support, stress and college adaptation to assess any relationships between these measures and perception of need for a peer mentoring scheme.

8.2.2 Sample

154 first year students at a Scottish campus-based university took part; this was approximately a 10% return rate from the whole sample of first year students for both home (41, 26.6%) and residential (113, 73.4%) students. The sample were predominantly female (78%) and traditional aged (mean = 20.88 S.D = 5.88). Only 10% were overseas students.

8.2.3 Measures

A 7 page questionnaire booklet (Appendix 5) containing: standard demographic questions, validated questionnaires, single social support questions and one open ended question (How do you feel a mentor would help you at university?)

8.2.3.1 Standard Demographic Variables:

Age was scored as a continuous variable and later categorised as a dichotomous variable into 'traditional' (17-20) and Mature student (21 +). Gender and country of origin (UK vs. non-UK) were scored as dichotomous variables. Ethnicity was categorised into white, black, Chinese, Indian, Pakistani and other; accommodation into halls of residence, rented with others, rented alone, living with parents and home owner. Disability was categorised into none, declared and undeclared.

8.2.3.2 Transition to University

Items identified in previous research (Phillips, Unpublished MSc) as potential stressors during the transition to university as well as particular events within Welcome Week (registration, module sign up) were used. This ten item measure was also used in Study 2 (see Chapter 7) however, additionally participants were required to indicate how depressing, stressful and challenging each item was on a scale of 1 (low) - 3 (high). A total score (range 10-30) was calculated for each of the subscales: challenge, depression and stress. Cronbach α within this study was: challenge = .708, stress = .753 and depression = .827.

8.2.3.3 Social Support:

The Interpersonal Support Evaluation List (ISEL) was used to measure participants' perceived level of social support. The short form (12 items) was used

within the current study. See Chapter 7 for further information on the scales properties. Within the current study Cronbach α = .819.

Individuals were also asked to assess their level of support received from pre-university friendships as well as university friendships on a scale of 1 (A little) to 9 (a lot). Further to this individuals rated their satisfaction with pre-university friendships and university friendships on a scale of 1 (Not at all satisfied) to 9 (extremely satisfied).

8.2.3.4 Adaptation to University Life:

Adjustment to university was assessed using the 18 item College Adaptation Questionnaire (CAQ) constructed by Crombag (1968). A higher score equals better adaptation. For a full review of this scale properties refer to Chapter 7). Cronbach α in this study = .904.

8.2.3.5 Stress

The Academic Stress Questionnaire (ASQ) is a 34 item scale developed by Abouserie (1994) to assess students' stress. Items include stressors such as conflicts with staff and other students, workload, accommodation etc and it thus measures personal, social and academic stress. Participants indicate the degree of stress experienced in response to each item on a scale of 1-7, with 1 being 'no stress' and 7 being 'extreme stress'. The scale's structure and reliability were assessed using 675 second year undergraduates in a UK university (Abouserie, 1994). The alpha coefficient was high- 0.915 and split half method was equally high 0.746 indicating good reliability of the scale. Correlational analysis and the item level analysis

produced all significant results at the 0.01 level. Within this thesis items were added to provide a potential range of scores from 34 – 238. Cronbach α in this study = .93.

8.2.3.6 Loneliness

Degree of loneliness was assessed using the revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980). The UCLA Loneliness scale has 20 items; 10 items deal with satisfaction with relationships and 10 deal with dissatisfaction. Participants are requested to indicate on a 4 point Likert scale, corresponding to never, rarely, sometimes, and often, how frequently they experience such situations. The total score yields a global measure of loneliness and can range from 20-80 where a higher score indicates greater loneliness. Several studies have demonstrated the validity of the scale (Jones, Freemon & Goswick, 1981; Russell, Peplau & Fergussen 1978; Russell et al. 1980) including comparisons with romantic involvement and depression. The scale's discriminant validity has also been established therefore although loneliness is correlated with measures of negative affect it is nevertheless a distinct psychological construct (Russell et al., 1980). The scale has indicated a high level of internal consistency and has been shown to be internally reliable over time (Russell et al., 1980). Within this study Cronbach α = .95.

8.2.3.7 Homesickness

Homesickness was assessed using two separate dichotomous variables. Retrospectively individuals are asked to state whether they suffered from

homesickness during their first weeks at university (yes/no). Secondly they are asked to state whether they are currently suffering from homesickness (yes/no).

8.2.3.8 Intention to Leave

Intention to leave was assessed using one question asking individuals to indicate on a scale of 1 (not at all) to 7 (a lot) how much they had thought of leaving university.

8.2.3.9 Where a Peer Mentor May Help

An extra column was included on the transition to university scale. This column asked students to retrospectively rate (yes/ no) whether they felt a peer mentor would be of help for each item. For analyses purposes every 'yes' was assigned a 1 and totals calculated providing a range of scores from 0 -10.

Where a peer mentor may be of help at the present time was also assessed using the statements from the 34 item academic stress questionnaire. Participants were required to state whether or not they would turn to peer mentor at present for each of the listed situations e.g. examination stress, personal problems, need to do well self imposed as well as imposed by others etc. For analyses purposes all yes's were assigned a 1 calculations yielded a range of scores from 0 to 34.

8.2.3.10 Peer Mentor Expectations

Expectations of mentor support was assessed by asking individuals to indicate on a yes/ no basis what social support areas (emotional, socialising, practical, financial and advice/ guidance) they would expect a peer mentor to provide during week 1 at university. Individuals were asked to indicate on a scale of 1 (definitely not) to 4 (definitely yes) whether they felt a peer mentor offering these five areas of support would have helped them to settle into university.

8.2.3.11 Ideal Characteristics of a Peer Mentor

Derived from the literature on mentoring and Higher Education 11 peer mentoring characteristics were considered: doing same degree, same gender, matched by age/ ethnicity, get on well with them, good listeners, sociable, willing to show you around, share same interests, easily accessible, committed to scheme, make time for you. Individuals were then requested to mark each characteristic on a 5 point Likert scale of perceived importance for a successful peer mentoring relationship: 1 = very unimportant to 5 = very important. Items were assessed independently.

8.2.4 Procedure

All first year students at a Scottish University were identified via student records. A questionnaire package including details of the study was distributed through mail to students' term time address. Individuals living off campus were also sent a stamped addressed envelope for return of the questionnaire. Students living on campus were informed of drop off points around halls of residence and within the

teaching buildings. Students were given a month to return the questionnaires and received one email reminder about the survey 2 weeks after the survey was initially sent out.

8.2.5 Ethical Considerations

Ethical approval was sought and granted from the Psychology Department Ethics Committee at Stirling University during February 2004. Particular ethical consideration for the current study revolved around the data protection act. As surveys required mailing to all students and to ensure full confidentiality Stirling University Administration addressed and forwarded the surveys. The researcher had no access to names and addresses (including email). Also no personal details were required on the questionnaire due to the cross sectional design of the study. Consent was in the form of a tick box sheet at the front of the survey and was implied by the completion and return of the questionnaire. Due to ethical reasons students were only emailed a reminder once and an email debrief about the study and peer mentoring schemes was forwarded after the closing dates of the survey.

8.2.6 Data Analysis

Any questionnaire missing less than 10% of its data underwent median substitution. Questionnaires with more than 10% missing data were deleted from the data base; in total 2 were removed due to missing data from the ASQ. Descriptive analysis and comparative analysis of gender and age (mature v traditional) were conducted for all variables in order to assess the homogeneity of the sample.

Non parametric tests were used throughout this study (except repeated measures analysis) due to large differences in sample sizes (between homesick and non-homesick/ residential and commuter), heterogeneity of variances and non normal data in many of the variables. In order to assess demographic differences ('commuters' v 'residential') and differences in homesickness on all outcome variables and peer mentoring items, multiple Mann Whitney U tests were conducted correcting assumed level of significance (ALS) for the number of tests using Bonferroni calculations.

In order to look at differences in social support, multiple Wilcoxon repeated measures tests were conducted comparing support from 'home' and university friends where a negative number indicates less support at university. Difference between 'home' and 'university' friends was also calculated in order to correlate the change in support with other outcome variables. The data was then split by place of residence (commuter/ residential) and then by homesickness (yes/no) to assess differences between these variables. Focusing on the peer mentoring items: number of events (regarding week 1 at university) where a student indicated a peer mentor would help, were collated and ranked indicating which events students would like the most support with. Number of items on the ASQ where a student would access a peer mentor were also collated and ranked indicating what students would find most helpful when dealing with academic and personal stressors. Descriptive analysis was conducted on the expectation of peer mentor support variables and perceived important characteristics of a peer mentor. Items were also ranked indicating what was expected from, and what is important in, a peer mentoring scheme.

8.3 RESULTS

8.3.1 Demographics

There were 158 participants within this study from a possible 1437 incoming first year students: a response rate of 10.9%. The majority of the sample were female (N= 122, 78.2%), white (N = 153, 98.1%) and of traditional age (N = 122, 78.7%). 111 (71.2%) students had moved away from home to attend university, 13 (8.7%) were international students and 108 (68.8%) were living in halls of residence on campus. Fifty (32.5%) were married or in a steady relationship, 12 (9%) stated that they had a disability and 8 (5.2%) had children. Differences between traditional and mature aged students and male and female students on each of the seven outcome measures: challenge, stress, depression, loneliness, college adaptation, social support and academic stress were assessed using multiple Mann Whitney U Tests. No significant differences were indicated. The sample can therefore be considered homogenous and treated as one.

Only one difference (on the Academic Stress Questionnaire) was evident when comparing individuals living in halls (residential) versus those living with family (commuting). 'Residential' students reported significantly more stress than their 'commuting' counterparts. Breaking the academic stress questionnaire down into 'personal issues' and 'academic issues' scales indicated significant differences between 'residential' and 'commuting' students on the personal issues scale only (see Table 8.1) indicating that 'residential' students perceived greater stress with regard to personal issues, however, both groups experienced similar levels of academic stress. Descriptive and Inferential Statistics for the five outcome measures can be found in Table 8.1

Table 8.1: Descriptive and inferential statistics comparing commuting and residential students, past homesickness and current homesickness for the five outcome measures.

	Commuting		Residential				Homesick (arrival)		Not homesick (arrival)				Homesick (current)		Not homesick (current)			
	MED	IQR	Med	IQR	*z*	*P*	Med	IQR	Med	IQR	*Z*	*P*	Med	IQR	Med	IQR	*z*	*p*
Challenge	14.0	4.00	14.0	5.00	-.467	.640	14.5	3.25	13.0	5.00	-2.770	**.006***	14.0	5.00	14.0	4.00	-1.061	.289
Stress	14.0	6	13.0	8.00	-.823	.410	15.0	5.00	12.0	6.00	-1.656	.098	15.0	5.25	13.0	6.75	-1.148	.251
Depression	10.0	5.00	09.0	7.00	-.727	.467	10.0	5.00	09.0	3.00	-1.742	.081	10.5	7.25	9.5	4.00	-2.106	***.035***[a]
Loneliness	35.0	15.00	34.0	25.00	-.895	.371	36.5	12.25	34.0	16.50	-0.69	.639	41.0	22.25	34.0	14.00	-1.675	.094
College Adaptation	90.0	29.00	98.0	38.00	-.637	.524	85.0	27.25	96.0	29.50	-2.112	***.035***[a]	74.5	3975	91.0	28.75	-3.207	**.001****
Social Support	22.0	7.75	20.0	8.50	-1.398	.620	37.5	8.00	37.0	8.00	-0.709	.478	35.0	11.00	37.0	8.00	-1.279	.201
ASQ (personal)	34.0	20.0	48.0	37.0	-4.512	**.001****	50.0	45.75	44.0	32.00	-2.452	***.014***[a]	69.0	37.50	44.0	29.00	-2.795	**.005****
ASQ (academic)	57.0	24.0	54.0	25.5	-0.187	.852	59.0	25.50	50.0	20.0	-2.234	***.026***[a]	37.50	32.75	33.0	25.50	-0.974	.330

Key: ASQ = Academic Stress Questionnaire

8.3.1.1 Homesickness

Retrospectively 58 (48.7%) individuals reported that they had suffered from homesickness during their first week at university, and 18 (15.4%) reported suffering from homesickness at the end of year one, 4 of whom had not suffered from homesickness during week 1. Two way chi square indicated a significant association between homesickness retrospectively and current homesickness: χ^2 (1) = 7.190, p = 0.007, Ø = .248.

Two way chi-square indicates that residential students, females and traditional aged students were significantly more likely to report homesickness when first arriving at university than their counterparts (χ^2 (1) = 5.518, p = 0.019, Ø = .215; χ^2 (1) = 5.339, p = 0.021, Ø = .213; χ^2 (1) = 3.449, p = 0.034, Ø = .196 respectively). There was, however, no significant association between current levels of homesickness and residential status (χ^2 (1) = 1.773, p = .183), gender (χ^2 (1) = 1.766, p = .184), nor age (χ^2 (1) = 3.449, p = .063).

Several differences were evident between individuals who reported homesickness on arrival and those who did not with regard to the outcome variables of interest (see Table 8.1) specifically individuals who were reporting current homesickness showed significantly higher levels of personal stress and significantly lower levels of college adaptation than individuals who were not homesick.

8.3.1.2 Intention to Leave

Students scored an average of median = 2 (IQR = 3) on the intention to leave scale. Most individuals were scoring 1 (no thought of leaving: 45.2% n = 71). Only

13.4% were indicating high levels of thoughts regarding withdrawing from university (score of 6 or 7: n = 21). A two way chi square looked at the association between residential status, gender, age and the intention to leave university. No association was found for residential status: χ^2 (1) = .963, p = .326, nor gender: χ^2 (1) = .157, p = .692. A significant association was found between age and intention to leave χ^2 (1) = 5.564, p = .018, Ø .190 where traditional aged students were 2.952 times more likely to indicate a high level of intention to leave than mature student. A 2 way chi square also indicated no significant association with homesickness reported in week 1: χ^2 (1) = 3.259, p = 0.071, Ø = .166. However, there was a significant association between intention to leave and current homesickness: χ^2 (1) = 8.886, p = 0.003, Ø = .277. Odds ratio calculation indicates that homesick individuals are 4.864 times more likely to want to leave than their non homesick counterparts.

