Coping among Students: Development and Validation of an Exploratory Measure*

Emilie Boujut1, Marilou Bruchon-Schweitzer2, Stephan Dombrowski3
1University Paris Descartes, Paris, France
2University Bordeaux Segalen, Bordeaux, France
3Newcastle University, Newcastle, UK
Email: emilie.boujut@parisdescartes.fr

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Students are a very specific population as regards their manner to cope with stress. A coping questionnaire for students was developed and administered to 1100 French students at the beginning of the term (T1). Principal Component Analysis of responses, followed by varimax rotations, yielded three factors accounting for 50.5% of the total variance. Factors were identified as seeking social support, avoidance/emotion-focused coping and festive-addictive coping. Associations were observed between scores on these factors and a general coping scale (WCC-R), personal variables measured at the same time (T1), neuroticism, self-esteem, substance use, and four stress factors, as well as variables measured at the end of the term (T2), somatic symptoms, depressive symptoms, eating disorders, and life satisfaction. It would be very interesting to develop the students’ personal competencies, so that they learn how to adopt functional strategies of coping rather than the harmful kind.

Keywords: Coping; Students; Stress; Validation; Addictions; Health

Introduction

The theory of “emerging adulthood” conceptualizes the developmental characteristics of people aged 18 to 25 (Arnett, 2000). Although previous research has contributed significantly to our understanding of emerging adulthood (Erikson, 1968; Keniston, 1971; Levinson, 1978), the key characteristics of this life period have changed considerably since the 1970s, when the theory was developed. Demographics such as age of marriage and parenthood have profoundly shifted in industrialized societies; whereas before the 1970s, young adults entered marriage and parenthood in their early 20s, these roles are now more commonly entered into during the late 20s and early 30s. Young adults often spend the period stretching from late teens to mid-twenties experimenting in their love and work lives (Arnett, 2005) and this might be particularly true for those who choose to continue schooling at the college or university level. Whereas emerging adulthood was previously considered to be covered by other developmental stages, developmental psychologists now consider this period to be well-defined and unique stage, with young adults passing through both a developmental and an educational transition (Boujut, Bruchon-Schweitzer, & Rascle, 2004). This paper thus focuses on some of the problems that university students frequently face during ‘emerging adulthood’; how they perceive these problems at the beginning of a term, and the effect of these variables on three outcomes: somatic, mental health and health-related behaviors.

Students’ stress is considered to be a transactional process between the new and stressful situation they have to face (e.g. beginning the first year of university) and their personal and social resources. These university students are considered to be in the last period of transition before adult life (Towbes & Cohen, 1996), and their psychological and physical discomfort can manifest itself in various ways, including mood, sleep and eating disorders. Although there has been little research proving pathology, it appears that many students present discrete symptomatic forms of discomfort that are seldom the subject of consultation. In a recently conducted study, approximately 15% of students indicated having had suicidal ideas, the second leading cause of mortality (after road accidents) among individuals aged 18 - 24 years, and 30% presented depressive symptomology during the previous 12 months (Lafay, Manzanera, Papet, Marcelli, & Senon, 2003). Other risk factors include the consumption of psychoactive substances, which tends to increase over time, with alcohol consumption consultations planned to become an integral part of medical visits to first year students (Wauquiez, 2006).

Despite the reporting of many symptoms including somatic (e.g. tiredness, headaches, backaches), psychological (e.g. depression, suicidal tendencies), and behavioral disorders (e.g. eating habits, addictive behaviors) among first year students, very few studies have focused on students’ coping and health (Boujut et al., 2004). Grebot and Barumandzadeh (2005) examined the perception of stress and the coping strategies that were adopted by students during their first year and noted an increase in the perception of stress (in terms of threat) between entry and 2 months, after which students would begin to more realistically understand the requirements of university. The students would, at this time, adopt dysfunctional coping strategies, such as drinking, smoking, or taking drugs. These authors suggested that it would be beneficially to carry out research on the coping strategies that are likely to develop anxiety-depressive disorders or aggravate psychic stress at a later stage. Other research reports have found that problem-centred coping, emotional coping, avoidance, and neglecting to seek social support, predicts...
less positive mental health in students (Dunkley, Zuroff, & Blankstein, 2003; Hatchett & Park, 2004; Stewart et al., 1997). Dunkley et al. (2003) report that the absence of active coping, as well as the recourse to emotional coping and distraction, increase the somatic symptoms of students.

