
Getting it right first time

Understanding and supporting the information
needs of disadvantaged young first time mothers



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Executive summary

Information informs, guides, and empowers; but barriers to use can be societally divisive, particularly amongst disadvantaged groups. There are complex access barriers and internalised behavioural barriers to consider, the former influenced by technology and media literacy issues, the latter by social structures and norms; barriers that can put young mothers, and in turn their children, at risk of living a stratified and disengaged existence within a small information world, and at heightened risk of negative health outcomes and poor life prospects.

This work sought to better understand the information needs of young mothers from UK areas of multiple deprivations, their information seeking behaviours, and the factors influencing their behaviours. We observed and participated in multiple support groups, and visited mothers in their homes. Via surveys, interviews, and focus groups involving 62 mothers we gained in-depth insight into their information needs, and the factors influencing how their needs are met (or not). We also observed young mother interactions with support workers (health visitors and support group staff), and via interviews and focus groups with 55 support workers, gained insight into the challenges of health communication and education in disadvantaged circumstances, and the factors contributing to effective information interactions with mothers.

In summary, four key findings emerge from this work:

1. The information needs of young mothers are complex: young mothers have multiple needs spanning issues of parenting, poverty, and personal development. Many are difficult to recognise and understand, and continually evolving. Many are interrelated, and compete for attention. Several mothers felt overwhelmed by the extent of their needs, and described situations of considerable anxiety and stress. In the majority of instances, young mothers are either unsure of their ability to meet their needs, or need help with needs.
2. Interpersonal information sources are important: young mothers value experiential advice and support, and make frequent use of their own mothers and grandmothers, other young mothers, and support workers. They value being able to discuss their needs, and participatory and demonstrative learning. In relation, several mothers described negative interactions with professionals across multiple agencies due to impersonal and simplistic one-way communication, and issue of judgement and stigma.

3. Use of State provided digital health and care services is low: our young mothers make moderate to low use of digital sources, and some no use. Those who do largely use Google or social media without reference to specific websites. Almost no evidence of the use of State provided digital services was found. Several mothers also felt that the information that they obtained online was too general to be of use to them. Limited Internet access and low health literacy are significant contributory factors, as is lack of tailored digital content.
4. An important information intermediary role is evident in support workers: support workers help young mothers to understand their needs, and play a key role in providing and connecting mothers to information, and addressing misinformation. They also play a key role in tailoring information for relevance to mothers, and communicating via incremental and recursive cycles that take into account individual learning needs. However, dependent relationships also raises questions regarding the development of independence in mothers.

And four key recommendations are made:

1. The design of health and social care systems for young mothers should recognise and support their holistic information needs.
2. The primary form of health and social care communication to young mothers should be interpersonal and interactive.
3. Community-based 'bridges' are required to encourage young mother use of state provided digital health and social care services.
4. Community-based approaches to health literacy education are needed to develop independent life skills in young mothers.

This major study of human information behaviour advances our understanding of effective methods of health communication and education amongst an at-risk group, and contributes to the important discussion of how state and third sector services can support young mothers and their children to prosper in the digital age. Through the voices of the young mothers and their support workers, this report provides significant insight into the factors influencing effective information interactions with young mothers, and reminds us of the importance of holistic personalised approaches to health and social care in the problematic context.

Professor Steven Buchanan

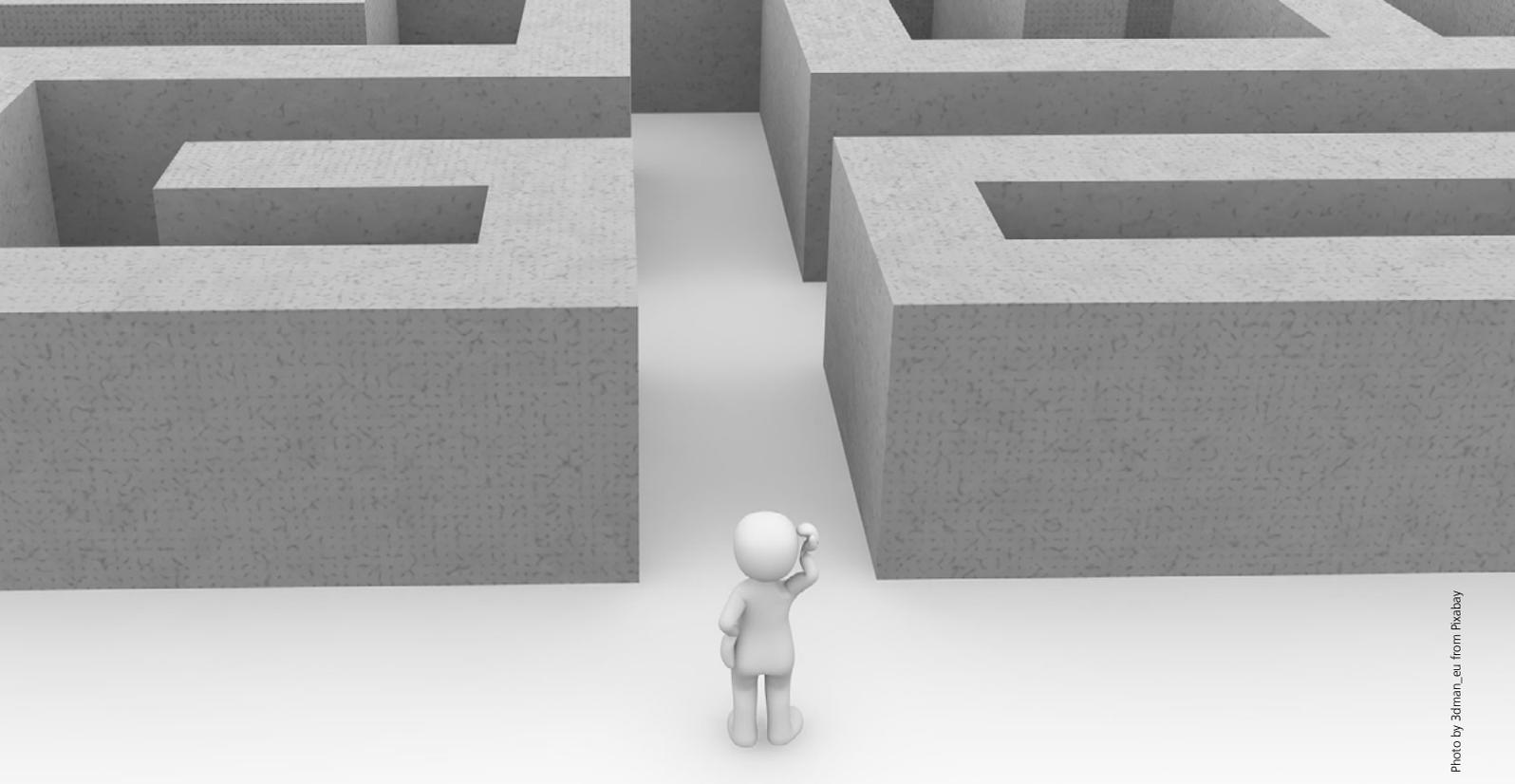


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Project overview

1 Project overview

Aims

This three year study sought to better understand the information needs of young first time mothers from areas of multiple deprivation, their information seeking behaviours (or not), and the factors influencing behaviours. It sought to better understand complex access barriers and internalised behavioural barriers, the former influenced by technology and literacy issues, the latter by social structures and norms; barriers that can put young mothers, and in turn their children, at risk of living a stratified and disengaged existence within an impoverished (small) information world, and at heightened risk of negative health outcomes and poor life prospects.

Background

The transition to motherhood is recognised as a period of “profound social change” (Prinds et al., 2013, p.734) and psychosocial adjustment for women (e.g. Grimes, Forster, and Newton., 2014; Da Costa et al., 2015; Kamali et al., 2018). Mercer notes that it, “...involves moving from a known, current reality to an unknown, new reality” (2004, p226), further described by Prind et al as an, “existentially [life] changing event” (2013, p.733). It can transform how a women thinks of herself, and the World around her, and generates new needs for understanding both specific and general. For example, Montesi and Bornstein (2017, p.201) comment that, “...becoming a mother implies a new perception of oneself as more in need of information”. Such profound transformation can also be problematic, and involve considerable anxiety and stress (e.g. Da Costa et al., 2015; Loudon, Buchanan, & Ruthven, 2016). Many women find themselves at home with a child within hours of giving birth and report feeling unprepared for motherhood. For example, Carolan (2007, p1168) comments that, “Following birth and the immediate postpartum euphoria, the new mother was confronted with the myriad concerns of her new role... Many described feeling really lost and helpless. Most felt ill-prepared and ill-equipped for their new role”. Information helps preparedness, but unmet needs are reported (e.g. Loudon, Buchanan, & Ruthven 2016), and correlated with negative health outcomes (e.g. Gazmararian et al., 2014; Rotich & Wolvaardt, 2017).

Young first-time mothers are considered at particular risk of negative health outcomes. The World Health Organisation (2018) reports that the leading cause of death amongst young women aged 15-19 globally is complications from pregnancy and childbirth. Infant mortality rates are also higher than older mothers (Torvie et al, 2015), and babies at greater risk of poor nutrition

and care (Harron et al, 2016). Stress and anxiety are also heightened, as are rates of depression (Raskin et al, 2016). Low literacy is reported (Bennet et al, 2013), and issues of preparedness for motherhood (e.g. Cronin, 2003).

Notwithstanding such significant issues, it is important to recognise that motherhood can be a positive and transformative experience for young people (Duncan, 2007; Brand et al, 2014); however young mothers from disadvantaged backgrounds, and young mothers more broadly, are subject to significant negative public attention and stigmatisation. Shoveller and Johnson argue that sanctioned public discourse on parenthood predominantly portrays young mothers as a societal problem, and encourages marginalisation and “a climate of sex-based shame” (2006, p47). They argue that public health interventions have been preoccupied with risk and “what is wrong with the individual”, as opposed to the environment, and that greater attention needs to be given to how to “transform youths’ social contexts and structures” (2006, p56). Brand et al discuss how this “deficit view of young motherhood” (2014, p174) can lead to mothers concealing needs from health professionals due to “fear of stigmatisation and lack of confidence” (2014, p175). Brand et al report “strong evidence of the interrelationship between a young mother’s support systems and experiencing a positive transition to motherhood” (2014, p177), but that “service models that offer the right type of support for young mothers are limited” (2014, p177). They highlight the need for “bottom-up” approaches to health care that foster meaningful relationships with young mothers and respond to individual everyday needs. This study sought to better understand their everyday information needs, and effective methods of meeting.