8.3.1.3 Changes in Social Support

Change in the number of friendships from pre university home friends (measured retrospectively) to university friendships measured at the end of the first academic year were calculated by subtracting home friends from university friends. Therefore negative numbers indicate a decrease in number of, and satisfaction with, friends from home to university. A significant mean decrease of -1.91 in the number of friends from home ($\overline{X}$ = 5.64, s.d 3.07) to university ($\overline{X}$ = 3.66, s.d. 2.73) was indicated: t(154) = 8.124, p < 0.001. There was also a significant decrease of -1.163 in satisfaction with friends from home ($\overline{X}$ = 7.73, s.d. 1.61) to university ($\overline{X}$ = 6.57, s.d. 2.01): t (140) = 5.702, p < 0.001.

Changes in social support were significantly related to loneliness, college adaptation and overall perceived social support as measured by the ISEL where decreases led to poorer outcome results in all cases (see Table 8.2)

Table 8.2: Correlation analysis between changes in social support and each of the outcome variables

	Loneliness	CAQ	ISEL	Academic ASQ	Personal ASQ	Leaving
Change in support from close friends	-.177**	.097	.071	.050	.046	-.012
Change in satisfaction with support	-.200**	.139*	.159*	-.048	.033	-.053

*Note: *p < 0.01, ** p < 0.001*

8.3.2 How had Current Students' found the Transition to University?

Individuals were asked to indicate how challenging, stressful, and depressing they had found the transition to university. Mean, SD and ranks for each transition experience are provided in Table 8.3 with total scores for challenge, stress and depression out of a maximum of 30.

Table 8.3: Mean, standard deviations and ranks of the ten transition items in relation to perceived challenge, stress and depression

	Challenge			Stress			Depression		
	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD
Finding way around	1	2.12	.77	2	1.93	.73	6	1.30	.55
Organising modules	2	1.87	.68	3	1.90	.70	7	1.29	.51
Meeting people	3	1.86	.77	5	1.75	.78	3	1.44	.69
Self doubt	4	1.78	.76	4	1.81	.78	1	1.72	.79
Homesickness	5	1.77	.85	6.5	1.70	.83	2	1.67	.79
Orientation to university	6	1.76	.67	6.5	1.70	.72	8	1.24	.51
Registration	7	1.72	.69	1	1.94	.72	9	1.20	.46
Meeting tutors	8	1.52	.64	8	1.58	.67	10	1.15	.43
Accommodation Issues	9	1.43	.60	9	1.52	.69	5	1.33	.61
Conflict with peers	10	1.31	.58	10	1.43	.69	4	1.37	.67
TOTAL		***13.73***	***3.11***		***13.71***	***3.67***		***10.53***	***2.98***

Note: Scores range from 1 = low to 3 = high.

As can be seen in Table 8.3 students are scoring on average small to medium levels of overall challenge and stress with low levels on the depression scale. The most challenging experiences appear to be finding ones way around and organising modules, whereas registration is considered the most stressful. Self doubt and homesickness are by far considered the most depressing experiences within this sample of the transition to university.

There were significantly strong inter correlations between the three variables: challenge was positively related to stress; $r = .753$, $p < 0.001$, n = 156 and depression; $r = .630$, $p < 0.001$, n = 154. Stress and depression were also positively related to one another; $r = .659$, $p < 0.001$, n = 154.

Mann Whitney U Test indicated no significant differences between 'commuting' and 'residential' students on each of these variables (see Table 8.1).

Individuals reporting homesickness on arrival to university were indicating significantly greater levels of challenge in comparison to those who reported no retrospective homesickness. No other differences were evident. Also no difference was found for current levels of homesickness.

8.3.3 How Might a Peer Mentor Help in Week 1?

Students felt that mentors would be helpful during the transition to university on average on nearly half (4.99) of the possible ten listed stressors. Mann Whitney U Test indicated no significant differences between 'commuting' and 'residential' students: z = -.16, p = .86, n = 154 on the dependent variable of peer mentoring support for week 1 items. There were also no significant differences between individuals who were homesick on arrival and those who were not: z = - 1.061, p = .289, n = 118 in terms of utilising a mentor during week 1. There was, however, a significant difference in potential help received from a mentor between individuals who were reporting current homesickness (Median = 15, IQR = 3.5) in comparison to their non homesick counterparts (Median = 13, IQR = 4.0): z = -2.529, p = 0.011, n = 116. Figure 8.1 indicates the percentage of individuals who believe a peer mentor would help, in relation to particular week 1 activities broken down by homesickness.

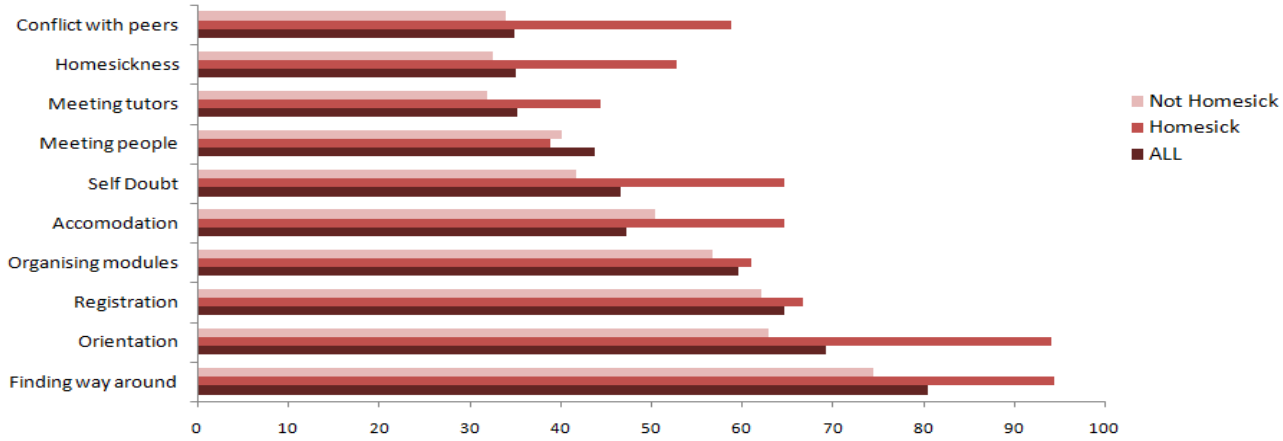


Figure 8.1: Percentage of homesick/ non-homesick individuals who feel a peer mentor may help with regard to particular activities of week 1 at university

As can be seen in Figure 8.1 overall over 50% of individuals think a peer mentor would be helpful for help in organising modules, registration, orientation and finding ones way around. Homesick individuals perceive a greater need for peer mentors with nearly 100% indicating that they would find mentors helpful in week one for orientation and finding ones way around.

8.3.4 How Would the Peer Mentor Scheme be Utilized Throughout the University Year?

Overall individuals indicated that they would access a peer mentor for 7 of the 15 potential academic stressors and 5 out of the 19 potential personal stressors from the ASQ scale. Mann Whitney U Test indicated no significant differences for both academic stress or personal stress comparing 'commuting' and 'residential' students, and homesickness categories (see Table 8.4)

Table 8.4: Comparison of residential status and current and past homesickness in relation to perceived need for a peer mentor for academic and personal stress (ASQ).

	'Commuting'		'Residential'				Homesick (arrival)		Not homesick (arrival)				Homesick (current)		Not homesick (current)			
	MED	IQR	Med	IQR	*Z*	*p*	Med	IQR	Med	IQR	*z*	*p*	Med	IQR	Med	IQR	*z*	*p*
ASQ (academic)	9.0	9.0	9.0	8.0	-1.385	.166	5.5	7.0	7.0	9.0	-0.289	.772	12.5	9.5	80	9.0	2.159	***.031***[a]
ASQ (personal)	4.0	7.5	2.0	4.5	-1.984	***.047***[a]	6.0	8.75	5.0	9.0	-0.357	.721	4.5	9.5	4.0	7.0	1.901	.057

Note. Bonferroni correction applied: ASL: 0.05/2 = 0.025. [a] = approaching significance. IQR = Interquartile Range

Table 8.5: Comparison of residential status, and current and past homesickness in relation to perceived social support from a mentor.

	'Commuting'		'Residential'				Homesick (arrival)		Not homesick (arrival)				Homesick (current)		Not homesick (current)			
SUPPORT	MED	IQR	Med	IQR	*Z*	*p*	Med	IQR	Med	IQR	*z*	*p*	Med	IQR	Med	IQR	*z*	*p*
Emotional	2	2	3	1	-2.912	**.004***	3	1	2	2	-2.299	.021	3	2	3	1	-2.170	***.030***
Socialising	3	1	2	1	-1.557	.119	2	1	3	1	-1.418	.156	2	1	2	1	-0.031	.975
Practical	4	1	3	2	-2.114	***.035***	3	2	3	1	-0.184	.882	3	1	3	2	-0.570	.569
Financial	1	1	2	2	-3.081	**.002***	2	2	2	2	-0.922	.357	2	1	2	2	-0.757	.449
Advice	4	1	3	1	-0.949	.343	3	1	3	1	-0.003	.997	4	1	3	1	-1.817	.069

Note. Bonferroni correction applied: ASL: 0.05/5 = 0.01. * *p* = selected α level, ** *p* = 0.001, [a] = approaching significance. IQR = Interquartile Range

Students felt that a peer mentor would be the most helpful for academic reasons with over 50% indicating that they would access a peer mentor for 7 of the 34 'stressors' on the ASQ. A full list of stressors and the percentage of students who would access a peer mentor for particular items can be found in Table 8.6.

Table 8.6: Stressors ranked by the percentage of students who feel they would access a peer mentor.

RANK	Item	Percentage
1	Essays/ Projects	63.0
2	Knowing what is important to study	62.3
3	Unclear assignments	60.1
4	Making choices about career	57.2
5	Studying for exams	54.5
6	Unclear course objectives	52.6
7	Loneliness	50.7
8	Conflict with college system	47.3
9	Conflict with lecturers	46.4
10	Examinations and Results	44.8
11	Timing, Spacing of assignments	43.8
12	Too much to do	43.5
13	Conflict with people you live with	43.3
14	Learning new skills	42.0
15	Amount to learn	41.8
16	Lack of time for family and friends	41.3
17	Financial problems	39.2
18	Conflict with peer(s)	38.0
19	Interpersonal difficulties	35.3
20	Peer pressures	35.1
21	Forgotten Assignments	32.5
22	Homesickness	32.4
23	Lack of time to study	32.0
24	Problems with accommodation	30.7
25	Need to do well (self imposed)	29.3
26	Boring classes	28.5
27	Family crisis	27.2
28	Need to do well (imposed by others)	27.0
29	Uninteresting curriculum	26.0
30	Personal health problems	20.5
31	Lack of time for own interests	16.6
32	Lack of time for family and friends	13.8
33	Sexual problems	13.6
34	Conflict with spouse/ partner	12.9

8.3.5 What Support would Students Expect from a Peer Mentoring Scheme?

With regard to expectations of support from a peer mentor 95.4% (n = 152) of the respondents indicated that they would expect a peer mentor to advise, 84.5% (n = 129) to provide practical guidance, 61.4% (n = 94) to provide emotional support, 58.8% (n = 90) to help with socialisation and 30.3% (n = 46) to provide financial advice.

Table 8.7 gives the rank order and descriptive statistics for the five areas of possible support provided by a mentor and how they may be beneficial during the transition to university.

Table 8.7: Rank order and descriptive statistics for the perceived benefit of mentoring support during the transition to university.

RANK	SUPPORT	Mean	SD	95% CI	
				Lower	Upper
1	Advice/ Guidance	3.39	0.73	3.27	3.51
2	Practical Guidance	3.08	0.89	2.93	3.23
3	Socialising	2.54	0.94	2.39	2.70
4	Emotional Support	2.42	0.93	2.27	2.58
5	Financial Advice	2.01	0.99	1.84	2.17

Note: 1 = No benefit, 5 = Substantial benefit.

Significant differences were found between these five areas of support $\chi^2(4) = 181.143$, $p < 0.001$. Post hoc analysis indicated significant differences (all $p < 0.001$) between the five areas of support except emotional support and socializing $p = .208$. 'Residential' students felt that emotional support from a peer mentor would have helped them to settle in to a significantly greater extent ($p = 0.004$) as well as financial advice ($p = 0.002$). 'Commuting' students rated practical assistance higher than 'residential' students ($p = 0.035$).

To assess the relationship between PM support and PM ASQ with the dependent variables challenge, depression, week one stress, academic stress, loneliness, college adaptation, social, support and wanting to leave correlation analysis was conducted (Table 8.8)

Table 8.8: Correlation analysis for the peer mentoring items with each of the dependent variables

	Leaving	Challenge	Stress	Depression	ASQ Personal	ASQ Academic	Loneliness	CAQ	ISEL
PM Support	.016	.297**	.253**	.242**	.224**	.222**	.048	-.065	-.012
PM Academic	.030	.091	.135*	.168**	.162**	.244**	.021	-.017	-.031
PM Personal	.000	.133*	.183**	.185**	.193**	.125*	.003	.013	-.043

Note: PM Academic/ Personal = Peer Mentor support with regards to the Academic Stress Questionnaire
ASQ: Academic Stress Questionnaire
CAQ: College Adaptation Questionnaire
ISEL: Social Support Measure
** $p \leq 0.05$, ** $p \leq 0.01$*

Although both PM support and PM ASQ are related significantly and in the expected direction to transitional challenge, depression and stress as well as academic stress, they are not, however, related to loneliness, social support, college adaptation or intention to leave.