In a longitudinal study of first years students, Halamandaris and Power (1997b) evaluated the coping strategies most frequently used during the first two weeks of entry, as well as the issue of adaption at the end of the semester. The strategy of seeking social support was predictive of good adaption. Vollrath (1998), in a study of the transactional model of addiction, demonstrated that students who smoke use more dysfunctional coping strategies (like denial, distraction, emotional coping and addictive coping) than non-smokers. She explains that smokers often use tobacco to regulate their negative emotions, rather than using functional strategies like problem-centred coping or seeking social support. This strategy tends to increase the number of unresolved problems the students face, and thus their stress. This phenomenon has also been demonstrated in other populations of smokers (Wills, 1986; Wills & Shiffman, 1985).

Links between coping and eating disorders have been highlighted in previous research as well. Emotional coping and problem-centred coping have been found to be correlated positively and negatively, respectively, with the intensity of compulsive eating symptoms among 164 students (Janzen, Kelly, & Saklofske, 1992). Similar results were found with regard to emotional coping and avoidance coping among 150 students (Janzen et al., 1992). Avoidance coping was also positively correlated with avoiding food behaviors in a study of 49 students (Mayhew & Edelmann, 1989). The results of comparative studies (with a control group) are similar: avoidance coping appears more prominently among students who compulsively eat than others (Paxton & Diggens, 1997). The same result was found when comparing anorexic students with healthy students (Mayhew & Edelmann, 1989). Finally, it has been shown that students who are compulsive eaters use no more avoidance coping strategies, or emotional coping strategies, than they use problem-centred coping strategies (Mayhew & Edelmann, 1989).

In this paper, we consider coping in a population of students, paying attention to the situational demands they encounter using the concepts of primary and secondary appraisal, as well as coping strategies. We are particularly interested in two distinct approaches to stressors: 1) how people react to normal situations of stress in terms of coping style; and 2) how people react to specific situations in terms of coping status.

Since the 1980s, many coping questionnaires have been developed that have led to the discovery of various dimensions of coping. The general consensus within the field is that there are two meta-strategies of coping (Lazarus & Folkman, 1984): 1) problem-focused coping (e.g. problem solving, conceptualising, minimising effects); and 2) emotion-focused coping (e.g. emotional responses, avoidance, guilt, emotional experience). Of the 13 studies identified by Endler and Parker (1990) in their critical evaluation of the multidimensional assessment of coping, 9 studies identified these two dimensions as being distinct components of coping.

In studies of coping among student populations, most researchers seem to use generic, validated, and widely used tools. Unfortunately, a number of these tools such as the Coping Strategies Questionnaire [CSQ (Roger, Jarvis, & Najarian, 1993)], the Coping Resource Inventory (Hammer, 1988), the Cope questionnaire (Carver, Scheier, & Weintraub, 1989) and the Coping Inventory for Stressful Situations [CISS (Endler & Parker, 1999)] are used without clearly differentiating coping traits in contrast to coping states. These scales, which ultimately measure a coping style, approach coping as if it is a specific and transient transactional process, but this is only true insofar as one’s coping style is created in response to normal situations of stress. In other words, the questionnaires may simplify coping to a construct rather than acknowledging the way in which coping can vary in terms of style and state. Many misunderstandings presently exist between these two aspects of coping because they are not always clearly defined or distinguished.