Methodology

Our methodological approach for the project in its entirety is provided in summary overview below and further detailed in the published proceedings (i.e. journal papers) that are referenced at the end of each of the main findings chapters (see Chapters 2-4).

Theoretical framework

Our overarching theoretical framework brought together theories of information behaviour with theories of social capital to better understand shared concepts of social integration, understood as participation, access, and engagement.

Wilson (1997) provided a macro framework for understanding contextual factors influencing information needs and information behaviours. Wilson proposes three factors which form context: personal (physiological and psychological); role (social and work); and environment (socio-economic); and proposes that such factors form the basis of various intervening variables between determination of need and action, including stress/coping and risk/reward mechanisms. The model also recognises that information seeking can be both passive and active.

Taylor (1968) provided a model for understanding the formation of information needs as a cognitive process, including early embryonic stages of understanding and expression. Taylor (1968) proposes four levels of cognition and communication of need: visceral (vague and inexpressible); conscious (rudimentary and ambiguous); formalized (understood and defined); and compromised (structured and expressed).

Chatman (1996) provided a model for understanding how insider/outsider identity can influence disclosure of information needs, and information seeking behaviors. Chatman proposes that in disadvantaged circumstances people can withhold their problems in the belief that negative consequences outweigh benefits; and proposes four concepts variously employed as self-protective behaviours: secrecy (concealment), deception (distortion), risk-taking (aversion), and situational relevance (utility). A stratification of information access can also occur, with outside sources not usually sought in a "world on which norms and mores define what is important and what is not" (1996, p.205).

Concepts of social capital guided our understanding of young mothers' information interactions within and across social networks. Three types of social capital are commonly recognized (Putman, 2000; Woolcock and Narayan, 2000): bonding (close, immediate peer and family connections); bridging (more distant connections with people of similar characteristics); and linking (institutional connections via people in authoritative positions). A particular strength of incorporating a social capital perspective was that it "shifts the focus of analysis from behaviour of individual agents to the pattern of relations between agents, social units and institutions" (Schuller et al., 2000, p.35).

It is important to note that whilst guided by the above concepts and models, our overall approach incorporated an inductive element (see data analysis). Please also note that our theoretical discussion of study findings, including relationships to above concepts, is not included in this report and can be found in the published proceedings referenced at the end of each of the main findings chapters.



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Data collection

Our data collection methods, in entirety, consisted of participant observation, questionnaires, semi-structured interviews, participatory focus groups, and textual content analysis of posts to online forums.

Observation was conducted in a number of young mother support groups prior to surveys and interviews and was designed to introduce the researcher to mothers, and to build a degree of trust and acceptance amongst mothers. The researcher, as a participant observer, introduced themselves to mothers and over a period of several weeks, assisted mothers and group leaders with various group activities.

Post observation a two-part questionnaire was distributed to mothers. The first part explored what types of information needs young mothers have, and their ability to meet their needs with or without support. A typology of information needs was provided by Buchanan, Jardine, and Ruthven (2018). This typology was developed through synthesis of findings from previous studies involving general population mothers (Loudon, Buchanan, & Ruthven, 2016), and early work with healthcare professionals providing support to young mothers (later reported as Buchanan, Jardine, & Ruthven, 2019). Needs were categorised as: baby care; general health; health terms; early learning and childcare; playtime; things to do; stress; money and benefits; housing; work, education and training; family relationships; domestic abuse; legal advice; and helplines. The second part of the questionnaire explored the sources of information utilised to meet needs, and asked mothers to rate information sources according to how frequently they used each source, how useful they found or considered each source to be, and how much they trusted the source. Information sources was based on Loudon, Buchanan, & Ruthven's (2016) model as follows: other mothers face to face; other mothers online; family; friends without children; GP; health visitor; parent group staff; librarian; mobile apps (e.g. readysteadybaby); websites; books; and other printed materials (e.g. leaflets). Questionnaire design also incorporated provision for participants to add further types of needs and sources not felt to fit these categories.

A further questionnaire explored what information mothers look for online, and how and where they look. The categories of potential needs was again based upon the typology discussed above, and again there was provision for participants to add further needs/topics. Mothers were first asked if they look online for information on these topics, and if so, where they looked (i.e. Google search or specific sources). Participants who indicated use of a specific source were asked to identify the source.

The questionnaire also asked mothers to self-rate (likert scales) their abilities to use computers, and locate and read information, without difficulty.

Interviews with mothers (individual and small group) were semi-structured to further identify and discuss their everyday information needs, information seeking behaviours, and the factors influencing behaviours. Cognisant to the potential for the term 'information need' to be considered too abstract by some participants; the interviewer asked open-ended questions in natural language such as, "Are there things you want to find out?" and "What questions do you/have you had?". Whilst the interviewer initially prompted participants with example topics to encourage discussion, participants self-identified their needs and sources utilised, encouraged by the open-ended questions. Participants were not required to provide narratives that might provide additional context, but it was recognised that narrative accounts can occur naturally during discussions.

Semi-structured interviews and focus groups were conducted with health and social care professionals. Interviews were semi-structured around everyday information needs, seeking preferences and issues that support workers observed and dealt with during their interactions with mothers. Focus groups followed and expanded upon interviews, beginning with preliminary semi-structured discussions, followed by open discussions. A participatory approach encouraged discussion and simplified data collection. Participants were asked to initially identify and note the various information needs, sources utilised, and issues experienced by young mothers; and to then discuss what they themselves found difficult during their information interactions with young mothers.

Further interviews and focus groups (and again preceded by observation) were also conducted with a team of health professionals to explore approaches to information and health literacy education in young mothers. Both interviews and focus groups explored understanding of information/health literacy concepts, and approaches to information/health literacy education in young mothers, and influencing factors.

To explore the role of Internet groups as sources of information and support, and to identify any potentially hidden information needs and concerns that young mothers might be hesitant to publicly reveal, textual content analysis of posts by young mothers to online forums was also conducted. Posts were primarily drawn from Netmums Young Parents Support Forum but also included posts to BabyCentre.



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Data analysis

Qualitative data analysis incorporated both deductive and inductive elements, with data disaggregated into meaningful categories via identification of patterns and regularities through iterative pattern coding and thematic analysis, involving multiple readings of verbatim transcripts.

Initial start-list codes were based on, but not limited to, categories of information needs and information sources as per our typologies (see Tables 1-2), and concepts of information behaviour and social capital as per our theoretical framework. Further codes were emergent from data, including those relating to complexity of needs and the role of support workers as information intermediaries.

One team member coded with periodic code checking (multiple sample coding) conducted by another team member independent to the first, with no notable disagreement in coding to report. Regular team discussion facilitated minor refinements to code structures, and identification of primary codes for data initially assigned multiple codes. Emergent themes were developed and refined iteratively (both team members) including crosschecking for coherence, consistence, and distinctiveness (as per Braun and Clarke, 2006). Narrative analysis was conducted to provide temporal sequence and context to information behaviours, and shift attention from “what happened” to “how people make sense of what happened” (Bryman, 2012, p582), including peoples sense of place and sense of role within recalled events. Inter-rater reliability

tests (Kappa statistic) were conducted on our coding of identified information needs, with high agreement found and reported in the relevant published proceedings.

Ethical approval

Ethical approval was obtained via Institutional Ethics Committee, with the study run in strict accordance with the Institutional Code of Practice on Investigations of Human Beings. Informed written consent was obtained from all participants, who all participated voluntarily.

Participants

In total 62 young mothers participated in this study, and 55 health and social care workers providing support to young mothers. The main study zone was the Greater Glasgow urban area extending to semirural areas within the Central Belt of Scotland. Mothers were accessed via third sector support groups, and home visits. Support workers were accessed via their workplace. All participants participated voluntarily.

56 young mothers completed one or more surveys, and 39 were interviewed with several participating in multiple interviews. Variance in participation reflected variance in week-by-week support group attendance where much of the engagement with participants occurred, and the practical availability of participants in the late stages of pregnancy or with infants.

61 of 62 mothers disclosed their age. The youngest mother was aged 15, the oldest 23 (median age 19). 59 of 62 mothers disclosed their stage of pregnancy or child age. 28 mothers (47.5%) were expecting their first child, 28 mothers (47.5%) had one child, and 3 mothers (5%) had two children. Expectant mothers were between 21 and 38 weeks pregnant (median 32 wks). The youngest child was 2 months, the oldest 4 years (mean child age 7.5 months). 57 of 62 mothers disclosed educational qualifications: 9 (15.8%) had left school without completion; 34 (59.6%) had or were working towards one or more national school qualifications; and 14 (24.6%) had or were working towards college certificate qualifications. None indicated college diploma or university degree enrolment or qualifications. 39 of 62 mothers disclosed place of residence. 31 of 39 resided in areas ranked between 1 and 8 on the Scottish Index of Multiple Deprivations and representing the 5% most deprived zones in Scotland, and 8 mothers resided within the 10% most deprived zones in Scotland.

The 23 mothers who did not disclose place of residence were engaged with support groups or services within areas of multiple deprivations.

As part of our examination of the use of online forums by young mothers, we also collected postings from 237 young mothers with a mean age of 18.7. No further demographic data was available for this aspect of the study (not provided with postings).

Our 55 support worker participants were variously family nurses, health visitors, social workers, and young mother support group leaders, and represented eight state and voluntary sector organisations/units providing health and family support services, with five of the eight working specifically with young mothers and the remainder providing support for general population mothers including young mothers. Whilst not all support workers exclusively supported disadvantaged mothers, such mothers were confirmed as forming large parts of all caseloads.



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The information needs of young mothers

I think that's how my anxiety sort of started getting bad, because it's just like, for a while I had my daughter and trying to do all that stuff, but I think it's mainly because I just went from being a teenager and not here to being hit by all these responsibilities, I mean, it's obvious that it's me that caused it myself, I know that, but it's like so much at the one time.

mother

2 The information needs of young mothers

Key points

- Disadvantaged young mothers have wide ranging and complex information needs spanning issues of parenting, poverty, and personal development.
- Many information needs are interrelated and compete for simultaneous attention.
- Many young mothers feel overwhelmed by their information needs, and experience considerable anxiety and stress.
- In the majority of instances, young mothers are either unsure of their ability to meet their information needs, or need assistance from support workers to meet.

The findings reported here were obtained via questionnaire and interviews with young mothers (see Methodology). They provide insight into the types of information needs young mothers have, and issues of cognitive load and affect. Needs identified (major categories) are summarised in Table 1 below with examples, and are discussed further in the sections which follow.