8.3.6 What are the perceived important characteristics of a peer mentor?

Factors indicated as important characteristics of a good peer mentor can be found in Figure 8.2.

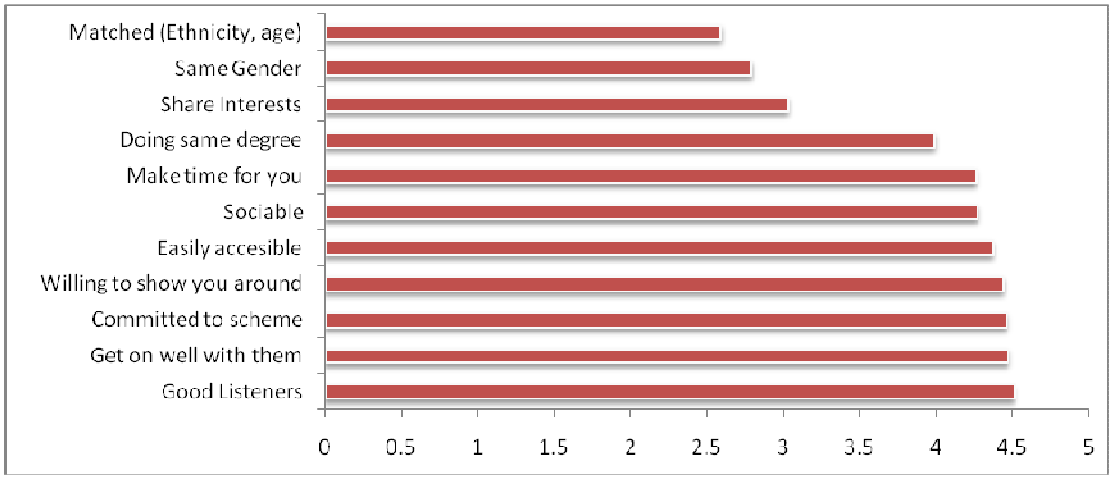


Figure 8.2: Mean level of importance regarding attributes of a peer mentoring scheme where 5 = very important, 3 = unsure and 1 = very unimportant.

As can be seen by Figure 8.2 of the 11 possible important factors of a peer mentor participants indicated that the most important attribute for a peer mentor was being a good listener, getting on well with the mentor, and being committed to the scheme.

8.3.7 How do students feel a mentor will help at university?

Eight categories emerged from the open-ended question of 'how do you feel a mentor would help you at university?' Categories, frequency occurring and sample quotes can be found in Table 8.9. Most people viewed peer mentoring as positive.

Table 8.9: Categories and frequencies emerging from the open ended question of 'how do you feel a peer mentor will help you at university?'

Category	N	Sample Quote
Settle in	**37**	*"Show you around, introduce you to a few people; a less formal option for help than going to [university support services] as often you feel problems are too small to go to these places but then they mount up"*
Guidance/ Information	**36**	*"A map and advice on handling workloads. Tips on essay writing, exam prep etc…help with questions I don't feel I can ask tutors"*
Someone to talk to	**11**	*"Someone to talk to when I'm feeling down, someone who would make a student feel at home and take away some of the anxieties of the first week and advice on academic life as a whole"*
Support/ Friend	**15**	*"The chance to provide a friendly smile in those first few weeks of being alone"*
Their Experience	**15**	*"somebody with experience who can relate to what you are saying"*
Reassurance	**10**	*"Help in the first few weeks is crucial. Self doubt is high and it would be good to know that this is common during the first few weeks"*
Confidence Giver	**4**	*"I think it would give me more confidence if I knew someone was there to help me if I needed them"*
Do not need one/ waste of time	**6**	*"I do not think that a peer mentor would be that much more help. You have to learn your way around university yourself, that is part of it, and everyone is really helpful around here anyway"*

8.4 DISCUSSION

This study has focused on psychological distress amongst a sample of first year undergraduate students with a further aim of assessing the relationship between distress and perceived need for a peer mentor.

There were no significant differences in psychological wellbeing with regard to gender and age. This supports the argument by McInnes (1993, 1994) and McInnes, James and Hartley (2000) that all first year new entrants, including mature aged students will experience the progression into Higher Education as a significant period of adjustment. However, inconsistent with past research on commuting versus residential students there were also no significant differences on any of the outcome variables between 'commuting' and 'residential' students. Therefore 'residential' students did not perceive the transition as significantly more stressful and 'commuting' students were not significantly less adjusted to university life. This discrepancy in results could be due to the timing of this research which was conducted at the end of the first year. Not having access to student's withdrawal details meant that it was not possible to check if there was an association between individual's residential status and withdrawal from university on a voluntary basis. Also some students may have changed their accommodation status over the first year.

8.4.1 Levels of Psychological Distress amongst a Sample of First Year Students

In support of Fisher et al.'s (1987, 1988) work this study found that nearly 50% retrospectively reported homesickness during the first weeks of university and

that although most recovered some (N = 43, 36.8%) remained homesick throughout the year with a small number (N = 4, 3.4%) developing homesickness later on. This is similar to the findings of Cutrona (1982) in the USA. The individuals who have remained homesick and developed homesickness in particular report lower levels of college adaptation and greater levels of academic and personal stress. As this is a cross sectional study it is impossible to state causality. It could be argued that high levels of homesickness would lead to less integration (college adaptation) making these individuals vulnerable to withdrawing from university (Tinto, 1975). This is supported by the fact that individuals who reported current homesickness were also reporting high levels of intention to leave university.

Many writers have proposed that the move to university will cause significant stress due to the changes in social support networks (Astin, 1993; Crissman Ishler & Schreiber, 2002; Earwaker, 1992) and thus individuals moving away from home will be affected by this aspect of the transition. In support of the literature on social support and loneliness the students within this study who experienced the greatest decrease in the number and satisfaction of friendships from home to university also experienced the greatest level of loneliness. Although neither of these variables were linked with intention to leave changes in satisfaction was also linked to college adaptation and social support.

8.4.2 Attitudes towards the Introduction of a Peer Mentoring Scheme

Overall the idea of introducing a scheme was perceived as positive with only 6 of the 158 indicating that they would have very little use for it. Individuals indicated that the greatest benefits of a peer mentoring scheme would be the more

practical and academic aspects of university life particularly with regard to the transition to university. Past literature has indicated that the first year in Higher Education is a critical time (Earwaker, 1992). Sources of stress have included changes in work, finances, living conditions and social relationships (Mallinkrodt, Leong, & Kralj, 1989; O'Neil & Mingie 1988). A peer mentoring scheme may be able to alleviate some of these stressors. In an open ended question, a high proportion of individuals indicated that a peer mentor would help them to settle in to university specifically by showing them around, introducing them to other first year students, and providing a less formal option for help. Past literature has shown reluctance to access the more formal services provided by universities (McKavanagh et al. 1996) therefore peer mentoring could be another route to supporting students who, without assistance, may be at greater risk of withdrawing.

Many students also indicated that general information and advice would be helpful during the first orientation weeks at university. This is similar to Bowman et al. (1990) evaluation of a student- to- student mentoring programme, where the most discussed topic between the dyad was coursework followed by 'procedures and paperwork'. A combination of factors including ambiguity regarding coursework requirements, the experience the peer mentor has within the university and department, as well as reluctance to contact tutors over perceived minor issues, highlights the possible benefits of a peer mentoring scheme in comparison to the more formal support services available at universities.

This aspect of 'not bothering the student services' seems apparent in previous work (McKavanagh et al. 1996). Perhaps it is the peer mentor's informality that makes it more accessible to individuals. Treston (1999) argued that peer mentoring schemes were successful and helped reduce dropout rates, especially when students

were reluctant to consult university staff and student services. Within the UK, Yorke (1999) found that only 27.6% of full time and 3.9% of part time students who discontinued their studies sought advice from official university services regarding withdrawing from university. Yorke (1999) does, however, suggest that lecturers and personal tutors remain the most likely individuals that students would seek advice from, but argues that this resource may become less viable as student numbers increase, leading to greater pressure on the staff. The survey conducted by Yorke did not question how many would not seek any advice at all and left university without informing anyone: this could be an interesting cohort to study.

Further to this, students also stated that a peer mentor's experience would be a great help. Peer mentors are not significantly different in age making them more accessible and easier to relate to than academic staff, yet they provide a role model because they have successfully 'survived' the first year (Treston, 1999). This facet of peer mentoring may prove to be beneficial to individuals from non-traditional backgrounds and also individuals who were the first in their family to enter university. It would be interesting to investigate if 'non-traditional' students perceive greater benefits from aspects such as role modelling from peer mentors, because they are less certain of their expected role.

8.4.3 How do Individuals Feel a Peer Mentor Could Help During the Transition to University?

When participants were asked how they felt a peer mentor could help them during the transition to university most (80%) indicated that they would find peer mentors helpful with regards to showing them around. A large majority also

mentioned orientation, registration and organising modules. The first week of university is often extremely busy; not only do students have to orientate themselves and meet new people (including tutors), they will also undertake many 'tours' and need to register and organise the modules they will be taking for the year. In fact when asked what they found challenging and stressful about the first week individuals indicated orientation to university, registration, organising modules and meeting people to be the highest. Module organisation and registration are important aspects of the first few days; this can be exacerbated by the more social aspects of the transition (meeting and making new friends). Individuals were scoring on average medium to high in challenge and stress on all aspects of the first week at university both contributing to the literature on transitional stress and providing vital information for the planning of a mentoring scheme. Students also indicated that self doubt and being away from home were moderately depressing. These factors highlight the multitude of issues occurring during the first critical days at university. However, it is important to highlight that these aspects were measured retrospectively. It may be difficult at the end of the first year to remember back to what it was like during week 1. Another problem with retrospective recall is the possible biasing factor of current wellbeing and mood. Individuals who are not settled into university at the moment may look back at the transition in a more negative way. Perhaps in support of this is the difference between individuals who are currently homesick (a proxy measure of wellbeing) indicating that the transition was more depressing than those who are not currently homesick. Individuals who stated that they experienced homesickness on arrival at university found the transition to university significantly more challenging. Challenge can reflect both a positive and negative factor during the transition to university.

8.4.4 How do Individuals Feel a Peer Mentor Could Help Near the End of Their First Year?

Looking at current possible stressors in a student's life using the Academic Stress Questionnaire (Abouserie, 1994) students indicated that they would access a peer mentor mostly for academic reasons. Over 60% would access a peer mentor if one were available with particular reference to coursework, knowing what is important to study and unclear assignments and over 50% would access a peer mentor if one were available for studying for exams, unclear course objectives and making career choices. As stated by Baker et al. (1985) moving to university also involves a shift in learning and studying style to become more independent. Students also have to adapt to much larger class sizes with little opportunity for one-to-one support that they may have been used to at school/ college. Thus mentoring may allow this transition to be smoother and help in the discrepancy between expectation and reality which can ultimately lead to withdrawal (Baker et al. 1985). The fact that many of the students indicated that they would access a peer mentor with regards to academic issues has important planning implications for universities. Many universities currently run peer mentoring / buddy schemes for week one only. However, many of the students in the current study are suggesting that a peer mentor would remain helpful beyond Welcome Week. Although peer mentors may be of greatest help in week one with regard to orientation etc they may later become more beneficial with particular regard to the coursework, exams and learning perspectives. It would be interesting to examine the value of peer mentoring throughout the whole of the first year at university. Also of interest from the academic stress questionnaire was the finding that over 50% would also access a peer mentor for loneliness

indicating a high number of individuals who would be willing to talk to, and perhaps feel more at ease accessing, a peer mentor.

8.4.5 What Kind of Support would Students Expect from a Peer Mentoring Scheme?

When expectations of support from a peer mentoring scheme were considered nearly all students stated that they would expect a peer mentor to provide advice and guidance, the vast majority of students also had a high expectation of practical assistance. Further to this around two thirds expected emotional support and support with regard to socialising. This indicates that peer mentors may be seen as academic supports first and foremost, however a subgroup of individuals believe they would also like to turn to a peer mentor with regard to emotional aspects. This is similar to Bowman et al. (1990) who found a number of students (29%) who sought a great deal of emotional support and encouragement. In contrast others may want only basic information.

8.4.6 What Attributes of a Peer Mentor do Students Consider the Most Important?

From the list of 11 possible characteristics of a peer mentor, individuals within this study expressed a preference for 'being committed to the scheme', getting on well with them' and 'being good listeners' rather than the "traditional" matching measures used in mentoring such as same gender, same degree, and same ethnicity, age grouping (Hale, 2000; Kram, 1983). The matching process has been implicated

as important for the success of a formal mentoring scheme (Chao et al., 1992), however, there is no consistent evidence of its necessity or a reliable approach to the matching process. What is perhaps more important is the selection of mentors for such a scheme and a consideration of other matching criteria such as interests and learning scales on an individual basis (Conway, 1998) rather than demographics.

8.4.7 Limitations

Within this research there are several limitations. Primarily this is a retrospective cross sectional study and although it provides a snapshot of students perceptions towards peer mentoring schemes it relies heavily on their memory of the beginning of the year when they made the transition. Future research would benefit from a longitudinal design asking participants how they feel before, during and after the move and how they feel a peer mentor may be able to help at these time points. This would provide a more reliable source of information for individual's attitudes towards peer mentoring. Memory within this research is likely to be affected by the current affective state of the individual, which was not controlled for. Future research would possibly benefit from including a current mood questionnaire, in order to control for this affect if needs be.