With regard to the evaluation of coping in student populations, a second concern is that the wording of items within questionnaires is not always adequately clear or catered for the target population. However, there is at least one coping scale that has been designed specifically for a student population (Allison, Adlaf, & Mates, 1997). This coping scale includes 19 items, and consists of five subscales: deviant coping (e.g. drinking alcohol, smoking cigarettes or cannabis), passive coping (e.g. sleeping, listening to music, eating, watching TV), destructive coping (e.g. seeking affiliation to a gang), withdrawal/drain (e.g. crying, not eating), and affirmative action (e.g. participating in sports). Allison et al. (1997) note that the constellation of behaviours that characterise deviant coping and destructive coping are similar to the concept of problem behavior (as outlined in the Theory of Social Deviance, cf. Jessar, Chase, & Donovan, 1980). Allison et al.’s questionnaire clearly highlights the specific behaviors exhibited by young people to cope with stress (noted above as examples of coping activities). The factors “deviant coping”, “destructive coping”, and “affirmative action” seem particularly relevant for the current study as these were shown to be unique for first year students, as compared to other populations. These factors do not exist in general coping scales: the Cope questionnaire is the one to evaluate substance consumption as a coping strategy, but does so with only one item. This scale needs to be validated in order to know the psychometric properties involved and the implications of coping factors on issues like health and academic performance. The unique personal and social background in which students encounter stress, and the need for questionnaires to be context appropriate underscores the need for empirical studies to better understand the responses and coping strategies of students.

**Aims**

The aim of the current study is to extend research in the area of coping within the student population, by adapting relevant measures to the French student population and by addressing scale validity. We seek to understand the various coping strategies that are used by students to cope with stress, differentiating between coping style and state. Secondly, the aim of this study is to explore links between coping and students’ health.

In order to achieve these aims, the number of subjects in the validation population has to be at least 10-fold the number of items being used, according to Kline’s criteria (Kline, 1993). Kraener and Thiemann (1987) give Statistical Power Tables to estimate the minimum sample size necessary given the number of variables and the type of statistical calculation required.

**Method**

**Sample**

An initial series of interviews was conducted with 40 first
year university students (20 male and 20 female) in France. The mean age of participants was 18.7 (SD = 1.3).

Subsequently, a questionnaire was administered to 1100 additional students (400 male, 700 female), of which 556 continued to complete a follow-up questionnaire (153 male, and 373 female). Of the original sample, the mean age was 18.7 (SD = 1.3). There was a significant difference between participants dropping out of the study and those completing in terms of gender (Chi² = 18.5, p < 0.001), with completers more likely to be female.

The decrease in the number of participants between T1 and T2 seems to be partially accountable to the difficulty encountered when seeking to contact the original participants by telephone, and also non-response by those who were provided the opportunity to complete the T2 questionnaire by email or post.

**Procedure**

One-on-one interviews were conducted with 40 French students in order to inform the questionnaire-development process. Interviews were transcribed and data was analysed using thematic analysis leading to the development of 33 distinct response categories which subsequently informed the development of a 33 item coping questionnaire (the Students’ Coping Scale).

This questionnaire was administered to 1100 French students at the beginning of the academic year (T1). At this time, the students also completed questions to assess neuroticism, self-esteem, general perceived stress and coping strategies.

Six months later (T2), the same students were invited to respond to the follow-up questionnaire. This questionnaire was conducted 2 - 3 weeks before exams and completed by 556 (50.5%) students whose data was analysed in this paper. There is no difference in terms of sex and age between students lost between T1 and T2 and others (Table 1).

**Measures**

Neuroticism, one of the factors of the Five Factors Model, was evaluated by the Neuroticism scale of the NEO-PI-R (Costa & McCrae, 1985), comprising of 48 items that have been validated in France (Rolland, Parker, & Stumpf, 1998).

Self-esteem was assessed with the Rosenberg Self-Esteem Scale (Rosenberg, 1969). This 10-item scale is the most widely used scale within young adult and adolescent populations.

Substance use was assessed with the ASSIST (Alcohol, Smoking and Substance Involvement Screening Test; WHO ASSIST Working Group, 2002). Only items concerning alcohol, tobacco and cannabis were used and specific scores were calculated for each substance.