Categories	Examples
Baby Care	Pregnancy, birth, sleeping, bathing, feeding, immunization etc.
General Health	Postnatal depression, family planning, diet, illnesses & infections etc.
Health Terms	Basic medical terminology, acronyms, definitions etc.
Early Learning & Childcare	Social and emotional development, language & literacy, nursery etc.
Playtime	Early communication, reading, singing, games, toys etc.
Things To Do	Mothers groups, playgroups, places to visit etc.
Stress	Anxiety, relaxation exercises, sleeping problems etc.
Money and Benefits	State welfare, maternity grants, food and vitamin vouchers etc.
Housing	State housing, private renting, furnishing, repairs, eviction etc.
Work, Education & Training	Careers, jobs, courses, childcare support etc.
Family Relationships	Communication, sexual relationships, separation etc.
Domestic Abuse	Emotional abuse, physical abuse, sexual abuse and coercion etc.
Legal Advice	Tenancy agreements, debt, employment rights, child custody etc.
Helplines	Emotional support, counselling, support services etc.

Table 1. A typology of information needs of young mothers (Buchanan, Jardine, & Ruthven, 2018)

The information needs of young mothers and their confidence in their own ability to meet

A questionnaire explored what types of information needs young mothers have, and their ability to meet their needs with or without support. Mothers were asked if they needed information on various topics, and if yes, if they could meet the need themselves, were unsure if they could meet themselves, or needed help to meet. Mothers could also add further needs/topics, but none did so. Responses (n 25) are summarised in Figure 1.

With respect to needs per topic, needs associated with parenting (playtime, things to do, early learning and childcare) appear common alongside needs associated with issues of poverty (money and benefits, housing) and personal development (work, education & training).

With respect to needs per individual, participants on average identified seven types of need. Figure 1 also illustrates that in the majority of instances of need (117 of 163 total responses, or 72%), our mothers were either unsure of their ability to meet the needs (34%), or felt that they needed help (38%). In particular, our mothers appear to need help with money and benefits, early learning and childcare, stress, housing, and things to do. Interviews with mothers provided further depth of insight into needs, including context.

Insights into the nature of young mothers' information needs

During interviews our young mothers (n 39) variously discussed needs relating to all categories in Table 1. In total we identified and coded 494 instances of information need as illustrated in Table 2. Some variance is notable when compared to questionnaire findings (see Table 1), most notably baby care and general health needs appearing more prominent, and things to do and playtime appearing less so; however, the reader should be cautioned against over analysis as this could simply reflect what mothers chose to discuss at that point in time. In further support we note that whilst relationship and domestic abuse needs could be interpreted as of relatively low occurrence, our analysis of posts to online forums by young mothers found 41% of posts to be in relation to relationship issues (Ruthven, Buchanan, & Jardine, 2018). Thus interview responses on these topics could also indicate a reluctance amongst our participants to disclose on sensitive topics. We believe that what is important in Table 2 is that mothers are once again demonstrating multiple needs across issues of parenting, poverty, and personal development.

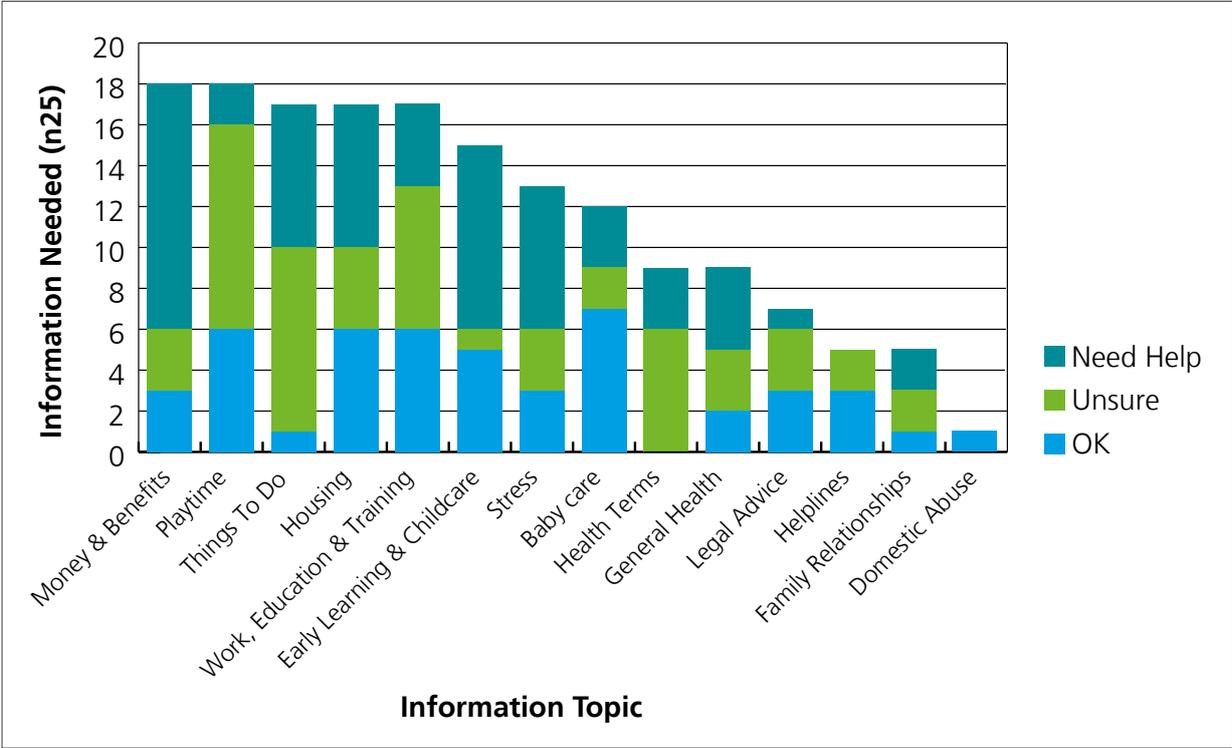


Figure 1: The information needs of young mothers (questionnaire) and their confidence in their own ability to meet (Buchanan & Jardine, 2020).

Information Topic	# Mums discussed (n39)	%	Times discussed (n494)	%
Baby Care	25	64.10	124	25.10
General Health	24	61.54	97	17.81
Money & Benefits	22	56.41	76	15.38
Housing	20	51.28	32	6.48
Early learning & Childcare	20	51.28	27	5.47
Legal Advice	17	43.59	41	8.30
Work, Education & Training	14	35.90	21	4.25
Family Relationships	13	33.33	37	7.49
Things To Do	12	30.77	19	3.85
Stress	9	23.08	9	1.82
Health Terms	8	20.51	9	1.82
Domestic abuse	6	15.38	6	1.21
Playtime	4	10.26	4	0.81
Helplines	1	2.26	1	0.20

Table 2: The information needs of young mothers (interviews) and times discussed (Buchanan & Jardine, 2020).

With regard to baby care, mothers discussed multiple new needs, and issues of affect. For example, one commented:

I needed information about everything; I hadn't been around a lot of babies so I needed to know how to feed them and change them and how to hold their head. I also needed to know about what the best things to give them are, and what products I should buy. When I found out I was pregnant it was a total surprise, I didn't plan it and I was in a bit of a panic – I wouldn't change it now but at the time I was panicking.

Mothers also discussed how baby care needs changed over time as their child developed. For example, one commented:

Because obviously she's growing, so you go through like getting the bottles down and getting the times down, and what kind of suits and getting it sterilised and making sure they're ready in time, and all that, and it's like, "Oh, wait, now we need to change that". It just all changes. Then like the teething and stuff, and how it changes her routine. It's all like drastically changing all the time... I think I know what I'm doing then I'm back to just winging it a lot of the time!

With regard to general health, mothers discussed needs relating to health and wellbeing that could arise from illness, accident, or childbirth. Questions related to labour were a recurrent theme amongst expectant mothers, and often multiple in nature. For example, one commented:

More how am I going to survive the labour at that stage [laughs]... I am having all these dreams, all these nightmares [laughs]. Honestly I need to know what to put in my bag, how long I'm going to stay there for, if there's any complications will I get a C-section or something, and how will this happen?

Several mothers discussed needs relating to mental health including post-natal depression. For example, one participant commented:

I had health problems after having my daughter and I don't think anyone was helpful with that... I didn't feel that anyone was giving me the emotional support because I was quite depressed about it, I didn't think anyone was understanding the pain I was in... especially doctors.

And another:

I didn't even care. You don't - I don't think I washed my hair or anything. I didn't even want to get out of my bed and then I had a baby and I was like "get him away from

me, take him away". I didn't do anything, all wanted to do was lie in my bed and waste away - not eat, not even drink water or anything. They [health visitors] had to force me to get washed, and eat and take a drink.

With regard money and benefits, several mothers described states of confusion regarding needs: not knowing where to begin, or what to ask, largely due to limited awareness and understanding of state welfare systems, and entitlements and eligibility conditions. For example, one commented that she, "wouldn't even know where to start", another that, "[I] don't even know what to look for in the first place", and another that, "I just didn't know where to go, where to start, I was just like a headless chicken". Another recalled telephoning the UK Jobcentre upon the birth of her child, but commented that she "didn't even know what she was phoning for". In relation, several discussed difficulties using online systems increasingly prevalent as part of UK government welfare reforms. For example, one commented:

Once you know what it is you need to look for, everything, it's all there, it's all online, but you need to know what to type into that search engine before you can find it. So that's the biggest problem, I think.

Mothers had questions not only on entitlements, but also on how to apply for and renew entitlements, and appeal unfavourable decisions. Several discussed how changes in circumstances such as leaving home, ending a relationship, or changes in partner income could create confusion over needs and influence outcomes. For example, one mother commented:

I actually missed out on – is it your Sure Start [UK State maternity grant] thing where you get £500? Whichever one it is, I couldn't claim it because I had originally been on a joint claim with his dad. So then when we split up... because I wasn't registered, I couldn't claim for that £500 and I ended up losing it... And I really needed that money because my benefits weren't coming through yet, so I basically had no money.

With regard to housing needs, these were often interwoven with financial and relationship issues and needs, with mothers variously describing experiences involving multiple moves, periods in temporary and/or unfurnished accommodation, and homelessness; with some occurring late in pregnancy or with a newborn. For example, one participant commented:

It was [Housing Association] found [housing] for me, a month before I had her. There was not a lot of time whatsoever. It was all chaos. We didn't even have a cooker, a fridge freezer or a tumble - a washing machine or anything like that, till the day I got out of hospital from having her - that was the day that that came. I didn't have carpets for weeks after she was born or anything.