Also within this study response rate was very low- 11%. As there was no way of assessing if this sample were any different from the rest of the first year undergraduates it is difficult to conclude that they are representative of the first year experience. It could be that the individuals responding are those who are more settled into university, or indeed, those that are unsettled. On the other hand people who didn'*t* respond may have been uninterested in peer mentoring scheme and thus

uninterested in replying to a questionnaire about peer mentoring. It would also be interesting to contact individuals who have already withdrawn from university to ask if they felt a peer mentor may have influenced this decision.

8.4.8 Recommendations for Policy and Practice

Students within this study indicated that the important aspects of a peer mentoring scheme were not those of matching by demographics, degree or even interests but more the inherent characteristics of what would make a good mentor. Therefore when developing a peer mentoring scheme such issues as commitment to the scheme, good listening skills and available time must be considered by all possible volunteering mentors. Many schemes are being developed within universities that focus purely on the transition to university and within this sense orientation to university seems to consider the biggest help for incoming first year students. However also of interest was the fact that students were indicating that they would access a peer mentor most in areas of coursework and exams, stressors that occur later on in the semester. This highlights the important need of possibly carrying on this relationship beyond week 1. the perception of need for peer mentoring was not related to any of the wellbeing outcome measures except for stress indicating that the sample as a whole would find them beneficial not just a vulnerable subset. As no differences in demographics were seen on any of the peer mentoring items this indicates that it may be important to focus on the university as a whole rather than ‘at risk’ students.

8.4.9 Conclusion

To conclude; peer mentoring within this study was viewed in a highly positive way with many participants indicating that providing advice and orientation to university life would be helpful in the transition to university. Participants believe that the most important attributes of a peer mentoring are good listening skills and being dedicated to the scheme both of which have not been highlighted in previous research. Although most students would rely on peer mentors for the more practical side of university life, many also believed that they would turn to a mentor for the more emotional/ personal issues as well. Out of 154 students who responded only 18 would not access a peer mentor at all.

Chapter 9
Peer Mentoring in Higher Education: The Mentors Perspective.

ABSTRACT

Research into mentoring identifies the benefits of this exchange relationship to both the mentors and the mentees, however the literature generally concentrates on only one side of this relationship: the mentee. The present study employs a qualitative methodology to examine the role of mentoring in Higher Education from the mentor's perspective. Sixteen mentors from a town based UK university participated in focus groups concerning their mentoring experiences. Several factors were of interest within this study: the perceived benefits and costs of being a mentor, individual reasons for becoming a mentor, and how they felt they had helped their mentees. Results indicate that a key motivation to becoming a peer mentor was previous experience of mentoring. Mentors felt they helped mentees by being available from the first day of university to show new students' around, answering queries about the university and location, and by more generally helping students' to integrate into university life.

9.1 Introduction

Mentoring has been cited as beneficial for the mentee in organizational settings, academia and more recently developmental research (youth work). Consistent claims have been forwarded that those who are mentored are at an advantage in comparison to individuals who have received no mentoring experiences (Chao, Waltz, & Gardner, 1992; Levinson, 1978; Kram, 1985; Scandura, 1992). Most of the systematic quantitative reviews on the benefits of mentoring have been carried out in the work place. Meta analyses have indicated that mentored individuals report higher levels of objective and subjective career outcomes (e.g. number of promotions, percentage salary changes, job satisfaction, intention to remain: Allen et al., 2004). However, a relatively small amount of research has been conducted on the possible benefits and costs of mentoring for the mentor.

Although interest in this aspect of mentoring is relatively recent, Levinson noted the possible benefits of mentoring from the mentor's perspective in his seminal developmental research in 1978. Yet literature into the benefits for the mentors remains mostly theoretical rather than empirical (Allen, Poteet & Burroughs, 1997). More recently, several qualitative and descriptive studies have been published since 2000. The vast majority of literature from the mentor's perspective concentrates on three key areas: the career and psychosocial benefits of mentoring, the disadvantages of mentoring and willingness to mentor others. This chapter describes a qualitative study (adopting focus group methodology) which focuses on the student mentors' perspective in a UK Higher Education peer mentoring scheme.

9.1.1 The Benefits of Mentoring for the Mentor

Allen (2007) argues that due to the dyadic nature of mentoring, ignoring one half of the duo leaves a critical gap in understanding both the nature and process of the relationship. The benefits of mentoring for the mentor have been considered by Hunt and Michael (1983), Kram (1985) and Newby and Heide (1992) but have not been empirically supported. Zey (1984) theorised four categories of benefits for the mentor: career enhancement, 'intelligence' (information), advisory role and 'psychic' rewards (confidence). Hunt and Michael (1983) suggested that mentors gain satisfaction, esteem among peers and superiors, and self confirmation by mentoring others. Within the teaching literature Andrews (1987) suggests five benefits of mentoring beginner teachers: mentors 1) gain constructive feedback on their own teaching, 2) experience peer supervision, 3) gain curriculum management expertise, 4) gain experience in educational consultancy, and 5) encourage critical reflection on teaching. Conversely Shaw (1995) discusses the possible benefits of mentoring by focusing on career enhancement, suggesting that it enhances a CV, it might be part of professional accreditation, it may enhance professional status within the practitioners' community, and it might contribute to improved practice.

Empirical research (interview studies and case studies) within organizational literature has revealed benefits in the areas of personal satisfaction from passing on information, knowledge and skills to others; a renewed energy provided by protégés; improved job performance by receiving a new perspective; loyalty and support from protégés; and organisational recognition (Kram, 1985; Levinson et al., 1978; Reich, 1986). Using in-depth semi-structured interviews with 27 employees in five different organisations within the USA, Allen, Poteet, and Burroughs (1997) indicated four higher order factors regarding the positive benefits of mentoring: 1) builds a support

network, 2) self satisfaction, 3) job related benefits (self focused - for example increases mentors own learning knowledge) and 4) job related benefits (other focused - for example builds a competent work force).

Empirical research in the area of beginner teacher mentoring has indicated that the most prevalent effects of mentoring others are a greater self confidence, enhanced awareness of one's own strengths, improved managerial skills, and improved performance in group work (Reich, 1995; Turner, 1995). In a comparison study of USA and Israeli teacher mentoring, little difference was indicated between the countries on the most influential benefits of mentoring i.e. enthusiasm, opportunity to collaborate, knowledge of subject matter and 'reflective mirror' (p. 100: a reflection of mentors' teaching practices) (Clinard & Ariav, 1998). The more qualitative aspect of the paper yielded further benefits of mentoring directed towards the mentors own teaching and classroom management. In areas beyond the classroom, benefits were noted in both professional and private lives. These included a higher degree of commitment to their career, feelings of validation, renewed enthusiasm for teaching, increased respect, a sense of fulfilment and pride, development of communication skills and a change in attitudes in both countries (Clinard & Ariav, 1998).

There has been relatively little research conducted within Higher Education on the benefits of mentoring for a student mentor. A review of the educational mentoring literature indicated 8 studies which included the outcomes of partaking in a formal mentoring scheme for the mentors: a summary of which can be found in Table 9.1. All 8 studies are based on a formal peer mentoring scheme. The majority are from Australia (4) with 3 based in the UK and only 1 from the USA. Most studies come from evaluations of a mentoring scheme where, with one exception (Good,

Halpin, & Halpin, 2000), asking mentors what they may have gained is not the core focal point of the evaluation. Research into peer mentoring programs within Higher Education have reported that mentors gain a sense of reward through assisting and supporting others (Craig, 1998; Drew, Pike, Pooley, Young, & Breen, 2000; Fowler & Muckart, 2004; Fox & Stevenson, 2006; Hill and Reddy, 2007; Treston, 1999), an opportunity to share information (Craig, 1998; Drew et al., 2000; Fowler & Muckart, 2004) and a sense of personal or professional development (Drew et al., Fowler & Muckart, 2004; Fox & Stevenson, 2006; Hill & Reddy, 2007; Thomas, Casey, & Houston, 2006) in particular an increase in confidence (Drew et al., 2000; Fox & Stevenson, 2006; Thomas et al., 2006; Treston, 1999). Additionally Durkin and Main (2002), Fox and Stevenson (2006) and Thomas et al. (2006) highlight the benefits of a deeper understanding of course material which was consolidated through the teaching of others. Drew et al. (2000) and Treston (1999) discuss more extrinsic benefits of gaining a reference, the enhancement of employability and establishing a greater familiarity within the department. Within Hill and Reddy's (2007) study of 32 psychology students, individuals argued that peer mentoring provided them with an extracurricular activity which offered a welcome break from their main studies. Fox and Stevenson (2006) found an increase in sense of belonging and a higher level of social acquaintances among their mentors in an accounting and finance department.

In a study of 19 peer mentors within a minority engineering programme within the USA, Good et al. (2000) focused only on the benefits of partaking in an academic focused peer mentoring scheme for the mentors. They argued that involvement in such a scheme may help in the retention rates of minority students for both the protégés and mentors. Through the analysis of diaries written during the

mentors' first quarter of tutoring and mentoring, several benefits were identified. Seventy percent reported a degree of academic growth as a direct result of involvement in the scheme with over 50% reporting an improvement in study skills. Twenty seven percent wrote that they experienced a growth in critical thinking and problem solving skills and a deeper understanding of core engineering concepts. Further to this 89% experienced development of personal skills, communication, confidence and identity and 89% argued that the involvement within the scheme helped alleviate feelings of isolation by providing an opportunity for social interaction. Finally Good et al. (2000) report retention figures on the course of almost 80% by the end of the first quarter. By comparing withdrawal rates with the national average (35.6%) for engineering minority students the authors argue that mentoring has a positive impact on mentor retention. Limitations of this comparison, however, do not consider the possibility that individuals becoming involved in the scheme were previously more committed and motivated towards their studies. Also the national average figures are taken from across all academic years not just the year of study these mentors were in. The literature indicates that individuals are most likely to withdraw during the first year of their studies, this figure then declines with each year of study (Earwaker, 1992; Tinto, 1993; Yorke, 1999). A more reliable comparison would have been with other students on the course in the same academic year, or from the from students in the same academic year but before the mentoring scheme was established (pre-intervention and post-intervention cohort).

In summary the projected benefits of mentoring others are mirrored in the few qualitative studies from the organisational USA context with perceived gains at both the career focused and psychosocial focused level. However, research so far has often concentrated on short term advantages of mentoring and has been cross

sectional in nature. Eight studies were identified that evaluated mentoring schemes within the Higher Education context and contained feedback from mentors; these are summarised in Table 9.1. The benefits mentioned by these mentors were similar to those mentioned in the organisational context with gains such as sense of personal and professional development, raise in self esteem, a sense of reward and a chance to share information mentioned. The literature available indicates that it is not only mentees that appear to gain from this dyadic relationship and that benefits of becoming a peer mentor could be highlighted to potential participants during recruitment stages.

Table 9.1 Review of the qualitative studies on the benefits of peer mentoring for mentors in Higher

Country	Author (Year)	Context	Method	# participants	Main outcome themes: Mentors
UK	Hill & Reddy (2007)	Peer Mentoring One department	Tape recordings. Participants asked to record view and expectations of the peer mentoring scheme	13 Mentors and 7 Mentees completed evaluations	Increases in confidence, communication skills, experiences in working with people, revision of academic concepts, enhancing CV, opportunity to be a role model, break from studies (extra-curricular activity), and reward of helping others, reflection of their own personal and academic development. Negatives for mentors > possible difficulty with first contacts due to timetable clashes, a lack of fulfilment – mentors had expected and wanted more contact with mentee.
UK	Thomas, Casey & Houston (2006)	Peer Mentoring Mentees –first year students	Various and ongoing e.g. questionnaires, focus groups and individual interviews	12/30 mentees and 8/17 mentors	Gain in confidence, improvement in ability to communicate ideas, and improved listening skills. Learning through teaching, helping someone makes you question and improve your own practice, improvement in organisational skills. Negative: worrying about the quality of your advice.
UK	Durkin and Main (2002)	Peer mentoring: mentees – first year students Study skills focus Computing science	In-depth interviews	6	All felt more confident. Knowledge and understanding of material was consolidated through having to teach others. Negatives for mentors > unease with role i.e. am I giving the right answers. Lack of confidence at times.
Australia	Fowler (2004)	Tiered mentoring programme. Lower tier reported here: Mentees – first year students. Across three departments	Questionnaires, Telephone interviews and a focus group on completion of programme	17	Four benefits: sense of reward through assisting and supporting, opportunity to share knowledge and experience, increased self awareness and learning how to work with others, and personal and/ or professional development in particular skill areas

Australia	Drew, Pike, Pooley, Young, & Breen (2000)	Peer Mentoring Mentees- first year students Psychology	Semi structured open ended group interviews	Not given. However 24 mentors and 30 mentees took part in the programme	Almost all perceived involvement lead to benefits in personal, professional and other aspects of their life. Personal = intrinsic reward, gaining more information about services available, personal growth and confidence and establishing greater networks Professional = greater familiarity with department, development of listening/ support skills, gaining a reference, gaining experience of being in a professional supporting role.
Australia	Treston (1999)	Peer Mentoring Mentees- first year Whole university	Survey questionnaires, telephone interviews, focus groups and regular reports.	Not given. Report is on data collected over eight years of the scheme running	Satisfaction that they have the ability and power to make a positive difference for new students. Self worth, putting something back. Enhances student employability. Improves self confidence and networking abilities
Australia	Craig (1998)	Traditional E-Mentoring. Mentees – female students from computing sciences.	Small group interviews and written reports	20 categorisation into mentors and mentees not given	Pleasure at helping others, information exchange. Negatives for mentors > felt out of place, a common concern was time
USA	Good, Halpin & Halpin (2000)	Peer mentoring Mentees (and mentors) ethnic minority Engineering students.	Analysis of comments made in journals	19	70% reported some form of academic growth as a result of involvement, 55% improvement in study skills, 27% growth in critical thinking and problem solving abilities, 27% better, deeper understanding of core engineering concepts, 89% experienced development in personal skills- communication, confidence and identity – 3 predominant themes: ease of social interaction and communication, development of responsibility and leadership skills and a sense of self satisfaction and belonging. 89% believed involvement helped alleviate feelings of isolation by providing opportunities for social interaction, 21% self satisfaction.