**Table 1.** Comparison of demographics between study dropouts (T1) and completers (T1 + T2).

<table>
<thead>
<tr>
<th></th>
<th>T1 only</th>
<th>T1 +T2</th>
<th>F/Chi²</th>
<th>P²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>61%</td>
<td>47%</td>
<td>18.574</td>
<td>&gt;.001</td>
</tr>
<tr>
<td>Women</td>
<td>39%</td>
<td>53%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>18.8 ± 1.4</td>
<td>18.4 ± 1.1</td>
<td>14.206</td>
<td>&gt;.001</td>
</tr>
</tbody>
</table>

Stress was evaluated with the Freshman Stress Questionnaire (FSQ Boujut & Bruchon-Schweitzer, 2009), which measures four factors based on 17 items: Academic Stress (e.g. academic failure), University Dysfunctions (e.g. poor organization of university), Feelings of Loneliness (e.g. anonymity of campus), and Problems with Close Relations (e.g. sentimental problems).

Coping was also evaluated by the French adaptation of the Ways of Coping Checklist-Revised (WCC-R; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). The French version is a 27-item scale that measures three coping factors: problem-focused coping, emotion-focused coping, and social support seeking (Bruchon-Schweitzer, Cousson, Quintard, Nuissier, & Rascle, 1996).

Physical Health was assessed using the subscale “somatisation” of the Psychosomatic Index of the Symptom Checklist 90 (Derogatis, 1994), which consists of 12 items.

Depression was assessed by the Beck Depression Inventory-Short Form (Beck, Rial, & Rickles, 1974), which consists of 13 items assessing the perceived severity of some depressive symptoms (affective, cognitive, vegetative) from 0 to 3. A score of 5 or above is considered by many authors to be a cut-off that differentiates clinically depressed subjects (Beck, Steer, & Brown, 1996).

We used the 4-item Subject Well-Being Scale (Diener, 1984; Diener, Emmons, Larsen, & Griffin, 1985) in order to assess the wellbeing of the students.

Eating Disorders were evaluated with the Eating Attitude Test-26 (Garner & Garfinkel, 1979) which measures a global score and three factors: restrictive behavior, bulimia and oral control. This is one of the most widely used standardised measures of symptoms and concerns that are characteristic of eating disorders (Garner, Olmsted, Bohr, & Garfinkel, 1982).

All of the aforementioned scales (i.e. Neuroticism, Self-esteem, Stress, Coping, Physical Health, Depression, Wellbeing, and Eating Disorders) have satisfactory psychometric properties.

**Analyses**

To explore the dimensionality of the stress questionnaire, a Principal Component Analysis (PCA) was performed on the answers of all T1 students (n = 1110). We then performed Pearson product-moment correlations between the identified stress factors and variables evaluated at T1 in order to assess the concurrent validity of the stress factors. Finally, we used multiple regressions between stress factors and variables evaluated at T2 to establish the predictive validity of the stress questionnaire. All statistical analyses were performed with SPSS.

**Results**

**Construct Validity**

Conducting PCA analysis revealed a three-factor structure (Table 2). The first factor was found to express the search for social support, and is similar to a factor from the WCC-R (“I seek help to overcome this problem”). We call Factor 1 seeking social support. Factor 2, which we call avoidance/emotional coping, consists of the individual using behavioral strategies to cope with stress and to regulate their emotional reaction to stress. In this regard, the individual who avoids emotion-focused coping may seek to recover a more positive emotional state through behavioral activities (e.g. eating pleasant foods, watching television). Factor 3 we call festive addictive coping, and this kind of coping strategy includes any consumption of...
Table 2.
Students’ coping scale (N = 1110).