In the above example the mother's support worker had been instrumental in identifying her needs and obtaining a Community Care Grant for the mother to be able to purchase furnishings, attested to in the mother's concluding comment, "It was [support worker] that done it for me, or I wouldn't have known what to do".

With regard to early learning and childcare needs, discussions focused on nursery provision aspects, with several participants describing this as challenging to resolve due to difficulties finding and applying for affordable, and limited, local childcare places. Many indicated that childcare needs were not met without assistance from support workers. For example, one commented,

I got [support worker] to phone up and get me an appointment because I didn't know you could just like walk in and ask these people... to like try and get him into nursery, because I didn't know what to do.

With regard to legal needs, mothers discussed needs relating to family matters such as registering their child's birth or changing their name, and aspects of human rights, and with some evidence of abuse of rights. For example, one discussed poor treatment by her employer:

I was forced to resign because I was pregnant, and they made things very difficult... I was working in the kitchen, so obviously there's certain things you're not really meant to do, and all these laws and things, so they started cutting my hours slowly... I was 25 weeks pregnant, and I was getting to the point where... you can't bend down or lift up really quickly, you can't turn round that fast, and I was like, "I can't do this". And I passed out in the kitchen, and I come back and my manager started screaming and shouting, "I'm all this and I can't do my job properly". So I went to the changing room and I cried, and I was like, "I'm not going back".

Another discussed feeling pressured into contraception by health professionals:

After I had [child], I got the implant put in, the day after, and I wanted it out, because it was making me... spotty and greasy and I just didn't like it. They [health professional] were telling me "No you can't, because we can't"... She said to me, "Oh no, we can't have too many teen pregnancies in [area] in the statistics now", being so rude, and I was like, "That shouldn't matter, I don't want this in my arm. If you don't take it out, I'm going to rip it out my own arm", so they eventually took it out and then I got, like I didn't want anything, I just wanted to get my hormones and that back to normal and get my period back, but she wouldn't let that, so she basically like insisted that I got the Depo jab... She would not let me leave that surgery without getting something.

With regard to work, education and training needs, several mothers discussed not only the need to find information on these topics, but also on the closely related topic of childcare that facilitated access to work, education and training. For example, one mother commented:

A lot of it is more than just finding out like about the course – I can do that – but you need to find out like all the times and dates you would need to be in, and then if that works with his nursery, and how are you going to pay for it.

With regard to family relationship needs, several mothers discussed needs for information on how to manage and cope with tensions in relationships variously encompassing their parents, partners, ex-partners and in-laws. For example, one commented:

I think things are more difficult for young couples, and that is why a lot of young couples don't last. Like thinking about my friends from my baby group, most of us are on our own now... because there is a lot of pressure on them – especially if they didn't plan it. If you haven't talked about it before you fall pregnant it can be like, "what does this mean?, should we get married?, move in together?, are we staying together forever?".

Some mothers discussed being unable to address other needs whilst concerned about relationships, and described an important support worker role. For example, one commented:



Photo by Jullia Bondarenko from Pixabay

I think it's good to have that support there, because I was 26 weeks when everything came out, and I was struggling enough telling my mum, my dad, my grans and stuff like that, I couldn't think about like money and what are you going to do next and all that, so [support worker] was there to sort that out for me, and it was also good for my mum and that to get their head around it, instead of having to sort me out, if you know what I mean.

With regard to needs associated with things to do and the associated topic of playtime, several mothers discussed how such activities needed to be affordable (i.e. free or subsidised) and accessible (i.e. local), and that such activities could be difficult to find without assistance. For example, one mother commented:

I think that's why some young mums get, like anxiety and, like they get in postnatal depression mode because they're not told about all these things, the things that are on. If you've not got a Family Nurse or a health visitor that comes to see you a lot you'll never really know.

With regard to stress, some mothers described needs arising from the onset of parenting responsibilities and financial issues, and the impact upon their mental health. One mother discussed an attempted suicide:

I was like really worried about money, like how am I going to afford all this? And then I just got really ill thinking about it, and that's what made, I think, me have postnatal depression... But it was worrying about money and how I would pay all these bills, because at the time, my partner wasn't, he wasn't working, and he wasn't able to get any benefit or whatever, so it was like me, and I was paying for everything, and I was like, "I don't have enough money for this". I couldn't sleep, and I was just constantly worrying about it... I had like panic attacks and made myself sick thinking about it, and then it just got to a point where I was like, I wanted to like jump off the Erskine Bridge [a suicide black spot in Central Scotland], because it was too much.

With regard to health terms, some mothers discussed needs relating to understanding unfamiliar terminology repeatedly encountered. For example, one mother commented,

"They [health professionals] need to remember that we are young mums - we're not like qualified and 30-year-old, knowing what we're actually doing". And another, "Well, they [social workers] used pure fancy words like pure words I had no idea what they mean, and I had to get my mum to translate for me, to understand what was actually happening".

With regard to domestic abuse, some mothers discussed needs arising from abusive relationships, although not always recognised as instances of domestic abuse. For example, one mother commented:

The only reason I got bail conditions [for partner] was because [partner] got like done for... domestic abuse or something like that, but he didn't even touch me... Oh what do you call... if [police] get called to a house... were arguing in, what would you call that? A domestic, something like that... But he never like - he never hit me, he like nudged me, and I don't even think he was drunk, so it probably wasn't on purpose, but what he was saying was that would probably be classed as domestic abuse or violence - not violence, well... I don't know.

With regard to helplines, one mother discussed a need to access a UK National Health Service helpline. In relation, they discussed being oversupplied with helpline numbers via health and social care services, commenting, "... you're constantly bombarded with leaflets, constantly".

Finally, several mothers, in general discussion, discussed feeling overwhelmed by many of the above needs at once. For example, one expectant mother commented:

When you first find out [pregnant] I think the whole thing is probably labour, is probably one of the first things that comes to your mind. Aspects of money, that's probably another thing that comes to your mind. How do I tell everyone... that's probably a biggie. How are people going to react, that kind of thing. I was... really nervous, I was scared and I kind of made it overwhelming for myself. I kind of was thinking about it too much and, oh, it was nerve-wracking. I was shaking even just thinking about telling anyone. I was like "oh my god!".

And another:

[I had] quite a lot [of questions]... about the breastfeeding for example. Obviously all the stuff that's happening to me like Braxton Hicks contractions. I don't know, just like personally. My relationship with the father of the baby or with the family overall. Obviously the finances.... because I was really struggling at one point and I got [family nurse] and other welfare officers to... help me.

The above mother, when asked how she had felt, replied, "Overwhelmed... because that was a bit too much and especially as this was my first baby and I want everything to be perfect".

Summary

Young mothers have multiple and complex information needs spanning issues of parenting, poverty, and personal development. The paper which accompanies and more fully discusses these findings (Buchanan & Jardine, 2020), including examination of findings in relation to previous studies, shows that we evidence young mothers to have more wide ranging and complex information needs than previously identified and reported.

Beyond issues of range of needs (i.e. spanning parenting, poverty, and personal development), many needs are interrelated, for example housing

needs are often interwoven with financial and relationships needs, and work and education needs often interwoven with childcare and benefit needs. Many needs can also compete for simultaneous attention, such as pregnancy, relationship, and housing needs. Many needs are also continually evolving and changing, particularly in relation to natural child development, but also often due to volatile personal circumstances. Many needs can also be difficult to recognise and understand.

Several mothers felt overwhelmed by the extent of their information needs, and described situations of considerable anxiety and stress. In the majority of instances, our mothers are either unsure of their ability to meet their needs, or feel that they need help with their needs. Support worker assistance appears vitally important in such circumstances, assisting mothers with understanding and attending to complex needs in the problematic context.

Further reading

The paper which provides further background to this section including methodological design and theoretical discussion, has been published as: Buchanan, S., & Jardine, C. (2020) The complex information needs of disadvantaged young first-time mothers: insights into multiplicity of needs. *Journal of Documentation*. In press.

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3

The information seeking behaviours of young mothers

Everyone just thinks you're stupid, just because you're vulnerable and get pregnant at such a young age, people obviously assume, "Oh, she's stupid, she got pregnant at that age, so she's stupid".

mother

3 The information seeking behaviours of young mothers

Key points

- Young mothers have a preference for interpersonal information interactions, and in particular with family and other young mothers, and health visitors.
- Trust is a critical factor in young mothers' choice of interpersonal sources.
- Experiential support and advice is highly valued, particularly from other young mothers.
- Stigma limits young mother interactions with older mothers, professionals, and wider society.
- Whilst some mothers indicated some use of online information sources, very few indicated awareness and/or use of State provided digital health services including NHS digital health services.

The findings reported here were obtained via questionnaire and interviews with young mothers (see methodology). They provide insight into their preferred sources of information, and the factors influencing their interactions with information sources.

The sources of information used by young mothers

A questionnaire asked young mothers to rate common sources of information according to how frequently they used each source, how useful they found or considered each source to be, and how much they trusted the source. The results are illustrated in Figure 2.

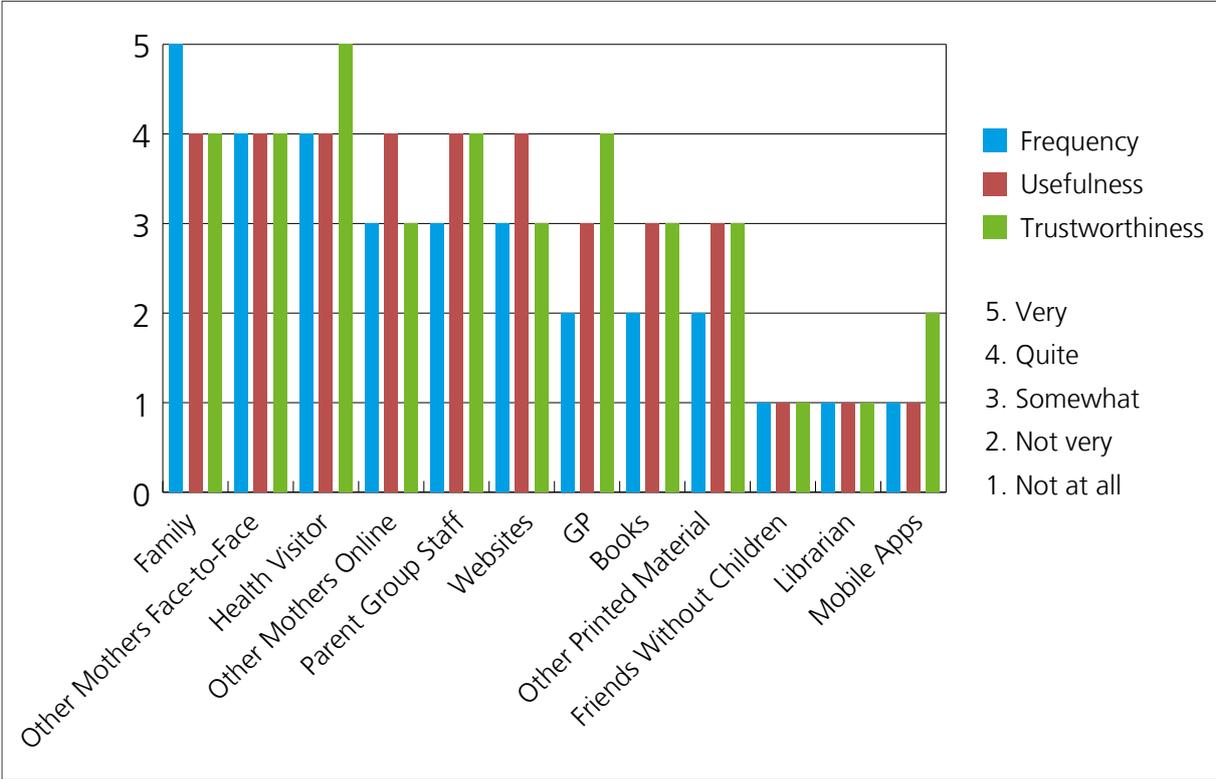


Figure 2. The information sources used by mothers (n23) by frequency of use, usefulness and trustworthiness (Buchanan & Jardine, 2021).