9.1.2 The Possible Costs of Mentoring

Considering the voluntary nature of mentoring and the large amount of time invested in mentoring others it is important to consider the possible negative impacts. The potential costs of mentoring have received even less attention than the benefits. Levinson et al. (1978) briefly mention that a relationship may in some cases become negative but then focus the discussion of this cost on the protégés perspective. Allen et al.'s (1997) qualitative study from the mentor's perspective confirms results of previous studies which have indicated negative consequences such as employee jealousy, time demands, the possibility of 'backstabbing' by disloyal protégés, and embarrassment if the protégé fails. In-depth interviews with 24 mentors within a formal organizational mentoring scheme indicated that 14% spoke of feelings of inadequacy as a mentor as well as 4% reporting other problems such as relationship not being as intense as desired (Eby & Lockwood, 2005), Eby, Durley, Evans and Ragins (2006) study of 218 professional and managerial employees from 2 large state universities within a formal mentoring scheme also indicated a number of negative consequences including time requirements (indicated by 55.5% of the participants) favouritism to protégé, protégé abused relationship and feelings of failure (indicated by 7% in each case).

Negative statements were only mentioned in three of the Higher Education peer mentoring papers. A common concern mentioned in Craig's (1998) study of e-mentoring was that of time demands. These students also indicated that they sometimes 'felt out of place', although this statement was not expanded on so it is difficult to assess what this refers to. Durkin and Main (2002) found that peer mentors indicated a lack of confidence on occasions and unease with the role. The negative implications reported by Hill and Reddy (2007) contradict other research

into the time demands of mentoring. The participants in their scheme felt a lack of fulfilment, they expected more contact with their mentees and said they could have easily have coped with more than one mentee.

The number of negative comments regarding mentoring endorsed by the mentors themselves is relatively few when compared with positive statements suggested by mentors within the same study. This may indicate that on the whole mentoring can be viewed as a positive experience. The main potential cost mentioned amongst organizational and educational literature is that of time. This factor would possibly be largely dependent on the type and length of scheme as well as the mentees themselves.

9.1.3 Willingness to Mentor Others

Mentoring can be described as a volitional activity which is not mandatory within organizations or part of a course's requirement (Allen, 2003). Mullen (1994) argues that "by acting as a mentor, one is performing pro-social behaviours" (p. 276). Given that university mentors are not paid (generally) and thus volunteer their time it is important to know what variables influence or motivate individuals to mentor others. Some research has linked the willingness to mentor to certain personality traits. For example internal locus of control and upward striving was found to influence the intention to mentor in Allen's et al. (1997) field study of 607 state government supervisors in the USA. Aryee, Chay, & Chew (1996) reported significant relationships between positive affectivity, altruism and self esteem with motivation to mentor others amongst managerial employees in America.

The greatest predictor of willingness to mentor others is previous experience of mentoring by either being a mentor or a protégé (Allen, 2003; Allen, Poteet, & Burroughs, 1997; Allen, Poteet, Russell, & Dobbins, 1997; Allen, Russell, & Maetzke, 1997; Ragins & Cotton, 1993; Ragins & Scandura, 1999), however these are all studies within the organisational literature and may not be easily applied to Higher Education. In a qualitative study by Allen, Poteet, and Burroughs (1997) 68% of the 27 employees reported that their experience as a protégé had influenced their decision to mentor. Further to this 92% said that their experience as a protégé helped them to prepare for the role of mentor. In a study of 880 participants in an organisational setting in the USA, increased mentor/ protégé experience was significantly related to a greater degree of willingness to mentor in the future (Ragins & Cotton, 1993).

The experience of mentoring relationships has also been found to influence individuals' perceptions and expectations of mentoring. Ragins and Scandura (1997) investigated the relationship between anticipated benefits and barriers to mentoring and intention/ willingness to mentor in the future among 275 executives. They reported that individuals with experience of mentoring from either being a protégé of a mentor were more likely to agree with statements such as 'mentors gain a sense of fulfilment and satisfaction from mentoring relationships' whereas individuals with no mentoring experience are more likely to focus on possible drawbacks of mentoring. Ragins and Scandura (1999) conclude that 'individuals without mentoring experience lack a 'realistic preview' of the relationship, and consequently may over-estimate the costs and underestimate the benefits associated with being a mentor' (p.505). The mentoring experience was also found to moderate the relationship between expected cost/ benefits and intention to mentor in the future. Thus individuals who lacked

mentoring experience anticipated greater costs than their experienced counterparts; however, variations in future intention to mentor for the 'high cost' group did not differ significantly from those in the 'low cost' group for individuals with no mentoring experience. Little research has been conducted on other possible moderating effects in the experience / willingness to mentor relationship. It is unlikely that this is a simple relationship. Also much of the research into willingness to mentor others does not question if the intention to mentor subsequently predicts actual mentoring.

Field research from 607 state government supervisors in America indicated that individuals were motivated by a multitude of reasons that were both other-focused and self-focused (Allen et al. 1997). The motivational dimensions they identified and their higher order factors can be found in Table 9.2. A higher proportion of the comments revolved around other-focused motivations such as a greater desire to pass on information than self-focused motivations e.g. pride, although gratification of seeing others grow received a high number of comment

Amongst the educational literature that is focused specifically on students mentoring other students, little rigorous research has been conducted on individual motivations for mentoring. Bowman, Bowman and Delucia (1990) in a study of 15 peer mentors in a graduate programme in America listed 'helping others avoid the difficulties of adjusting to university', 'giving something back to the programme', and 'getting to know other students' as the most commonly cited reasons for volunteering to become a mentor. The only work on mentoring motivations amongst students was conducted within the UK by Fazey in 1997 and reported within SEDA (1999).

Table 9.2 Results of Content Analysis for Individual Reasons for Mentoring

Higher Order Factors	Number of comments	Dimensions
Other - Focused	13	Desire to pass information on to others
	11	Desire to build a competent workforce
	10	General desire to help others
	6	Desire to help others succeed
	5	To benefit the organisation
	2	Desire to help minorities/ women move through organizational ranks
Self - Focused	10	Gratification seeing others succeed/grow
	5	Free time for other pursuits
	5	Personal desire to work with others
	3	Increase personal learning
	2	Pride
	2	Desire to have influence on others
	2	Respect from others

As cited in Allen, Poteet, and Burroughs (1997)

Fifty percent (sample size is not reported) gave the most important reason for mentoring as wanting to use their experiences to help the first year students to settle in and possibly avoid difficulties they may have experienced themselves as first year students. Thirty Five percent stated that they wanted to meet new people and to work with others especially across year groups. Fifteen percent stated that they wanted to 'give something back' to the community. Further to this participants were provided with a list of possible motivations for mentoring and asked to indicate on a scale of 1 (important reason) to 4 (unimportant reason) how important each item was in their decision to become a peer mentor. Most of the items were scored as very important or important, however some of the more external reasons such as 'it is prestigious to be a peer guide' and 'you get free food and a T-shirt' were mostly categorised as

unimportant or very unimportant. The highest ranking motivation was that of: 'First years need help from an experienced guide and I can provide that help' (p. 26)

Although research into motivation for mentoring others has expanded in the organisational and management literature very little has been conducted within Higher Education. Organizational literature indicates a multitude of reasons for engaging in a mentoring relationship including 'other focused' motivations such as helping others and 'self focused'. By far the biggest predictor of willingness to mentor within organisational research is that of experience of mentoring either as a mentor or mentee.

9.1.4. How Mentors May Help First Year Students

Very little information is available on what mentors actually do for incoming first year students. Within the UK Thomas, Casey and Houston (2006) asked their mentees how they felt mentors had helped them. All 12 respondents listed: talking a situation through; listening to your ideas; and giving you confidence. In Australia Treston (1999) reported that mentees felt reassured by the presence of a mentor. They also found that having a mentor allows one to see that are others are having similar problems, mentors can also help bolster motivation and finally, approaching a mentor was listed as less intimidating than approaching a lecturer. No research has focused on how mentors themselves perceive they help incoming first year students: this study therefore planned to address this question for peer mentors at a UK university.

9.1.5 AIMS and OBJECTIVES

The objective of this study is to elucidate a student mentor's perspective of involvement in a formal peer mentoring scheme within Higher Education using a qualitative methodology (focus groups). This will provide information with regards to mentors' motives, benefits and costs which could be integrated into practice.

Specific research questions of interest are as follows:

Research Question 1: what are the perceived benefits and costs of being a peer mentor for first year students in Higher Education?

Research Question 2: What are student's motivations for becoming a peer mentor to incoming first year students?

Research Question 3: How do student mentors perceive they help incoming first year students?

9.2 METHOD

9.2.1 Participants

Three focus groups were held each containing 5 or 6 participants (5, 6, 5 respectively) with a total of 16 participants. Participants were undergraduate students from a UK town based 'red brick' university who had been involved in a peer mentoring scheme as a mentor. Of the 16 students 12 were female (75%), 8 were in their 2nd year (50%), 7 in their 3rd year (43.8%) and only one in their 4th year (6.3%). For 11 individuals this was their first year of taking part in the peer mentoring scheme (68.8%). Participants were studying a range of degree subjects with most individuals coming from the Psychology Department (5; 31.1%). The participants' average age was 20 with a range of 19- 22.

9.2.2 Measures

Standard demographic information was gathered at the start of each focus group via questionnaire format. The following information was of interest: age, gender, degree subject, year of study and number of years of mentoring experience. Individuals were also asked whether they had a peer mentor during their first year at university, whether peer mentoring had aided their transition to university (this was recorded on a linear scale of 1: not at all to 7: very much so) and whether their experiences as a mentee had influenced their decision to become a peer mentor themselves (again measured on a scale of 1: not at all to 7: very much so).

All focus groups were tape recorded and transcribed later by the researcher. An assistant was also present to take notes at all 3 focus groups. The perceived benefits and costs of peer mentoring were collated on a flipchart. The focus groups were semi structured: there was a standard set of questions, but these were designed to be open ended to allow further questioning of the group. The questions were developed from a review of the literature and were designed to draw out information regarding each identified topic. Specific questions were as follows:

1) Thinking of the outcomes of mentoring what do you feel the benefits and costs of mentoring are?

2) What were your individual reasons for becoming a peer mentor?

3) How do you feel you helped first year students the most?

9.2.3 Procedure

Requirements for this study were a peer mentoring scheme that had been running for some time to ensure that the scheme was well established within the university and running smoothly. It was also essential that a local coordinator was available for liaison regarding the research. Study 1 identified 10 long running and established schemes, however, only two of these were available to the entire university. Both universities were approached to take part in the research but one declined to participate. The university within this research was a red brick university, non campus based and rural. Approximately 2000 new students register each year (HEFCE, 2003) with an 8% dropout rate. The university also has the largest and longest running peer mentoring scheme in the UK involving every department within

the university and over 400 second and third year students registered as peer mentors. This particular peer mentoring scheme had a more social and emotional support element rather than academic peer mentoring. Although the scheme is available for the whole academic year the greatest focus is within the first few weeks at university. The scheme was also not structured (no specific times/ dates mentors and mentees should meet) although mentors are actively encouraged to meet with mentees within the first few days of university. Although this was a one-to-one peer mentoring scheme peer mentors were easily identifiable (by t-shirts) and thus there was an ethos of joint mentoring within the first couple of days at university.

Potential participants were recruited for this study via notices on the intranet, posters displayed around the main university buildings and an email from the peer mentor coordinator. All gave a brief description of the research and contact details for those wishing to take part. The opportunity to take part was left open for a month. After this period names and emails were gathered and all participants contacted with four possible time slots to indicate which ones they could not make. Once all the data was accumulated individuals were contacted with their date and time to attend the focus group and further information was forwarded. Each group initially had 8 to allow for the possibility of dropout. At the outset of the focus groups participants were assured that their answers would remain confidential and anonymous. Each focus group lasted approximately 50 minutes.

9.2.4 Ethical Considerations

Ethical approval was sought and gained from the Ethics Committee, Psychology Department at the University of Stirling and also from the Ethics

Committee from the university involved within this particular study via the peer mentor coordinator. As well as the ethical concerns regarding consent and confidentiality there are additional concerns within focus group methodology (Smith, 1995). These involve the possibility of over disclosure and the group setting. Additional privacy concerns arise from the fact that participants are not only revealing themselves to the researcher but also to others. Furthermore the participants within this study were discussing experiences of being a mentor so the possibility of disclosing information about their mentee was high. Additionally the dynamics of a group could add pressure to a particular individual. Participants' were fully informed of the focus group process, their full names were not divulged to the rest of the group, they were advised about the disclosure of information, informed that they did not have to partake in a particular conversation, and, most importantly, were advised not to use any names when discussing mentees. All participants were asked to provide consent for tape recording before hand and were advised that only the researcher would have a copy of the tapes, which would be destroyed once the study was complete. Any individual identifiers were also removed from quotes in the final write-up (apart from group and gender).

9.2.5 Data analysis

Demographic and background information data was analysed as frequencies, means and standard deviations. Focus groups were transcribed, verbatim, to produce texts of on average 13 pages and 7000 words each. The steps for content analysis are well established (Bauer, 2000), however, there are few guidelines on thematic analysis (Marks & Yardley, 2004). The current analysis followed a 15 point checklist

of criteria for thematic analysis provided by Braun and Clarke (2006, p. 96) Texts were analysed thematically by repeated reading of the comments elicited for each question: motives of mentoring, how individuals helped first year students and feedback on the scheme.