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Variance explained</td>
<td>14.7%</td>
<td>14.4%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Cronbach</td>
<td>.75</td>
<td>.68</td>
<td>.60</td>
</tr>
</tbody>
</table>

Items

6. Je parle de mes soucis à des proches (I talk to my relatives about my worries). .81
17. Je demande des conseils à d’autres personnes (I ask for advice from others). .75
27. Je demande de l’aide pour surmonter ce passage (I ask for help to overcome problems). .77
12. Je garde mes problèmes pour moi (I keep my problems to myself). −.62
5. Je mange plus que d’habitude (I eat more than usual). .68
10. Je mange des choses qui me font vraiment plaisir (I eat things that give me pleasure). .67
31. J’ai envie de pleurer (I want to cry). .58
7. Je regarde la TV (I watch TV). .49
25. Je n’arrive pas à penser à autre chose (I can’t think of anything else). .44
11. Je dors plus que d’habitude (I sleep more than usual). .43
26. Je ressens le besoin d’écrire (I feel the need to write). .42
19. Je bois avec des amis (I drink with friends). .78
4. Je sors, je m’amuse, je fais la fête (I go out, have fun, I celebrate). .75
20. Je fume un joint (I smoke a joint). .61
1. Je vois des amis pour me changer les idées (I see friends to help me change my focus). .56

psychoactive substances. Festive addictive coping can be repetitious and done within a seemingly celebratory environment (e.g. “I drink with friends”). The percentages of explained variance is satisfactory (14.7%, 14.4%, 13.7%). In contrast, for the questionnaire, the alphas are questionable for Factors 2 and 3 (.75, .68, .60).

Convergent Validity

Product-moment correlations were calculated between specific coping scores on each factor used in the students’ coping scale and the three general factors of the WCC-R (Table 3). The specific and general factors of seeking social support were correlated. In addition, we observed a significant relationship between the “emotion-focused coping” of the general scale and avoidance/emotional coping in the specific scale. There were not significant relationships between festive addictive coping and the three factors in the general scale.

Concurrent Validity

Product-moment correlations were calculated between specific coping scores on each factor and the other variables measured at T1 in the 1100 students (see Table 4): SCS, Neuroticism (NEO-PI), Self-esteem (Rosenberg’s Scale), and Freshman Stress Questionnaire (FSQ). Only avoidance/emotion-focused coping on the student’s coping scale was significantly correlated with neuroticism (positively), self-esteem (negatively), and the four freshman stress factors (positively). Only

Table 3.
Pearson product-moment correlations between student’s coping scale and general coping factors at T1 (n = 1110).

<table>
<thead>
<tr>
<th></th>
<th>Seeking social support</th>
<th>Avoidance/emotional coping</th>
<th>Festive-addictive coping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convergent validity (T1)</td>
<td>.15*</td>
<td>−.08</td>
<td>.03</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>−.11</td>
<td>.31***</td>
<td>−.11</td>
</tr>
<tr>
<td>Emotion-focused coping</td>
<td>.66***</td>
<td>.07</td>
<td>.14*</td>
</tr>
<tr>
<td>Social-support seeking</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ***p < .001; **p < .01.

Festive addictive coping on the student’s coping scale was significantly correlated with substance use (alcohol, tobacco, cannabis).

Predictive Validity

Partial regression coefficients (β) were calculated between the three students’ coping scale measured at T1 and relevant outcomes measured at T2 (Table 5). Seeking social support at T1 was negatively associated with depression and positively with life satisfaction at T2. Avoidance/emotion-focused coping at T1 was associated negatively with life satisfaction and positively with somatic symptoms, depression and eating disorders at T2. Festive addictive coping was not significantly associated with these outcomes.
problems with close relations

Loneliness

University dysfunction – .03 .21 * – .07

Academic stressors .09 .32 *** – .07

Cannabis use – .02 .04 .51 ***

Alcohol use – .04 .07 .49 ***

Self-esteem .09 – .22 * .03

Tobacco use .05 .07 .58 ***

whole thing, blaming myself, etc.). The kinds of avoidance/

ing more, watching television, eating pleasant foods) and the

expressed differently in our que stionnaire (eating more, sleep-

edly because the discussions that were carried out in order to

create items were held at the beginning of the school year and

not during examinations. Seeking social support was expressed

similarly in both questionnaires. Emotion-focused coping was

expressed differently in our questionnaire (eating more, sleep-

ing more, watching television, eating pleasant foods) and the

WCC-R (hoping a miracle would happen, trying to forget the

whole thing, blaming myself, etc.). The kinds of avoidance/

emotion-focused coping strategies that we used were ca-

tered to the population in consideration. A similar approach was
taken to festive-addictive coping, where we chose to express this
strategy with strategies that are relevant to our target popu-

lation: partying, drinking with friends, smoking joints, smoking
cigarettes.