Findings illustrate family, other mothers, and health visitors to be very frequently used. Health visitors (e.g. family nurses) also appear highly trusted. Other mothers online, parent group staff, and websites also appear useful to mothers, but with the exception of parent group staff, are trusted to a lesser degree, and all three are used less frequently. GPs, books and other printed materials appear less useful to mothers and are not very frequently used. Friends without children, librarians, and mobile apps do not appear used at all. Interviews with mothers provided further insights into their information seeking preferences.

Family (in particular participant's mother or grandmother) were high-ranked in terms of frequency of use, usefulness, and trust, largely due to close relationships and recognition of prior experience. For example, one mother commented:

If it is just somebody on the street telling you "oh you should do this" and you are like "oh aye, I bet that worked great for you!". Whereas if it is your mum saying "well I done this with you and it sort of worked", then you are more likely to give it a try.

Several mothers viewed their own mothers as vast sources of information. For example, one mother commented, "My mum just knows everything. I don't know what I would do without her".

However, several also discussed how intergenerational advice could often contradict advice from healthcare professionals, requiring careful and selective consideration on their part. For example, one commented:

Well, with my mum, she smoked during her pregnancy... but she was also quite good with helping me settle him, because he was really difficult to put down when he was little... so she helped with showing me things like techniques and stuff, so it depends on what advice she's giving, whether to take it or not to take it.

Family could also be an important source of demonstrative learning. For example, one mother commented:

I stayed with my mum, after [child] was born, and my dad, he must have changed like a million nappies, just to drum it into me that that's how you do that, and I had to sit and watch, and any other wee things, like I hadn't a clue how to swaddle a baby, whereas my nana, my nana knew. My nana was like, "Right, you pull it over here, you put the wee

arms, tuck it in and then that's it," and I was like, "Oh, right, OK". So a couple of times watching them, and then them just telling me wee things for teething.

Closeness was another factor when seeking advice and/or reassurance, with several mothers describing close supportive relationships with family. For example, one mother described being able to contact their own mother "like five times a day", and another described their interactions as "daily". However, some mothers also described negative relationships and discounted family as an information source entirely. For example, one participant commented, "I'm just going with myself, family I never see at all, my family piss me off".

Other (young) mothers face-to-face were also high-ranked in terms of frequency of use, usefulness, and trust, largely due to shared experience and peer support. For example, one mother commented, "You'd trust another mammy, she's done it". Another that, "I really would say I did trust them [other mothers], because they have their weans, so, same as if my mum told me". Situational understanding was also important. For example, one participant commented, "You can trust them because you are in the same situation". In relation, mothers described their young mother support groups as providing important opportunity for young mothers to meet and share information and ask questions with other young mothers, in an environment described by one mother as "not judgey", and by another as a "safe space". Another commented:

...it's a big trust thing. And we're all like family, even the workers - I cannae see life without them. Aye but a lot of the information that we find is through each other.

Several mothers discussed how close relationships with other mothers allowed them to talk about their children, and to share day-to-day events and questions amongst themselves without the need to always involve professionals, described by one participant as, "just keeping it kind of to friends-level".

Health visitors were also high-ranked in terms of frequency of use, usefulness, and trust. Mothers discussed an important support role, particularly with regard to Family Nurse Partnership (FNP) nurses, who are assigned to an expectant young mother and then meet regularly with the mother (providing one-to-one support in the home) until the child is aged two. Mothers who were part of the FNP programme repeatedly described their family nurses as a valued and important source of information. For example, one participant

described her nurse as “a star”, and another as “brilliant”. Another commented:

I can ask my Family Nurse, and that's me - I've got the information I need. And if she doesn't know, she's got lots of information for you to look at as well.

Non-FNP mothers described mixed experiences. Whilst some were positive, some described poor and/or infrequent interactions with health visitors. For example, one mother described their health visitor as having made them feel, “really anxious and awkward”. Another commented:

When I spoke to a Health Visitor - she came out, that is the only time I ever seen her. I never saw a health visitor the full year I was in that house before, or I think I maybe did see them once.

Other mothers online were mid-ranked in terms of frequency of use, usefulness, and trust. In discussion, mothers expressed mixed views as to how often they used online or social media sources such as Facebook groups or Internet forums to access other mothers online. For example, one participant described such online groups as “brilliant”, another as “quite useful”, and another as “quite bitchy”. Several mothers indicated that they valued anonymity when posting questions to online groups. For example, one commented:

One of the groups is anonymous, you just send them a message and they post it, so nobody really knows who's asking and stuff, so I find that quite useful, it's easier to ask if people don't know who you are. Like, other groups I'm on, I won't ask anything on, because the majority of my Facebook's actually on that group, so I don't know.

Some mothers indicated that they read posts, but did not post themselves, or only asked particular questions. For example, one commented:

I'm part of some mums groups of Facebook, but they can be quite bitchy. I don't really post anything, I just read what other people are doing! I have a group chat on Facebook with the girls from my baby group – that is a good way for us to all keep in touch so you don't have to message everyone individually.

And another:

I would use them [Facebook groups] for silly questions, or ... for instance, when I wanted to find out about how much are swimming lessons, because she loved swimming, but not

for anything serious, because they're really judgemental as well, and they're all bitchy.

Several mothers who used forums valued access to the experiential knowledge of other mothers. For example, one participant commented:

And I prefer that it [Netmums] is real-life experience rather than looking at a textbook, because I don't think any textbook can prepare you for what you'll do, whereas someone who's been through it can... it's good to know there's a lot of people that are in your situation, and they can tell you too. It's good.

However, some mothers were critical of the information being shared by other mothers online. For example, one commented, “they are all giving the wrong advice and you are sitting like ‘oh my god, don't do that, please don't do that’”. In relation, some mothers discussed how advice from other mothers might not always be applicable to their own circumstances. For example, one participant felt it important to recognise that “every baby is different”, and that advice given out online “might not work for you”.

Our separate analysis of Netmums and BabyCenter online forums (see Methodology) provided some further insight into online forum interactions of young mothers (Ruthven, Buchanan, & Jardine, 2018). It found that young mothers use such forums for not just asking questions of other mothers, but also as a way to share problematic personal situations with other mothers, describing situations rather than posting specific questions. Analysis of topics also revealed that the majority of mothers' posts concerned relationships (41.33%), followed by personal circumstances such as money and housing (32.71%), and then child development and health (25.94%). Analysis also found that many mothers can have difficulty understanding and expressing their personal situations and needs.

Websites were also mid-ranked in terms of frequency of use, usefulness, and trust. Mothers were divided as to whether or not they would look online for information, and for those that did, whether or not this information was useful. Of those that did, none made reference to specific websites, but instead described general searches. For example, one mother stated that if they went online, they would “just Google it”, and another that, “I just google everything”.

Some mothers felt that much of the information available online was too general to help them with their specific questions. For example, one mother commented:

Although there's good information online, it's not specific to me, because I want to put him in a cot, I could Google something along the lines of "putting your baby in a cot," but it would all be information that applies to everyone about a cot, it wouldn't be something specific, or "8 month old that's breastfed and feeds every hour at night and doesn't like to be sleeping alone," type of thing.

Several mothers discussed actively avoiding the Internet because they found the volume of information obtained overwhelming. For example, one mother commented that an online search would, "just start freaking myself out". Another commented, "I am scared to Google it [health information], I'll just end up in a right state". Another, discussing perceived risks of looking for health information online, felt that Google results would only lead mothers to "think we were all dying". Another commented:

Do you know what, like, websites are a pile of pee. Also because the amount of websites there is, all of them contradict themselves so much, you don't know what ones to trust.

Some mothers indicated no use of websites whatsoever. For example, one mother commented, "I don't think many people [young mothers] look online for information", to which another mother replied, "I know I didnae".

A separate questionnaire (see Methodology) provided further insight into young mothers' use of online information sources. The questionnaire first asked if they do/would look online for information on the identified common topics, and if yes, whether they would conduct a Google search, or go to a specific source. If a specific source, mothers were also asked to indicate the website. As illustrated in Figure 3, our mothers can be seen to predominantly look for information online via Google searches. Of a total of 223 information needs indicated by 29 participants, 180 (81%) are or would be Google searches.

Of those mothers who indicated use of a specific source, very few referenced specific websites, instead making vague reference to the parent organisation such as the "NHS", or to "government websites". Across health topics, only one mother made specific reference to "NHS Inform", the NHS online information service, and none to ReadySteadyBaby, the NHS online guide for pregnancy and childbirth.

Parents' group staff were high-ranked for trust, and mid-ranked for frequency of use and usefulness. With regard to the latter two rankings, several mothers were infrequent support group attendees, or did not attend at all, and therefore had limited or no contact with support group staff. Explanations were brief. For example, one mother simply stated that support groups weren't "for them".