Thematic analysis "involves abstracting from the immense detail and complexity of our data those features which are most salient for our purpose" (Dey, 1993 p. 94). Themes were specified at the latent level which looks for implicit meanings which may not be explicitly stated (Marks and Yardley, 2004). Coding in the case of the current study was conducted by two independent researchers using inductive methodology which is useful for new areas of research (Boyatzis, 1998; Braun & Clarke, 2006). However, Bauer (2000) warns against pure inductive coding (whatever one sees within the text) and states that codes need be derived from specific questions within the research. With this in mind the analysis within the current study was not pure inductive coding. The initial unit of coding within the current study was attached to sentence/ phrase (Braun & Clarke, 2006). Codes were then collated into potential themes by both independent researchers and final themes were derived after discussion. Themes were reviewed by both researchers independently by checking them in relation to coded extracts and overall data (Braun & Clarke, 2006).

An inter rater reliability analysis using Kappa (Landis & Koch, 1977) was performed to determine consistency among raters on the research questions regarding motivations to mentor and how mentors felt they helped first year students. Data was preserved as multinomial during analysis as clear disadvantages have been observed when collapsing data to dichotomous (Bartfay & Donner, 2000). Inter rater reliability for the raters with regard to motivations was found to be Kappa = 0.766 ($p < 0.001$).

Inter rater reliability for the raters with regard to helping first years was found to be Kappa = 0.763 ($p<0.001$). The advantages and disadvantages of mentoring were noted on a white board and thus participants developed their own themes and reliability analysis was not needed.

9.3 RESULTS

9.3.1 Background Information

Regarding their own protégé experiences 13 (86.7%) had a mentor within their first year at university. When asked to state on a scale of 1 (not helpful) to 4 (extremely helpful) how helpful they considered mentors to be in the transition to university the average reported was 2.8 (SD = 1.14). All participants stated that their experiences of the peer mentoring scheme during their first year in Higher Education positively influenced their decisions to become a peer mentor themselves. When asked the number of individuals they were peer mentoring at the time of the study the average was 11, however, this ranged from as low as 1 to as high as 44. This participant came from a small department where they were only 1 of 2 peer mentors for the whole department. Individuals were also asked to give an estimate of the time they spent peer mentoring during the first week of university. The minimum number of hours given was 10 but several indicated that they had mentored all day, every day for the whole week.

9.3.2 Research Question 1: what are the benefits and costs for the individual of being a peer mentor in Higher Education?

The statements made in response to this question could be split into two factors: perceived benefits and costs of mentoring in general (non-specific to this particular scheme) and benefits and costs of mentoring linked specifically to this particular scheme. All benefits and costs noted by the participants can be found in Table 9.3

Table 9.3: List of benefits and costs of mentoring as stated by the peer mentors

Benefits	Costs
Meeting people	Time demands
Socialising	Responsibility/ guilty (leaving distressed students can lead to guilt)
Personal satisfaction	Revealing self
Sense of achievement	Stress- especially organising
Confidence builder	Rejection if it doesn't go well
Learn more about self	Overwhelming when involved with other things
Good for the C.V.	No way of contacting students- responsibility and guilt (wary of giving out telephone numbers)
Enables you to look good in the department	
Meeting others in your year (PG social network)	
Consolidating information in the course (academic benefits)	

9.3.2.1 The Perceived Benefits of Mentoring

All the participants indicated that meeting people, both first year students and other peer mentors and students within their year was a large benefit of taking part in the mentoring scheme.

"It's been better at university because when you go out with your friends you know more people around its quite nice" (Female, Group 2).

"You get to know other peer mentors as well" (Female, Group 1).

Participants also agreed that becoming a peer mentor had increased their own confidence and social skills simply through having to meet new people, make the first move in introducing themselves, and through successful peer mentoring experiences.

"It has made me more confident having to go up to people and introduce myself, being really nice and chatting to them. I wouldn't have really done that before because I am quite a shy person but now I don't mind" (Female, Group 1).

"I was quite shy in the first year that I did [peer mentoring] but this year around I have ... found it a lot easier the second time around" (Female, Group 1).

"Helping [first years] gives you a confidence boost as well" (Male, Group 2).

Connected to this is the sense of achievement and reward when the mentees appear to be settled in.

"We had one girl who in the first couple of days was very homesick and we kept an eye on her during the first weekend and now she has survived and she is happy it is nice to know that she got over it and she didn't drop out and you feel like you had some role in that" (Female, Group 2)

"You get to feel quite good about yourself as well because when I see some of the students I have peer guided out with large groups of friends I think arh yeah I looked after them"(Female, Group 2).

Although none of the peer mentors within the focus groups had taken part purely for reinforcing their CV, many of them recognised this as an added benefit and four talked of peer mentors they knew of whose primary motivation was to improve CV. Students also mentioned how taking part in the scheme can boost their 'image' within the department and set them apart from other members of their course.

"*It will look good for the department and the university so when future things come up they will sort of remember you" (Male, Group 1).*

"Yeah I know if I need a reference they will be able to do that" (Female, Group 1).

Two people spoke about the chance to discuss academic content with their mentees and thus consolidating knowledge that they gained the year before. Further to this one person discussed how the peer mentoring experience had enabled them to learn more about themselves

"*When you are with all the other freshers and you are telling them what you like about [the university] and the things that you do, you kind of realise who you are and what you like to do and things like that."(Male, Group 3).*

9.3.2.2. The Perceived Costs of Mentoring

Negative comments were far less frequently endorsed than positive. The main cost of peer mentoring was that of time demands. All peer mentors agreed that this can become an issue although they were aware that it depended on how demanding their mentees were: some require a substantial amount of time where as others appear

to settle very quickly and do not need much guidance. Within this sample 10 (62.5%) felt that time demands were a negative factor. However, connected to time demands is the sense of failure and rejection if a relationship doesn't work out or the mentee appears not to need the mentor.

"You get quite down if they are not there... that happened to my friend: [mentee] didn't want to go out with her because they had already met and made friends so she felt kind of bad" (Male, Group 3).

"Definitely losing interest... they don't need you so much now so it's good but at the same time you don't know whether you are doing your part properly because you want to help them but they are not wanting it"(Female, Group 1).

Several students also mentioned responsibility as a negative. They felt in some cases they had too much responsibility and that the academic departments (usually the smaller ones) leaned too heavily on the peer mentoring scheme as the only form of support. There was also an overwhelming sense of responsibility for the individual mentees.

"I had three freshers and two of them were fine but one of them I could never meet her and that kind of stressed me out because I felt it was my responsibility to meet her and I felt a bad peer mentor because I couldn't find her" (Female, Group 1).

"I had a friend that was also a peer mentor and her person never showed up at university. She felt quite a responsibility to find out what was happening so she went to the student union and stuff like that to try and find out what had happened to her ... so she went beyond her duty ... so quite a big responsibility" (Male, Group 1).

Students also talked about the training sessions they received. Training for this scheme was 2 hours which highlighted what a mentor is and who would make a good mentor. Each mentor is given a handbook containing contact phone numbers such as student welfare, counselling etc. Additional non-compulsory sessions were offered, which specifically focused on students with disabilities and student mental health. Within the main training session students' were informed on how to deal with cases of suicidal ideation and university dropout and instructed to refer these cases on. However, although the concept of boundary setting was not discussed explicitly, it was clear that some students would have struggled with it.

"[when discussing distressed students] ... but in terms of where to draw the line and how far to help... I wouldn't know where the barriers are" (Female, Group 2)

"I think I get involved a bit too much... they say to refer on but..." (Female, Group 3)

Some participants also mentioned the fact that they had given out personal details, such as phone numbers and addresses to their mentees, but felt comfortable with this and didn't see it as a problem. On discussing the training they had received individual groups were split on their opinions. Some students believed that the training was very useful.

"I quite liked it when they said what to do if your person is having trouble on their course or wants to leave university. I wouldn't have known what to do if they were thinking suicidal thoughts I wouldn't have known where the counsellor was or anything and I did the extra training sessions as well which I found useful" (Female, Group 1).

Whereas others believed it was simply common sense. One student argued that

"I think the training impacts you differently depending on how your first year went and what things you dealt with in the first year" (Male, Group 1).

Because this particular student had dealt with serious welfare issues with a friend in their first year they felt a little more prepared, whereas others stated that they would not have known how to approach topics or deal with cases of distressed students. Participants admitted that they would feel guilty about 'setting boundaries' and potentially leaving distressed students.

"*If you were not aware how serious something was you would feel a bit ignorant towards that person and you have not taken your time to go and get to know them better and to help them integrate" (Male, Group 1).*

"[The training on suicide] freaked me out it's like 'oh my god' if anybody comes to me telling me they are suicidal I wouldn't remember any of my training" (Female, Group 2).

Additionally three peer mentors mentioned that they would want more support: a greater network of information and advice for if things did go wrong. Specifically one spoke of the need for greater information and contact details

"I think a bit more information about what kind of support you've got so it's like if you do have a [distressed] person then who you need to ring" (Male, Group 3).

It appeared that amongst these students social support came from other mentors.

"I think a lot of the stuff you deal with or ask another mentor. Peer mentoring gives a huge support network" (Female, Group 3).

But there was a lack of hierarchical support for the mentors themselves.

9.3.3 Research Question 2: What are students' motivations for becoming a peer mentor to incoming first year students?

The main theme that emerged regarding the motives for becoming a peer guide was previous experiences as a peer mentee. Interestingly most individuals (n = 14) stated that their own peer mentor was 'bad' and that they wanted to improve on this:

"We never knew we had them until the Wednesday of fresher week and we walked up some stairs and they were there and they said we are your peer guides; we were like 'really? You could have been there on Sunday'. We decided that shouldn't happen to another year so we took over the peer guiding" (Female, Group 3).

"That's the reason I became [a peer mentor] because mine was rubbish… I didn't want anyone else to have that" (Male, Group 2).

Alternatively for one individual a good experience in the first year with their peer guide helped her to learn and motivated her to also become a peer mentor.

"Mine was really good and I learnt from it because they were there when I needed them… like being away from home etc. So I thought… yeah I would like to do that and help people because I knew the type of experience you would get" (Female, Group 1).

Additionally one student did not experience peer mentoring in their first year but realised the possible benefits of having one which then motivated them to sign up themselves.

Additional predominant themes regarding motivations for peer guiding revolved around wanting to help the first year students and 'giving something' back to the university. Participants wanted to use their own experiences to guide and support other students through the first few weeks at university and being available as a friendly face on the first day.

"*I wanted to be there for them if they ever needed any help… I just felt that they should have someone especially when you first move in, just to have some form of contact … like you don't know what you are going to be doing on a Sunday night you know a text from a random person is like… It's a new scary place but if you meet them…" (Female, Group 3).*

Other motivations revolved around the social aspects of mentoring. Mentoring provided students with a good way to get to know first year students and other students in their own year. Peer guiding provided a support network.

"It's a good way to get to know the new freshers. It's nice to some back early and see everyone before university starts to socialise etc" (Female, Group 2).

"It's a way to get to know other peer guides as well because psychology is so big. You go up to people and they are like 'what year are you in?' 'Oh I am in third year as well how come I have never seen you before?" (Female, Group 1).

The peer mentoring scheme at this particular university is so large being part of it has become a motivation in itself, to integrate into social groups.

"Last year I wasn't a peer guide and everyone I knew was a peer guide and I was so bored and I saw how much fun everyone was having and how everyone was getting to know all the new first years coming in and how it was good to make new friends and stuff" (Male, Group 1).

9.3.4.1 Question 3: How do students perceive they help incoming first year students?

All of the participants mentioned that they spent the first day of Welcome Week knocking on the peer mentees doors to provide a friendly face and a helping hand with moving in:

"Kind of being a friendly face to them… I got the impression that a lot of them were a bit scared and nervous" (Male, Group 2).

"If you can meet them in their rooms with their parents it seems to calm [the parents] down a lot" (Female, Group 3).

Some participants felt that they specifically needed to check up on their mentees. When questioned on how regularly they do this all agreed that it depended on how they perceived the student was coping

"*It depends what they seem like… if they seem settled in then you don't really need to go back to them but if they … you can tell they have got problems or feeling homesick or something then you go back to them later and see how they are getting on" (Female, Group 1).*

Other ways participants felt they helped first year students within the first few weeks of university was in the organisation of planned activities, tours of the

university and local town as well as integrating and socialising their mentees with other first year students on the same course or in the same halls of residence.

Additionally all peer guides saw their role as advisory and thus provided information that they felt the departments and staff may not give them. This ranged from clubs and pubs to aspects of the hidden curriculum (e.g. time management) and 'insiders information' on lectures and classes (e.g. which modules were interesting, which books are useful).

"I have told them which lectures are just so boring and which ones are really cool…" (Female, Group 1).

"It's something they need to know but isn't taught" (Male, Group 1).

9.3.4.2 Helping specific target groups

Students who were living at home, mature students and individuals with dependents appeared to require different mentoring strategies in comparison to mentoring residentially traditional aged students. Although only four of the participants had a mentee who fell into one of these categories, they all knew of peer guides who did have either a commuting student and/ or mature student. All participants believed this subcategory of individuals were more difficult to mentor and felt it was harder to integrate them into university life.

"A lot of the activities take place in the evening and it's hard to incorporate them… so if they live [out of town] or they live further afield and they have to get home then it becomes a little more difficult." (Female, Group 3).

"The big issue was transport and then somewhere to stay when they want a night out because it's hard sometimes with the train and stuff" (Female, Group 2).

A further issue for commuting students is that peer mentors do not receive any information about them (address etc) which they would get regarding residential students. For this reason 'normal' mentoring activities such as 'knocking on doors' on day one cannot be extended to the commuting students, and result in commuting students feeling excluded.