The development and validation of specific coping question-

naires for students can help us to more precisely study the fac-

tors determining the populations’ coping from various adaptive

or dysfunctional approaches (Vollrath, 1998). The strategies

that have been discussed here uncover many significant effects

on various issues, particularly dysfunctional effects as regards the

avoidance/emotion-focused coping strategies. In our study, as

in previous research, adopting emotion-focused coping (as in

the WCC-R) predicted more depressive and somatic symptoms,
eating disorders and less life satisfaction at the end of the year
(Janzen et al., 1992). As in previous studies, the search for so-
cial support is a coping strategy that decreases state-depression
and increases life satisfaction. It is probably the case that hav-
ing friends or a close and attentive family helps students to feel
supported in times of stress (Halamandaris & Power, 1997a). The
festive-addictive coping has no functional or dysfunctional
effects, but correlates with substance use without seeming to
have consequences on physical or mental heath among students
during the first year. It is possible that this factor has a lon-
term effect on health, as substance use often predicts health
problems among young adults, but this effect would certainly
manifest at a much later point in time (Vollrath, 1998).

In summary, our study supports previous research with re-
gard to the effect of more traditional strategies of coping
(Stewart et al., 1997). Emotional-avoidance coping consists of
trying to avoid a flooding of emotional tension by diverting
attention from the stressful situation toward satisfying substi-
tutes (e.g. eating more or pleasurable foods, sleeping, watching
TV). This strategy is sometimes effective (at least temporarily)
as it reduces emotional tension, but in our sample its effects were
clearly dysfunctional. It corresponds both to an attempt to avoid stressful situations and problems (it is moderately associated with the emotional- avoidance coping of the WCC) and with the seeking of imme-
diate and shared pleasures. Consuming food or other substances in the face of adversity seems to be a very specific strategy that has parallels with addiction, even if this consumption does not involve psychoactive substances (Ball & Lee, 2002). With regard to “festive-addictive coping”, our findings were unex-
icted. Psychoactive substance consumptions are not associ-
ated in the avoidance/emotion-focused coping but are associ-
ated to having fun with friends. This suggests that consumption
is used in a festive mode, and that it is not unhealthy when we are
looking only at the students’ lives in their first year.

Among the coping factors of this specific scale, avoidance/
emotion-focused coping, one behavioral strategy appears to be
particularly relevant to first year students: the recourse to “fes-
tive addictive” coping. This underlines the originality of the
new tool we have developed. The context in which first-year
students live, which involves both developmental and educa-
tional transition, seems to be one in which students experience
rather specific states of stress (e.g. academic stress, loneliness,
stress relating to the dysfunctions of the university itself). In
order to face these states of stress, certain students will adopt a
festive-addictive coping strategy (Vollrath, 1998), which will
provide short-term satisfaction and relief from stress. This is

Discussion

Having applied a newly developed students’ coping ques-
tionnaire to a French population, we found three factors to be of
relevance: seeking social support (e.g. “I talk about my worries
with relatives”), avoidance/emotion-focused coping (e.g. “I
want to cry”) and festive addictive coping (e.g. “I drink with
friends”). The percentages of explained variance and Cron-
bach’s alpha were satisfactory, but the coefficient of internal
consistency of the third factor was weak.