Mothers who regularly attend support groups discussed supportive group staff and access to information and practical assistance. For example, one commented:

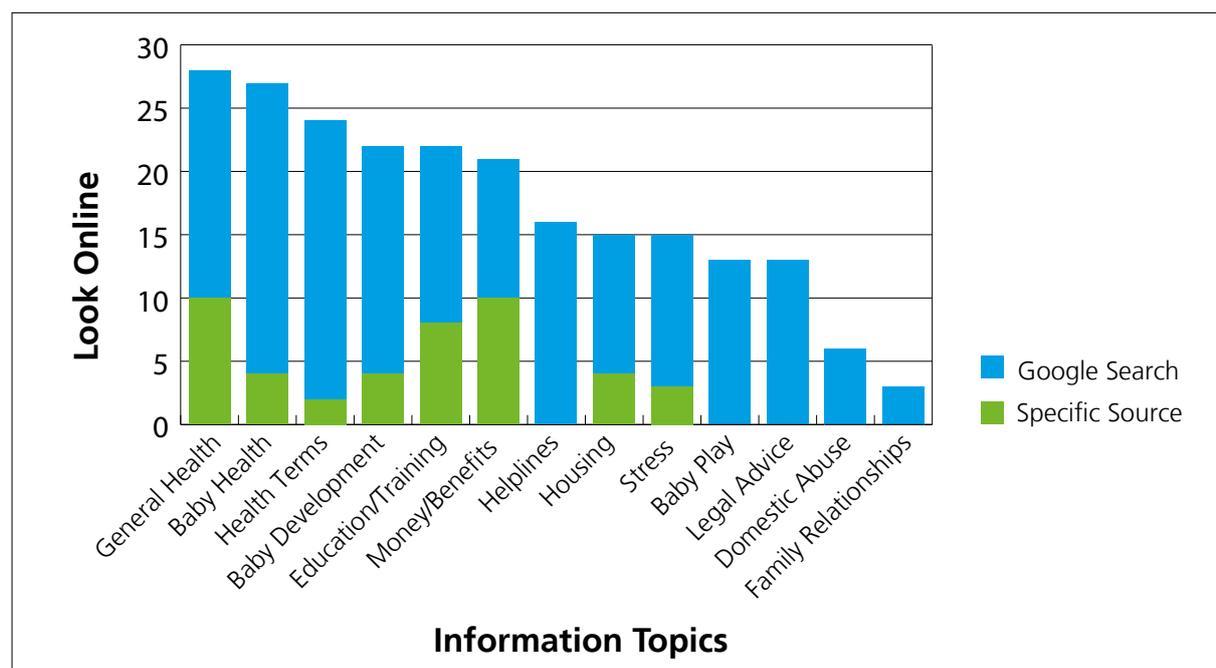


Figure 3. Type of online information seeking conducted by young mothers (n29) by topic (Buchanan & Nicol, 2019).

[Young parents' group name] are quite helpful, and they've got people in each department that can assist you with those kind of things, like if it's benefits or a health problem, or a health and safety thing, there's always somebody, somebody that can help.

And another:

It wasn't until I did start like going through my anxiety and all this, and depression, and did start coming to baby group and did start finding out, like, "Oh, well actually I can get this and I can get that," and it was like word of mouth and talking to people. Like I just felt when I researched stuff, do you know what I mean, you just get so far and then you just, I just give up, because I don't know if this would apply to me... it wasn't till coming in here [young parents group] that I found out so much.

And another:

Aye [support group staff] helps us a lot because if we were to come in and be "I'm really stuck on this", [support worker] or whoever can try and plan a session on something that we all need help with, do you know what I mean. Or even just like when we have the chance to come in and print recipes and that, things that are useful, they are useful for us. Or like even coming in and setting up an email, if it is not something you have done and someone is here to help you then it is less stressful than trying to do it in the house yourself.

Several mothers discussed how staff demonstrations during group activities helped them better understand information commonly distributed by book and leaflet. For example, one commented:

They give you a Ready, Steady, Baby book kind of thing, the midwives give you it and it does give you a lot of useful information, it teaches you a lot of things. But it doesn't really still, I mean it gives you information but it is different doing it to seeing it written down on a piece of paper. So it was good to come here [young parents' group] and see it first-hand.

GPs were mid-ranked for frequency of use, usefulness, and trust. With regard to the former, the majority of mothers discussed only contacting their GP when specific health concerns arose.

In relation, mixed outcomes were discussed, appearing largely influenced by relationship and interaction. For example, one participant commented:

I don't really feel like he listens to me, and I've had to change from my doctor who I like when I moved house, so I don't really know if I can trust him, or talk to him about personal things.

While another commented:

I always trust my GP, because obviously they're supposed to be the ones that are most informed, so that is the people I trust.

Another key factor influencing outcomes was the degree of interaction during consultations, and in particular, GP willingness to enter into a dialogue with mothers to talk through problems, answer questions, and explain health information. For example, one mother commented:

I think there's only one doctor that I actually trust, because he tells you what it actually is, he does use the medical terms, but he explains it for you and stuff, so I trust him. Everything that he's done or gave us has worked straight away, whereas with other doctors, they don't really know what's actually going on.

Another commented:

It's having somebody that knows what they're talking about, without reading it in a book. And having somebody that knows that not every situation is the same, either. Because you read it in a book, and they tell you all these things, and they play it out, like everything, every scenario's, going to be the exact same thing.

Books were low-ranked for frequency of use and usefulness, and mid-ranked for trust. No books were cited beyond Ready, Steady, Baby, which several mothers described as a useful book during pregnancy. For example, one commented, "That was like my little bible, I read it like every day", and another "that I read that every time – like every week I read what was supposed to be happening". However, once their child was born, few mothers appeared to use this or any other books. Some mothers felt that the information contained in the books was insufficient to meet their needs. For example, one commented:

Ready, Steady, Baby takes you all through the pregnancy and everything but I've read that book back to front and there is no mention in it of any mental health or anything like that. I can't even remember if there was much towards funding for it or anything like that because most benefits you don't qualify for until after you have had baby, so I think there needs to be more advice on that.

Several mothers indicated a general preference for interpersonal sources over books. For example, one mother, who commented that in comparison to books "actually speaking to people is better", went on to explain that if she hadn't had access to other expectant mothers via her pre-natal group she "wouldn't have had a clue". Others felt that they simply did not have the time. For example, one mother commented, "now she's here, if you've got five minutes to yourself... you don't want to read about babies, you want five minutes without a baby!", and another commented, "I don't have time to read them, and you just put them in a drawer". Some indicated difficulties with reading. For example:

I'd rather ask somebody else. I don't read books, because I'm terrible at book-reading... when I pure try to concentrate, I just, I read it, but I just don't take any of it in, and then I need to read it again! So I just kind of, I just give up.

Other printed materials (e.g. leaflets) were low-ranked for frequency of use and usefulness, and mid-ranked for trust. Some mothers described leaflets as useful when relevant to a particular problem, such as medicines that their child needed to take. Some felt overwhelmed by large quantities of written material automatically distributed by health care services and professionals. Several did not want leaflets that they did not find useful but did not want to say no to. For example, one mother described taking leaflets "to be polite". Whilst use was low, some mothers did discuss keeping leaflets. For example, one described keeping leaflets "in a folder", and another "in a drawer". One mother commented that, "You don't look at them [leaflets] unless it is something that you can relate to, because you get so many of them", and another commented, "You're constantly bombarded with leaflets, constantly".

Friends without children were low-ranked for frequency of use, usefulness, and trust. Mothers felt that such friends, lacking children of their own, did not have sufficient knowledge to be a useful source of information. For example, one mother commented, "Your pals without children,

you cannae ask them about your bairns, [they] don't have a clue, if they don't have bairns", and another commented that friends without children, "Don't understand anything".

Some mother commented that they would consult these individuals on topics other than child related. For example, one mother discussing what they did ask friends without children, commented, "Not for child related things, but they have still got their own houses and their own jobs, so they can be good for that".

Librarians were low-ranked for frequency of use, usefulness, and trust. Some mothers indicated that they had used libraries to access computers and/or borrow books, but none indicated regular use, and several indicated that they had not been in a library themselves since their own childhoods. Several mothers also appeared to hold negative and/or limited perceptions of the role librarians. For example, one mother commented, "A librarian? I'm not going to ask some random woman... a librarian's just reading books to tell me things", and another commented, "I don't know what a librarian knows. I think they only know where a book is... I don't think I would trust them, to be honest. I don't think so". Some mothers recounted negative experiences. For example, one mother commented:

The librarians, they are snotty and they stick their nose up at you, basically. Yeah, because they're all posh, and you need to be quiet and if you take a crying baby in you have to leave again... I took her [child] once, and then she started crying, because she wasn't getting what she wanted, and they told me I was to quieten her down or leave. So I left. I was like, "Goodbye, I'm not going to sit here and take this". I just left.

In contrast, some mothers positively discussed attending library Bookbug sessions for their children, and one mother also discussed further use of library services, commenting:

But now we go to Bookbug – he [child] really enjoys it. It is good because it is quite a long time for him, so he is learning how to sit for that long, whereas before he would just be chucking things about and running around. It is good for me too, because then if I have something I want to ask there is someone I can talk to... when I'm there they can tell you different things that are going on or sometimes I use the computers.



Apps were also low-ranked for frequency of use, usefulness, and trust. Several parents had used apps during pregnancy to track development, described by one participant as “really cool”. However, none described using apps after their child was born. One mother commented:

They [apps] were more useful when your pregnant – I used the ones that say, “this week your baby is the size of an orange”, but when they are here all babies are so different so they can’t really do that.

The negative factors influencing the information interactions of young mothers

Young mothers discussed a number of negative factors that impact upon on their information interactions, categorised as: bureaucratic and complex Institutional Systems; negative interactions with professionals; information overload; conflicting information; practical access; and stigma.

With regard to bureaucratic and complex institutional systems, several mothers described difficulties when seeking information from institutional (typically State) systems, in particular to resolve housing and benefit needs. Mothers described situations of uncertainty and confusion, with many uncertain of entitlements and/or unable to complete application forms without assistance. One mother described the various forms that

she was required to complete as “quite hard” to understand, another as, “pure brain damage”. Several required help to complete. For example, one mother commented:

When it came to the Child Benefit side and things, I was like, when [name removed] was born, I was “Right, how do I do this, how do I apply? Do I go, forms to fill in,” questions on the forms, I had to have family help me with the questions, because I was like, “I don’t understand like what I would put down for that, I’ve never done this before”.

Another mother, discussing protracted institutional processes to obtain support for her postnatal depression, commented:

Yeah, and then I’ve got a form to fill in that says like ... I can’t remember what it says, I’ve got it somewhere, I’m not sure. It’s just the questions are quite weird, it’s not really to do – like some of them makes sense right enough, but some of them are like why are you even asking me that?

The mother also commented about lack of contact during the process:

And you’re not even getting anything back, I never spoke to anyone, I’ve not heard anything from them ... so they could probably make that better.