"You can't contact them so to them it looks as if you are leaving them out… [they] were, like, why shouldn't we be involved." (Male, Group 2).

Three participants had one or more mature students to mentor. One participant argued that mature students were no different from any other student although this participant did highlight that it depended on their individual personalities and stated that they do often congregate together which means that they are less integrated into the university environment as a whole. Others with mature students indicated that their mentees were not interested in taking part in the scheme as mature students sometimes have different motives and needs with regard to Higher Education.

"They are obviously more focused about their reasons for coming to university they wanted to come back and study." (Female, Group 2).

One participant from a smaller department stated that they tried to match the mature students up with mature peer guides and that they had tried to recruit more mature peer guides.

"We match them up, we get them together with a older peer guide because I would imagine that it would be quite intimidating to [be around] all these younger students." (Male, Group 3).

9.4 DISCUSSION

Little is known about the benefits a mentor gains from mentoring and because of the high focus on the advantages of mentoring even less is known about the possible costs. This study, therefore, has focused on mentoring from the perspective of the mentor using a qualitative methodology (focus groups). In particular there were three areas of interest: the benefits and costs of mentoring for the mentor, the motivation to mentor and, more specifically for Higher Education, how mentors help first year students.

9.4.1 The Benefits of Mentoring

Participants highlighted both self-focused and other-focused benefits of mentoring as noted in the organizational literature. Notably mentors spoke initially of the social aspects of mentoring (increase of social network and social support) and their sense of satisfaction and achievement before discussing other more objective benefits such as improving CV and becoming well known within the department. This is very similar to Allen et al's. (1997) higher order factors identified from semi-structured interviews with 27 employees. Participants within the current study also mentioned academic benefits such as the chance to discuss their course, as well as reaffirming some of their earlier studies. Such academic benefits were also noted amongst mentoring in beginner teachers from both America and Israel (Clinard & Ariav, 1998). Clinard and Ariav (1998) also found that the participants in their study reported development of communication skills: a benefit mentioned by many of the peer mentors within the current study. With regard to the research conducted on mentors (traditional and peer) within Higher Education many of the participants'

comments confirmed previous research in other contexts. Specifically mentors believed that partaking in a mentoring scheme increased their self-confidence, gave them a sense of achievement, increased their social network and provided extrinsic rewards (CV).

9.4.2 The Costs of Mentoring

The main cost for the participants in this study was that of time demands (indicated by 62.5% of the participants). This is reflected in organizational literature (Allen et al., 1997; Eby et al., 2006) and the Higher Education literature (Craig, 1998). Eby et al. (2006) reports that 55% of their sample of 218 employees indicated that 'time demands' was a negative consequence of mentoring. However, the participants within the current study were aware that some mentees required more input than others. It is also important to note that depending on department size and availability of mentors, the number of mentees assigned to mentors varied substantially. Larger departments on average had larger numbers of mentors and thus mentor/ mentee ratio was much smaller. Having a large number of mentees is obviously going to have an effect on an individual's time and affect the quality of the relationship. Interestingly both the current study and organisational research contradicts a finding reported by Hill and Reddy (2007). They argued that mentors within their evaluation of a peer mentoring scheme in the UK felt a lack of fulfilment and had been expecting more contact with their mentees. This also linked to a feeling of rejection which was mentioned repeatedly amongst the participants in the current study who had had less successful mentoring relationships. There was a sense of

personal failure and disappointment if the mentees did not make contact or simply did not need them.

Several participants within the current study also spoke of responsibility and guilt. The sense of responsibility for the student's wellbeing sometimes became a burden, for example if they could not get in touch with the mentee and needed to find out what had happened to them. The participants also talked about their training on suicide awareness and admitted that despite this they would still struggle to set boundaries and cope with psychological distress. Feedback from another academic peer mentoring scheme in Higher Education has suggested that mentors may be uncertain about the limits and boundaries of the mentor's role (Durkin & Main, 2002). This is an important consideration for any mentor training. None of these negative factors with regard to offering emotional support have been mentioned within previous literature. This could be because this is more common with students (less career focused mentoring, more social and emotional support) or it may be that research into outcomes of mentoring has not specifically regarded negative factors.

9.4.3 Motivation to Mentor others

In support of all the organizational literature on motivation to mentor others (Allen, 2003; Allen et al., 1997a; Allen et al. 1997b; Allen et al., 1997c; Ragins & Cotton, 1993; Ragins & Scadura, 1999) past experiences of being a mentee had a large impact on these participant's motivation to become a mentor. All participants stated that their own experiences of being mentored influenced their decision to mentor. However, within this study it was the negative experiences of mentoring that motivated participants to want to do better. However, one participant mentioned that

a positive experience had motivated her to become a peer mentor. It would be interesting to examine the balance of positive and negative motivations in future research.

It was not only the experience of being mentored that motivated these students but also their experience of first year in Higher Education. Some also spoke of altruistic motives such as wanting to help first year students and wanting to 'give something back to the university'. These three aspects all appear within Fazey's (1998) SEDA report where 50% stated that the most important reason for becoming a peer mentor was helping first year students to settle in and avoid some of the negatives they themselves may have experienced. Fazey (1997) also reported that a third of the students had joined the mentoring scheme for the social aspects such as meeting new people. This was also supported within the current study. Many of the participants valued the increase in social contacts as a result of mentoring.

The wide range of motives identified by participants highlights the variety of factors underpinning the decision to mentor. It is unlikely that a mentor will volunteer because of a single factor and thus future research should consider the range of, and interaction between motives as a predictor of successful peer mentoring.

9.4.4 How Mentors Perceive they Help First Year Students.

Mentors believed that being available from the first day, meeting and greeting students and parents and getting them involved in university life immediately was a priority during the first week at university. Beyond the first day, mentors tried to involve their mentees in planned activities and orientation tours of the local town and

university. More importantly they believed this involvement would help the mentees to socialise, integrate and make new friends within the university environment. Participants also spoke about the need to 'check up' on some individuals where they believed they may find settling in difficult. Beyond the first week, mentors saw their role as advisory with regards to general information about the department and lectures rather than academic advice. Thomas et al. (2006) also asked their mentees how they felt mentors had helped them, and identified academic issues, such as: help with approaching assignments. This apparent discrepancy may be due to differences in the focus of peer mentoring schemes, favouring social rather than academic integration.

9.4.5 Limitations and Future Research

Although this research was based on an established and large peer mentoring scheme it only involved one university. This makes comparisons and generalisations difficult. For example the scheme in this study was focused on social integration of students and emotional / social support, and tends to be quite short in duration with little structure. After the first few weeks, mentees tend to lose touch with their mentors. The peer mentoring scheme in the current study was specifically initiated for the welfare of students within one department and then expanded to the whole university. Other mentoring schemes have a more academic focus, begin after induction week and contain more structured support (timetabled meetings and feedback: Durkin and Main, 2002; Thomas et al., 2006).

One also has to consider the possibility of bias in the focus group's volunteer participants. All participants positively support the scheme so may not have been

typical. The commitment of a peer mentor will be affected by a number of factors. Mentors who feel less strongly or uninvolved in the scheme may have entirely different motivations and perceptions of costs and benefits.

9.4.6 Recommendations for policy and Practice

Programme organisers should seek to realistically highlight the benefits and costs of mentoring when advertising for potential mentors. They should also describe the time demands and commitments required so they are fully aware of these before becoming involved. Related to this program organisers should consider the optimum number of mentees assigned to peer mentors. The optimum number of mentees may depend on the commitments of the mentor and the demands of the scheme. More structured long term schemes focused on both academic and social/ emotional needs may require a smaller mentor / mentee ratio. The perceived lack of skills to deal with psychological distress, and boundary setting issues highlights the importance of providing adequate training. It also recognises the need to provide peer mentors with ongoing support.

9.4.7 Conclusion

In summary peer mentoring can be considered largely beneficial from the mentors' perspective. Participants reported increases in confidence, social skills, and social support as well as an increased sense of achievement, factors noted within the organisational literature. Participants also report multiple reasons for wanting to volunteer for a mentoring scheme including their past positive and negative

experience of being a mentee and their general sense of wanting to help incoming first year undergraduates: as noted below

"I'd say for me that was probably the most important thing about the peer mentor system, that first day is so important and to just know someone makes such a difference".

Chapter 10
Summary of the Main findings, Practical Implications and Recommendations for Future Research

10.1 Overview

Mentoring within Higher Education is increasing in popularity, as reflected by increases in mentoring in practice and in mentoring research, as shown by an expansion in published papers evaluating mentoring schemes since the year 2000. Within a review of the literature into developmental (youth) mentoring, however, Colley (2003) noted that 'the existing research evidence [into mentoring] scarcely justifies its use on such a massive scale' (p.1).

The main goal of this thesis was to evaluate peer mentoring as a viable 'retention and enrichment strategy for undergraduate education' (Jacobi, 1991; p. 505). The present work assesses peer mentoring in a theoretically driven way, applying the use of valid and reliable measurements to evaluate prevalence and outcomes of mentoring. The results of this enquiry may guide practitioners on the development of future mentoring strategies and schemes, as well as informing further research into peer mentoring in a higher educational setting.

The need for rigorous empirical studies into peer mentoring is apparent. This thesis aimed to investigate the impact of peer mentoring in UK Higher Education in four systematic stages: 1) assessing the prevalence of peer mentoring schemes within UK universities and evaluating the impact of mentoring for institutions; 2) assessing the utilization of mentoring within Higher Education and evaluating the impact for mentees; 3) evaluating students' beliefs regarding the value of a peer mentoring

scheme in a Scottish University that did not currently provide such a scheme; and lastly 4) assessing motivations for becoming a mentor and evaluating the impact of mentoring for mentors.

In order to achieve this, multiple methods were adopted within four studies including cross-sectional and longitudinal survey /questionnaire design studies, and a qualitative focus group study. Mentoring was evaluated in terms of several outcomes, including student stress, self esteem, social support, wellbeing, and college adaptation, using standard and pre-validated measures. Since existing instruments designed to measure psychological wellbeing and mental ill health are not always directly applicable to university students within the UK a new composite instrument that measures student wellbeing was also developed. The new scale and its properties are described in Chapter 5.

The studies focus on social consequences of peer mentoring and its association with student adjustment, wellbeing and retention. The focus is therefore on the psychological sequelae of attending university and not concerned with the impact on academic factors (grades) or peer assisted learning.

10.2 Theoretical Background

A general limitation within the mentoring literature is a lack of a theoretical framework. Researchers generally conclude that mentoring is effective, without providing an explanation as to why it may be effective. The preceding studies aimed to assess mentoring within theoretical frameworks.

Review of the literature into student persistence highlights that Tinto's (1975) theory is the most widely cited and empirically tested theory within this literature. Although it should be noted that empirical studies only provide partial support for the 15 testable propositions derived from Tinto's theory (Braxton, 2002), social integration has been identified as one of the most prominent features within the model. No study has directly tested the generalisability of Tinto's complete model, or aspects of it, within the context of UK Higher Education. Within both Study 2: Comparison of mentoring and non-mentoring universities; and Study 3: Attitudes toward mentoring, adaptation to college (a measure of the Tinto's core concepts of social integration) was found to be the strongest predictor of intention to leave, providing support for the model within the UK. It has been proposed (Jacobi, 1991) that Tinto's model of student attrition can provide a theoretical understanding for the mechanisms underpinning peer mentoring in Higher Education. Thus peer mentoring could aid student integration (as measured by the College Adaptation Questionnaire: Crombag, 1968) which would improve retention. The mediational model proposed by Jacobi was partially supported within the current research (see chapter 7). Although the trend was evident there may not have been enough power in the study due to small sample sizes to fully support the model.

Peer mentoring as studied in this thesis is viewed as a form of social support and thus has been studied with reference to the social support literature. Social networks have been shown to have direct protective effects in the stress – strain relationship, whilst perceived support has generally been indicated as a moderating factor. An additional model for the possible effects of peer mentoring is that of the social support buffering hypothesis (Cohen & Wills, 1985) suggesting the presence of mentoring can reduce the effects of stress [the transition to university] on outcome

measures. With regard to the transition to university, several studies have highlighted the negative effects such as decreasing levels of social support, general affect and self esteem shortly after the move. It was hypothesised that mentoring as a social support mechanism would buffer or reduce some of the negative changes evident during the transition to university.

10.3 Study 1: Validation of the Student Wellbeing Scales

Review of student transition literature revealed a number of factors that could impact student wellbeing and student persistence including aspects of the transition to university itself, student mental health, and academic concerns. However, a review of current measures' of wellbeing highlighted a number of limitations in their application to the student population. In order to measure all of the possible repercussions of the transition to university and student wellbeing a new compact measure including items on homesickness, loneliness, depression and anxiety was developed. The two factor model produced within the two different samples indicated a highly reliable, valid and internally consistent measure which was used as a multidimensional or unidimensional measure of student wellbeing within the current research on peer mentoring and can also be applied to future research into the first year at university. However, further validation of the measure is required using larger sample sizes and a longitudinal research design.

10.4 Study 2: Prevalence of Peer Mentoring in UK Higher Education

10.4.1 Prevalence of Peer Mentoring

When reviewing the literature on mentoring the first thing that becomes apparent is that there are many different definitions and model of mentoring. This inconsistency makes constructive comparative empirical research difficult. Authors agree that mentoring can benefit mentees, mentors, and institutions, and discuss its growing popularity within organisations and the educational sector, yet provide little empirical data. This thesis initially surveyed the prevalence of mentoring schemes within UK universities in 2003. This was a large scale study incorporating all types of universities in the UK thus allowing a data base of formal mentoring schemes to be constructed.