Two coping strategies that are highlighted here are compara-
tible to those that have been isolated from other populations:
seeking social support and emotion-focused coping (Folkman,
Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). We have
used two research instruments: a general questionnaire on cop-
ing (the WCC-R) and an original questionnaire on coping for
students: the students’ coping scale. The factors of emotion-
focused coping and seeking social support were common to
both questionnaires. Problem-focused coping only appeared in
the WCC-R and not in our specialised questionnaire, undoubt-
edly because the discussions that were carried out in order to
create items were held at the beginning of the school year and
not during examinations. Seeking social support was expressed
similarly in both questionnaires. Emotion-focused coping was
expressed differently in our questionnaire (eating more, sleep-
ing more, watching television, eating pleasant foods) and the
WCC-R (hoping a miracle would happen, trying to forget the
whole thing, blaming myself, etc.). The kinds of avoidance/

<table>
<thead>
<tr>
<th>Table 4. Pearson product-moment correlations between student’s coping scale and at T1 (n = 1110).</th>
</tr>
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<tbody>
<tr>
<td>Seeking social support</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Concurrent validity (T1)</td>
</tr>
<tr>
<td>Neuroticism – .06 .45*** – .02</td>
</tr>
<tr>
<td>Self-esteem .09 – .22* .03</td>
</tr>
<tr>
<td>Tobacco use .05 .07 .58***</td>
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<tr>
<td>Alcohol use – .04 .07 .49***</td>
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<td>Cannabis use – .02 .04 .51***</td>
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<tr>
<td>Academic stressors .09 .32*** – .07</td>
</tr>
<tr>
<td>University dysfunction – .03 .21* – .07</td>
</tr>
<tr>
<td>Loneliness – .03 .29** – .07</td>
</tr>
<tr>
<td>problems with close relations .04 .36*** .02</td>
</tr>
</tbody>
</table>

Note: ***p < .001; **p < .01.

Table 5. Multiple Regressions Analysis between the stress factors and criteria of Emotional and Physical Adjustment evaluated at T2 (β) (n = 556).

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Predictive validity (T2)</td>
<td>Seeking social support</td>
<td>Avoidance/ emotional coping</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Somatic symptoms (SCL-90) .023 .263*** .056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State-Depression (BDI-SF) – .166*** .312*** – .005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating disorders (EAT-26) – .002 .196*** – .015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction (Diener Scale) .104 – .195*** .023</td>
<td></td>
<td></td>
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</tbody>
</table>

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compatible with the Theory of Self-Medication (Khantzian, 1985), in which behaviors like smoking or drinking are able to have a regulating function on emotion. They seem to be related more to the quest for social support than an unhealthy addictive strategy, given the correlation that was found between the factor of “search for social support” of the WCC and that of festive coping. This type of strategy is a good illustration of how the feeling of freedom can improve the students’ perception of stress in the beginning of their first year—during a period during in which the students’ relationships to their parents change, and when the university institution itself is not perceived to be sufficiently “framing” (i.e. it does not provide the students with a satisfying amount of structure). This first year of study coincides with a period of transition, in which students can explore their identity, and try new experiences (Arnett, 2004). It is particularly interesting that coping responses are seemingly characteristic of the age group that was sampled (e.g. changing dietary habits, sleep patterns, and self-medicating). In all general coping scales, we found only one item which concerned substance use as a strategy (Carver et al., 1989), and this item is a factor and was not associated with other behaviors. Moreover, only one specific students’ coping scale (Allison et al., 1997) is described in literature, but it has not been statistically validated. This students’ coping scale was used when developing the study described in this report, as it links specific behaviors to the coping strategies used by young adults in times of stress.

In conclusion, further effort should be made with regard health education, with the aim of helping students to modify their behaviors in times of stress. We have emphasized the importance of certain behaviors as avoidance strategies (e.g. to eat more or sleep more than usual), and have drawn attention to the risks that can be incurred through these behaviors. The stress that is generated by entering an institution with complex individual conditions can limit the choice of coping strategy that students toward the adoption of avoidance strategies and risk behaviors. We know that the family unit and university personnel can play an important and beneficial role in helping students cope with this transitory period (Boujut, Koleck, Bruchon-Schweitzer, & Bourgeois, 2009). Similarly, health professionals assigned to universities could play an important role as regards the prevention, tracking and treatment of student stress, if adequate means of conducting this kind of work were available.

REFERENCES