Several mothers discussed actively seeking professional support and direction to understand entitlements and application processes, but again this was not always straightforward. Some mothers discussed how they found it initially difficult to telephone agencies for advice and direction when they themselves did not fully understand what they needed and what to ask for. For example, one mother commented:

I didn't know any of this [state entitlements]... and [support worker] helped me with all my setting everything up for my new claims and that, because I would have just been pickled and got really anxious over the phone.

Several mothers discussed how confusion over entitlements and/or mistakes in claims could lead to significant financial hardship to the detriment of both mother and child, and that such issues could still arise in situations of close professional involvement. For example, one young mother living in a supported mother and baby unit and working with social work, described a situation of incorrect information and/or misunderstanding that led to her missing out on important entitlements:

You get your Child Benefit form in the hospital, and your Bounty pack, and they [nurse] tell you that the Child Benefit sorts your Tax Credits, but not, definitely it does not, and then you have to phone Tax Credits and trying to get through to them is absolutely beyond a joke. Then you get the form, and you wait weeks for the form, and then you don't get your money backdated. Because they'll only backdate it like 31 days... And whilst you are waiting on Tax Credits, you're not getting any milk tokens either so you're literally living on Child Benefit. And it's just not – they should give you the Tax Credit form as well.

Another mother, in debt and living solely on Child Benefit due to entitlement errors (previous overpayment) and changes in personal circumstances (child's father no longer resident), described complex interactions with multiple agencies:

I was getting £20 a week, and I had to make a change of circumstances to being a single person house, and then I had to phone up Income Support, Child Tax Credits, and Child Benefit, and the Housing Benefit, so I had all these different forms to fill in, which the forms are a nightmare... then I got another letter from Child Tax Credits saying I still owed them £100... And I was like [recounting telephone call to Child Tax Credits], "Look, I'm

like just going and starting to get benefits again, I'm waiting for it all to get processed", and I had to phone them up so this is charging me... and you get a big [telephone] bill for that... So I was like, "I'm only getting £20 a week in Child Benefit, to try and get by for now for me and my daughter," my rent is all tallying up, because that wasn't getting processed, ...so my rent was backdating... I was like, "Can you not just wait until I start getting my Child Tax Credits again, and take it off that". Because that's what they were doing, they were taking some money off... and now they just started taking more and more, that I was getting like £9 I think.

With regard to negative Interactions with professionals, several mothers described poor interactions with professionals across multiple agencies. They discussed feeling dictated to, not having questions answered, infrequent contact, and judgement.

Several mothers felt instructed rather than involved in decisions regarding their own health and the health and care of their child. For example, one mother discussing a session on health and safety commented, "her [professional] tone and the way that she was, I just switched off and stopped listening". And another commented:

They [professionals] basically try and get you to do what they think's best for you, but [what] they think is best. In fairness, breastfeeding might have all these things and all that, but they shouldn't force it on people.

Several mothers discussed feeling mistreated due to their age during interactions, and not being listened to. For example, one mother described themselves as feeling "belittled", and another as being "treated like a child". Another commented:

They're not listening to me. They just think because I'm young and obviously I've got [child name removed], they think I'm stupid. They're horrible... They're apparently there to help, but they don't.

And another:

It's like pure deliberately pressuring you, especially in the hospital, they really pressure you about it [breastfeeding]. It's like they didn't even tell [my friend] that they could give you bottles, they didn't even tell they could give you bottles. They let that wean scream for 24 hours straight, and didn't give her a hand, basically because she was only 17, so they basically just tried to force her to breastfeed.

Several mothers discussed how when feeling mistreated they actively disengaged from interactions with professionals. For example, one commented:

You zone out when somebody looks down on you and belittles you and that, you are like "why should I sit and listen to this person, do you know what I mean?"

Negative interactions could also impact upon the mothers' perceptions of themselves as good mothers. For example, one mother commented:

I did not like my social worker from the start, he made me cry and cry and cry every time. Then at a meeting he kept going on about my past and everything that happened and they would air it and air it and it didn't need to be going on about it. They all had the report and they all seen it in the report but he still went on about my past and i just didn't see the need for it. I don't like him, I didn't like him from the beginning and when it got to the end I kind of [warmed] to him - but at the start I felt like a shit mum, I felt like I didn't even deserve my wean. I actually wanted to turn round and say "here, you take him, I don't feel like I'm good enough, you take him".

Several mothers discussed how fear of judgement stopped them from revealing their information needs to professionals. For example, one mother commented, "I just don't ask for help", and another replied, "No, neither do I, because then you get judged for asking. No, I would never want anyone to think that I didnae know what I was doing. Others concealed behaviours. For example, one commented, "My [Midwife] is like "don't ever co-sleep with your baby" and I'm like "I never do that, ever" and then I am like "into my bed". Several mothers also feared state interventions. For example, one mother, discussing whether or not they would share needs with 'nice' health visitors, commented, "I still wouldn't because they still have the authority to get social work on me", and another replied, "The nice ones are more scary because you trust them and tell them more stuff and then they write it all down and go and tell social work". And another commented:

I always get scared of social work - like if I ever said to my health visitor that I couldnae cope, I would be scared in case she phoned social work or something. Because I have got social work the now, and see when they are coming out, even though I know everything is fine, I pure run about all gutting my house. And I am worried that someone will come and take him away so I hide all his clothes.

And another:

The social worker comes in and you tell them that everything is absolutely fine, but really you are falling apart. Everything is crumbling, but you just tell them that everything is fine.

Several mothers discussed feeling not fully informed about their child's health conditions and medical procedures during interactions with professionals, and described situations of considerable distress arising. For example, one mother recounted a recent clinical interaction:

The way she [doctor] done it made me get so much more upset, because she was like grabbing her hand and bending her, she was a really tiny baby at the time, and she was only 5'10 when she was born, so she was teeny, and she kept just like stabbing her, and [child name removed] was screaming and getting upset, and then being sick, so I had to like lift her up, half a needle in her hand, and then she's crying, and I was "Why are you?" because she [doctor] never explained, "Why are you stabbing my baby, pretty much, why are you doing that? Every time, she's bleeding, can you not just take it off there?" And she never even said anything to me. I was like, "Hello?" but the wee side helper person was, "It can just take a wee while to find the vein," and I was like, "If you'd have said that to me, I'd have understood, I wouldn't have got as hyped up".

Another mother, discussing the premature birth of her child and reflecting on questions unanswered by health professionals, commented:

They just basically said he'll grow better on the outside, they never explained to me why - they never actually investigated why he stopped growing. They never said to me why.

Another mother, ill with postpartum psychosis, discussed how she was not even aware that she had been diagnosed with this condition until recently:

I didn't even know that that [postpartum psychosis] was what I was diagnosed with until about two weeks ago, it was in one of the reports and nobody even told me, not even my doctor.

Several mothers felt that professionals did not take enough time to explain conditions and procedures to them. For example, one mother while discussing the GP, commented, "She's [GP] ... seems to rush you out of the door, whatever you ask".

And another:

Like last week he had Impetigo and I had taken him to the doctor and they just gave him some cream and rushed us out like in five minutes. Then overnight the rash just basically exploded everywhere so we went to the out of hours and they spent like fifteen minutes with us giving him a proper check and they gave me antibiotics and explained that it was contagious. Like the doctor didn't even tell me that!

Some mothers recounted infrequent contact in often sensitive and dependent situations. For example, one young mother, suffering from depression, commented:

I never saw a health visitor the full year I was in that house before, or I think I maybe did see them once. But the only time she showed up when we moved house, the doctor had obviously said that I was on anti-depressants and it was just a check-up to make sure the home was ok and stuff. And she had given me a leaflet and said about this, just a talk-it-over group where you can go and get help and seek one-on-one counselling and stuff. And she was like "you book it and I'll come with you" and stuff - and I felt because my partner was at work so much that I really do want somebody to come with me, and I could never get a hold of her, and she never showed up and she just kind of left me in the dark and I ended up going on my own, so that was quite tough. But I got over it, I got over it myself, but I dealt with it myself and stuff but I was just really let down by that, and I never saw her - it has been nearly two years now... I have never heard from her, never saw her, I can't even remember her name.

With regard to issues of information overload, several young mothers discussed feeling overwhelmed by the volume of information that they received and had to deal with. For example, one mother commented:

Like ... I mean, with all the benefits letters, like tax credits and all that stuff, I've no idea. When a letter comes through the door, I just look at it and I'm like, "OK, put it in the drawer for a wee bit, forget about it," I don't know what to do, so I just leave it. I didn't even know I had to renew my tax credits, like nobody tells you these things.

Several discussed books and leaflets routinely given out by state and third sector agencies and professionals. For example, one mother commented:

I think there is too much books in pregnancy and after pregnancy. See pregnancy, when I was pregnant and my family nurse came in with bagfuls of books; I was like what are they sitting there for?

And another:

I just felt so overwhelmed when the health visitor came in with all these booklets, and I think that is what tipped me over the edge.

Several mothers discussed not having time to read books and leaflets. For example, one mother commented, "how have I got time [to read] when I have a toddler?", and another, "how am I meant to read them?". In such circumstances, several mothers indicated that they simply put the books and leaflets that they had been provided with out of sight, and out of mind. For example, one mother commented, "I don't have time to read them, and you just put them in a drawer.", and another, "They [books] were sitting in the wardrobe. I don't want them."

Some mothers also discussed receiving information at inappropriate times. For example, one commented:

When I was in the hospital and I'd just gave birth to mine, she was going through like [risk of] cot death and things like that, and I was just like sitting there, in tears, and she's telling me these things, and I'm like, I didn't ken any of that beforehand, and it would have been alright if I could have had it beforehand, but hearing that when you've just gave birth, and you're like, [gasps].

With regard to issues of conflicting information, some mothers discussed receiving conflicting information from family and professionals, causing confusion and requiring careful and selective consideration on their part. Mothers discussed how intergenerational advice from family could often contradict health advice from professionals. For example, one mother commented:

I was told not to put a rusk in his bottle [by health visitor], but my mum did it with me, and when I did do it with him it filled him for longer. That's how I managed to get him down to five ounces every four hours, so that lasted longer.

Some mothers also discussed receiving conflicting information from professionals. For example, one mother commented:

With my second one, one midwife told me to give her water, and a health visitor was like "don't give them water, they don't need it". People tell you all different things, so it's stupid.

And another:

I had two [health visitors] to start with because he was premature - and one was telling me to wean him at three months and one was telling me to wean him at six... I just went with my gut and just started weaning him.