Approximately a third of the universities (N = 34) involved in the survey had a peer mentoring scheme already running at that time, with over half (64.7%, N = 22) being in piloting stages. Many of these piloting schemes had been set up in response to pressures from the government to broaden participation rates whilst simultaneously improving retention. Some universities may have responded by setting up mentoring schemes despite a lack of strong empirical evidence that such schemes are beneficial. Nevertheless, the number of existing and piloting schemes identified suggests general growth in the prevalence of peer mentoring in a UK context. Further to this, five universities without a scheme indicated that they wished to initiate one in the next five years.

The main finding of this study was the diversity of such schemes including a large overlap with other peer support schemes such as peer assisted learning and peer counselling (nightline). The diversity in schemes observed within this survey

highlights the fact that comparison between schemes is difficult since many are context specific. Despite substantive efforts to gather information on individual schemes, a limitation within this study was availability of data. Surveys were originally forwarded to student support departments at each university, but some schemes may be run at the department/ faculty level and remain unknown to the support services. To address this, questionnaires were followed up with a large scale internet search to capture other formal peer mentoring schemes within each university.

It should be noted that the distinction between peer mentoring schemes and peer assisted learning was not always made by the university concerned. It is possible that some peer mentoring schemes were therefore not included in the analysis. The academic or social focus of a peer support scheme may depend on student characteristics (demographic and academic) and the particular needs of the department, faculty or university.

10.4.2 Possible Benefits of Mentoring - Institutions

Using national statistics and a large sample size of all types of universities across the UK, the study showed that peer mentoring appeared to have a beneficial effect on student retention. Universities with a peer mentoring scheme consistently showed lower dropout than their calculated benchmark (expected withdrawal): even when the type of university was taken into consideration. Universities that were piloting a peer mentoring scheme generally had high levels of dropout before the introduction of the scheme. The strong association between the duration of the scheme and the reason for initiating the scheme indicated that those piloting a

scheme may well have been responding to these high dropout rates. Peer mentoring also appeared to moderate the relationship between student diversity and dropout statistics; the relationship remained only in universities who were piloting a scheme at the time. A cost benefit analysis could be conducted within future research where the cost of running a scheme could be assessed against the cost of student withdrawal.

10.5 Study 3: Comparison of Peer Mentoring and Non-Peer Mentoring University.

10.5.1 Possible Benefits of Mentoring - Mentees

When focusing on the benefits of mentoring at the individual level, conclusions in the literature regarding academic benefits are fairly consistent. Mentored individuals evidence higher levels of GPA, grades, and module completion rates. Psychosocial outcomes are less consistent with mixed results reported. Many of these studies concentrate on the evaluation of a particular scheme and have numerous methodological flaws including the design (cross sectional with no control group) and measurement (non-use of reliable and valid scales and questionnaires). Study 3: Comparison of mentoring and non mentoring universities, adopted a strong methodological design, incorporating a large sample size and pre-validated measures. The main finding within this study was that individuals who did not have a peer mentor were 4 times more likely to have seriously considered leaving university than those who had a peer mentor ten weeks into the first term. Peer-mentored individuals also appeared to be coping with the transition to university better than non peer-mentored individuals during the first few days at university. The peer mentored

group were also generally more adapted to university life ten weeks into university and this factor then became a significant negative predictor in thoughts of withdrawing. However, these statistics did not consider the relative importance of peer mentoring alongside other potential predictors (e.g. transitional stress) and only concentrated on the direct effects. Although this provides fairly substantial evidence with regards to peer mentoring, the interactive effects of peer mentoring alongside other variables could be considered within future research. As suggested by Jacobi (1991) the relationship between peer mentoring and thoughts of withdrawal was mediated by college adaptation providing a theoretical framework for mentoring and support for Tinto's (1975) Interactionalist Model of Student Withdrawal within the UK context.

Individuals without a peer mentor showed decreases, from week 1 to week 10, in social support, self esteem and positive affect as predicted from the literature, whereas those with a mentor evidenced increases in all three. The significant interaction between time of measurement and mentoring supports the conviction that peer mentors can 'buffer' the negative effects during the transition to university. However, the relationships between all these factors: transition to university, peer mentoring and individual differences is very complex requiring a larger study (in order to increase statistical power and external validity), an increased number of mentoring and non mentoring universities taking part and a longer follow up. This is shown by the lack of statistical support within the buffering hypothesis analysis. Peer mentoring did not moderate the relationship between transitional stress and outcome variables. Therefore it is unlikely that mentoring acts a social support mechanism in the same way as family and friends.

Satisfaction with a mentor, or indeed the amount of contact time bore no relationship to the outcome variables of interest; yet mere presence of a mentor did. Exactly how this mechanism is operating is unanswered. It could be that by providing students with a mentoring scheme, and one which is an integral part of the university, universities are instilling a general sense of caring, belonging and support from the start. It is interesting to note that within Study 2 (Comparison of mentoring and non-mentoring universities) most of the students met with their mentors during the first day at university. It may not be what happens in the mentoring relationship that is important but the knowledge that mentors are 'simply there' if needed. It may also be that we are simply not asking the right questions to comprehensively gauge levels of satisfaction and support received from the mentors. The effect of the presence of a mentor is in support of Allen et al's. (2004) research concluding from a meta-analysis of the benefits of mentoring for mentees within the organisational literature that the functions of the mentor, and satisfaction with that mentoring relationship, had little effect on the outcome variables measured, it was the mere presence of a mentor that indicated greater effects.

Another possible explanation is that those universities who instil a greater sense of belonging and perceived support to their students may be the ones who are more likely to consider a peer mentoring scheme in the first place. Future research may expand this research design across several peer mentoring schemes within different universities: each university being matched to a non mentoring university: analysis could then take place at the individual matched pairs level and also overall between universities.

10.5.2 Utilization of a Mentoring Scheme

The peer mentoring schemes studied within this study were focused around social, emotional and practical support during the transition to university. Mentors were actively encouraged to meet with their mentees within the first couple of days at university. As expected the amount of contact for the majority of mentees decreased over the first semester as they settled into university life. However, a small proportion in the study continued to see their mentors for more than one hour per week as far as 10 weeks into university. This may highlight a vulnerable group or merely those whose peer mentor have been incorporated into their social network. The amount of mentor/ mentee contact time, however, had little effect on any of the psychosocial outcomes - college adaptation, wellbeing, and stress. Although those seeking advice from a peer mentor for personal reasons were less adapted to university with lower levels of social support, college adaptation, and wellbeing. These students also had a significantly higher level of intention to leave. Further to this, individuals who wanted more support from a peer mentor on entry to university were also lower on levels of wellbeing, college adaptation and social support ten weeks into the first term. This may indicate a vulnerable group who are utilizing the peer mentoring scheme to provide psychological support. This finding is supported by the fact that a lower wellbeing score was also a significant predictor of turning to a mentor for personal issues.

10.6 Study 4: Attitudes towards Peer Mentoring

No published research to date has asked students about their attitudes towards a peer mentoring scheme and whether they would become involved in one if offered. Therefore the aim of this study was to assess students' attitudes to the development of a peer mentoring scheme in a university where one is not currently available. A further rationale for this study was to relate student characteristics to perceived need for peer mentoring, to indicate the value of targeting specific groups. Overall this study received positive support for the initiation of a peer mentoring scheme with 97% of the sample believing it would be a useful means of for support. The current study found perceived need for a peer mentor was greatest in individuals who were currently (assessed at the end of year 1) experiencing homesickness, compared with those who were not homesick. No other differences were evident in any of the psychosocial (loneliness, college adaptation, social support) or demographic variables (age, gender, commuting v residential students). This suggests that there is no particular psychosocial or demographic group that the scheme should be targeting.

It appears that peer mentoring is of significant benefit where contact is initiated on the first day of university attendance and participants within this study perceived the benefits of having a mentor present during 'Welcome Week'. A high proportion agreed that they would seek advice from a mentor for a range of reasons including orientation, and socialisation.

This study also found that students were less concerned with matching of mentors to mentees but considered listening skills and commitment to the scheme as more important attributes of being a mentor.

10.7 Study 5: Peer Mentoring in Higher Education: The Mentors Perspective

The findings from the fourth study generally support previous organisational literature which investigates the mentor's perspective. The mentors within this study listed several costs and benefits of mentoring. Advantages to mentoring included increases in self-confidence and listening skills; a sense of satisfaction and achievement, and academic factors such as career enhancement and consolidation of information regarding the course for the mentors. This supported the findings reported within the few qualitative studies of peer mentoring in Higher Education and highlights the need to research this side of the relationship further using a more quantitative design and on a larger scale to increase external validity. Although very little research on the possible benefits of mentoring has been conducted within Higher Education one can extrapolate from the organisational literature that both sides of the dyadic relationship appear to profit (Allen et al. 1997).

Given the voluntary nature of peer mentoring, the costs of mentoring in time and resources should also be considered. Minimal empirical research on the costs of mentoring has been conducted previously, particularly in the area of Higher Education. The main negative factor emerging was that of time demands and this was also apparent within the organizational literature (Eby et al. 2006). Within Higher Education, however, it was clear that time demands was dependent on the number of mentees the mentors had been assigned and was also dependent on how quickly each mentee 'settled' into university. Whereas most students do adapt to university life quite quickly some may continue to need support. This is vastly different from organisational formal mentoring schemes whereby individuals are usually assigned one mentee and the relationship is focused on career aspects instead of psychosocial adjustment and social support (Eby, personal communication, 2008).

Formal organisational mentoring schemes tend to be more structured and although some university schemes adopt a framework/ structure (meeting dates, log books etc) most do not. Interestingly mentors whose mentees settled into university very quickly and thus did not contact mentors after one or two weeks felt 'redundant and rejected'. There was also a sense of failure if the relationship did not work or if they simply were not needed highlighting the need for balance between too much contact and too little.

10.8 Recommendations for Policy and Practice

There were several recommendations for policy and practice which arose from the studies:

1. As there were no differences with regard to demographics in the perceived need for a mentor mentoring schemes could be beneficial at a university wide level rather than targeted at specific groups (Study 3).

2. The highest proportion of mentor utilization was during the first week at university and mentors within study 5 indicated that this is a vital and busy mentoring week. The first week at university has also been highlighted as a significant potential stressful week. Therefore a mentoring scheme should highlight the importance of mentors being available during the first weeks of university (Study 3, 4 & 5).

3. A significant proportion of students continued to see peer mentors after the first week at university and many participants within study 4 (attitudes towards a mentoring scheme) indicated that they would turn to a mentor for

current stressors (measured at the end of the first year). Therefore a mentoring scheme may be beneficial if continued throughout the first year (Study 3, 4 & 5).

4. Mentor: Mentee ratios: mentors within study 5 (the mentor perspective) coped well with up to 5 mentees. However, mentors were aware of individual mentee differences and the time demands accompanying mentees who need more interaction with and support from mentors (Study 5).

5. Training is an important aspect of a mentoring scheme and could be considered essential, especially with regard to discussions on boundaries of responsibility and coping with distressed students (Study 4).

6. Mentors in study 5 highlighted the need for a support network and thus a hierarchy of support and advice could be made available and explicit (Study 5).

7. Matching of mentees and mentors on demographic variables is not considered important amongst potential mentees. The most important attributes of mentors were judged to be their listening skills and commitment to the scheme (Study 3).

8. Consideration should be taken when recruiting mentors. The costs and benefits of mentoring could be highlighted during the recruitment stages. Mentors' motivations will differ and it may be that providing structure to a scheme will help less committed mentors to offer the help mentees require (Study 4).

9. Evaluation of schemes should be theoretically focused and systematic in nature in order to provide an evidence base for future investment in peer mentoring schemes (Study 1)

10.9 Theoretical Implications

The current thesis has exploited three areas of literature: firstly literature on mentoring within an organizational and educational context, secondly literature on the higher education system and student dropout, and thirdly literature on the transition to university and the first year experience in Higher Education. The main area of literature within the current thesis was that of mentoring. The literature on mentoring is fragmented (see chapter 1) and is more often than not developed from studies within an organisational setting. This may not have had a direct bearing on mentoring within a Higher Educational setting. Therefore, the current research has developed concepts to describe, conceptualize and analyse the emerging mentoring research in a Higher Education perspective. Previous research studies completed on mentoring within higher education have not been theoretically driven: by utilizing higher education literature, including core models of student dropout; the current thesis has aimed to address this. Additionally pre validated and reliable measures were rarely used within the evaluation of mentoring, which made assessment of a studies strengths complicated and comparison across studies difficult. The current research studies have highlighted the need for reliable and valid measures and have adopted this approach to allow for future meta-analytic comparisons.

10.10 Recommendations for Future Research

Given the limitations within the current mentoring literature identified within the literature reviews four recommendations for future research are considered.

1. Good, well structured, prospective studies that track students intensively over the first few weeks of university and follow up beyond 6 months.

2. Theoretically driven evaluations of peer mentoring using standardised and validated measures incorporating models of student dropout and social support.

3. Assessing the interaction and impact of academic and social integration during the transition to university and focusing on mentoring functions specifically targeting these areas.

4. Researching the mentor's perspective adopting a more quantitative design with a larger sample size as well as exploring the concepts of responsibility, guilt and boundary setting in the peer mentoring relationship.

10.11 Conclusions

Peer mentoring appears to be a useful retention and enrichment strategy for universities. The growing popularity of peer mentoring in the Higher Educational sector reflects a belief within universities that mentoring is highly beneficial. Universities with established peer mentoring schemes have higher retention rates than their expected benchmark and individuals from a 'peer mentoring' university were three times less likely to want to leave university at the end of the first term.

Peer mentors can help individuals become integrated and adjusted to university which then leads them to stay at university rather than leave within their first term. Peer mentoring was also shown to buffer some of the negative effects in the transition to university.

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