With regard to issues of practical access, several mothers discussed a range of practical issues that could impede upon their attempts to obtain information. Several indicated that they did not own or have access to a computer and/or were unable to afford home telephone or broadband (and often too young for contracts requiring credit checks). Consequently, many mothers were entirely reliant on their mobile phone for both calls and Internet access, and via limited credit "pay as you go" tariffs that can be expensive with regular use. Neither could it be assumed that mothers possessed smartphones due to prohibitive purchase costs. For example, one mother discussed how she had just purchased a new phone from a supermarket for £10 after her old phone had been knocked out of her hand by her baby and broken the ground. The replacement phone was observed to have a very small screen size by today's smartphone standards. In such circumstances, mothers discussed how it was difficult, if not impossible, to search online and access and complete online forms. Limited access to printers only compounded such issues.

Practical access issues could also extend to healthcare professionals. We found that one FNP family nurse team providing outreach support to 89 young mothers had no Internet access in the field beyond the nurses own personal mobile phones. Third sector support groups reliant upon charitable donations can also be similarly constrained.

Some mothers also discussed public transport issues that could limit their access to groups and services. In particular, mothers discussed not being able to board buses due to a lack of space for prams, and having to wait long periods for the next bus.

With regard to stigma, several mothers discussed perceptions and/or experiences of judgement from other mothers, family, professionals and wider

society. Much was attributed to age related stigma. For example, one mother commented:

When I first had [child], when I used to take him out, I personally felt there was some folk that was older, a lot older women, would look at me, and I felt that that's how they looked at me, "Silly little girl, they're all doing it, they're all getting themselves pregnant, and they're all going having babies, sitting in their houses, not doing anything with their life".

Several mothers discussed judgement from other mothers. For example, one commented:

I think mums can be the most judgemental people you'll ever meet to be honest with you. I guess because everyone thinks that they're doing it the right way, and everybody does it differently.

And another:

See going to any kind of toddler thing or things like that, that is mums in their 30s or 40s, you get looked down at, well I have anyway, because they have all got careers and they are all on maternity leave. Whereas we're young, most of us don't have a career so its mainly for younger people because we do get snooty looks and all the rest of it.

Several mothers discussed not attending support groups for mothers due to such issues. For example, one mother commented:

I kept meaning to go [ante-natal classes], but I just didn't, I skipped them. I feel like there was a lot of older mums and stuff, and I didn't want to... go and be the youngest there and everyone pure looking at me like what's you up to. I was 16 at the time.

And another:

I took him to bounce and rhyme session and I was the youngest one with the youngest wean - so their babies were all bigger. And they were all sitting tutting at me and everything. And a mum said to me, "how old are you?", and I was like, "I'm 20", and she was like, "no you're not". And she says to me, "people like you should be locked in a cage until you are responsible enough to have a baby"... so I have not taken him back.

Fear of judgement could also stop mothers from revealing and/or acting on information needs. For example, one mother whilst discussing issues of judgement commented, "I just don't ask people for help", to which another mother replied, "No, neither do I, because then you get judged for asking. No, I would never want anyone to think that I didnae know what I was doing".

The positive factors influencing the information interactions of young mothers

Young mothers discussed two positive factors that impacted upon on their information interactions, categorised as: peer support from other young mothers; and positive interactions with professionals.

With regard to the positive influence of peer support from other mothers, several mothers described this as "very important" and as largely provided via young parent support groups. In relation, several mothers discussed the importance of shared experience. For example, one mother discussing her support group, commented, "There are people like you here... going through the same things that you are", another that, "It is good to meet people who are going through the same things as you are, because then if you are scared about something they can reassure you", and another that:

You socialise with other mums, you realise, "Maybe I'm not a bad mum – maybe I'm on the right path", or, "Alright, I already knew that".

Several mothers discussed age as an extremely important factor, and a preference for support from other mothers of their own age. Several discussed not being able to identify with older mothers. For example, one commented:

I personally don't think I could have spoke to, like sat and had a conversation with like 30 year old women that had a baby. I wouldn't know what conversation to have with them, with someone like that, because that's like someone in their 30s, that's like my mum's age, like... I think it's a totally different lifestyle, in a sense, like we both have kids, but I mean, I feel as if, for a young mum, it's totally different: there's a whole lot more challenges to face as a mum with a baby than there is for an older woman.

Others discussed feeling judged by older mothers. For example, one young mother who only ever attended youth groups and her young parent support group, discussed how she avoided all other baby groups due to the relayed experiences of other young mothers:

I know quite a few of the other mums had been to other baby groups but it wasn't for young mums and they didn't enjoy it at all because they just felt like everybody was judging them and thinking they were better than them so it is good to have ones which are just for young mums.

Several mothers discussed the important role of their young parents support group in providing them with access to other young mothers that they could identify with and share common experiences. For example, four mothers in discussion commented:

Mother one: *I think if I didn't come here [young parents support group] I wouldn't be sane! Just talking to people that is the same as you.*

Mother two: *People say talking to people and that [is important], but you literally need to talk to people your similar age, not even your similar age, but that is in your situation.*

Mother three: *Yeah in your situation.*

Mother two: *Whose life is similar. Because you think that everyone is pure coping brilliant when they are no. Like before I came here I thought that I was the only person who had bad anxiety and that and then... I realised that everybody had it, and I didn't feel so alienated, do you know what I mean? Because obviously I am the only person with a baby out of my pals and that so they don't really have anxiety and depression so it is hard for them to understand you really. But when I came here, everybody was like "I get that".*

Mother four: *It's quite good, as well, with these groups, most – well, not everybody here, but like most people – they are in similar situations, so I was like a wee bit worried about having to go to a Children's Hearing thing and then one of the mums was like, "Oh, I've done that, it's not that bad". And then like I had been to mine, and then another mum was like, "Oh, I've to go to it," and I was like, "Don't worry about it at all, it's like nothing, it's just something that you have to do, don't worry about it, it'll be fine, it's not that bad.*

The importance of sharing both good and bad experiences in support groups was also discussed by several mothers, and contrasted with more one-sided portrayals of parenthood on social media. For example, one mother commented:

On Facebook everyone makes out that they're so happy, but sometimes you just need to know that somebody's doing bad. Like, as horrible as that sounds.

With regard to positive interactions with professionals, mothers valued continuous relationships, and participatory interactions. Several mothers also discussed professionals as an important link to other young mothers.

Several mothers discussed the importance of an on-going continuous relationship with professionals. For example, three mothers discussing their health visitors commented:

Mother one: *I had one [health visitor] coming every week for him, and then I got a different one coming out. I'm not seeing them again until he's one, but you build a relationship with your health visitor and your health visitor builds a relationship with your child, so when it is a different person that is coming in and making a judgement on your child when it is the first time that they have met them, I think that is quite a big thing.*

Mother two: *I have a different one each time they come out.*

Mother three: *I would hate that because then you have to go over absolutely everything from day one again, it's so annoying.*

Some mothers discussed how a lack of continuity would result in complete disengagement. For example, one commented, "If I had a different person [health visitor] each time, I wouldn't even bother. No. I'd be like, "OK, that's all, thanks, bye".

Several mothers in continuous relationships with professionals indicated close and welcomed support. For example, one mother commented, "... She's always there, like always", and another, "...it's having the support, as well, someone to hold your hand, for whatever". In another example, two mothers discussed staff in their young parent support group:

Mother one: *[the staff] are great. Like, the way they help you: they're not judgemental, they'll just help and assist any way they can, even if it's just giving me a lift to the doctor's.*

Mother two: *Any event, they're there as well.*

Mother one: *That small assistance that just goes that wee extra mile, like ... if it was a health visitor, if it was a social worker, you'd feel like they were just trying to watch you,*

whereas [the staff], they're there to just assist: anything you need, they will assist you as much as they can.

Several mothers discussed how continuous relationships built trust and openness between mother and professional. For example, one mother commented:

I like it because she's [family nurse] been working with me since I was pregnant, so she knows me, she knows my situation, she knows [child name], and I'm comfortable around her, and I'm comfortable with being able to open up and speak to her, be like ... "Right, well this has happened this week and I was feeling this about it," and "How's [child name]?" "He's great, this is happening with [child name] this week," and "What's happened?" and it's just nice: I feel comfortable, I feel able to speak to her, I don't feel like, "I can't do that," or I can't speak to her, I can't say this, but I do feel comfortable with her.

And another:

With my family nurse... seeing the same person from when you are pregnant to when you have got the baby, so you have already got that relationship with them... was really good... I knew if I was worried about anything, I could just say and they weren't going to be like "you're a terrible mum" you know what I mean, instead of it being somebody I don't know.

Several mothers discussed how it took them time to build relationships with professionals largely due to issues of confidence and trust. For example, one mother reflecting on her initial relationship with her assigned family nurse commented, "I didn't want to bother her all the time... I knew she was there, but I was still a wee bit shy at the time, a wee bit nervous." Another discussed it taking her over a year for her to build a relationship with her family nurse:

At first I was like just not wanting to get involved [with family nurse], I just sat there, really, but now it's fine... I don't know, I guess it's just who I am. I don't trust anybody. It takes a really long time for me to trust anybody, so ... it's been over a year.

Professionals could address issues of confidence and judgement via positive feedback. For example, one mother commented:

My Family Nurse... wrote this thing about me and I was pure greeting reading it because I was so emotional. And I think that pure made me feel amazing, like her saying that and knowing that she was somebody that was like, that could go two ways. Like she could judge me for being... Like, some days she would come to my house and my house would be a pure tip and I'd be in my jammies and my hair up and all that, like just a pure mess. And she never ever judged me and then she wrote like this thing and I thought it was like because she saw me like on down days and then she saw me good and she wrote that I felt like pure good because it was a professional writing things like that and just telling me things like that.

With regard to participatory aspects of positive interactions, several mothers described positive outcomes where professionals spent time talking though needs, answering questions, and helping them to better understand information via alternative and/or simplified examples. For example, one mother commented:

I was terrified about giving him [baby] food, you know, just giving him toast and stuff like that, I was terrified, and [Family Nurse] talked me through it and told me what to do if he does choke: she was like, he'll probably not – just in case he does, she told me exactly what to do, when to call for help and stuff. I was getting it at that level.

Several mothers discussed the benefits of being able to discuss information commonly distributed in print form with their family nurses. For example one commented:

It's good she [family nurse] talks me through it, because I feel like if she just hit me with loads of paperwork, I'd just be, "I'm not reading that, it's too much," but the fact that she talks over it and stuff, I already know what it's about anyway.

And another:

With my Family Nurse we mainly chat, she doesn't overload me with paper – she gives me information sheets but we more talk through them... it's better to discuss it because if she just left me with a big pile of paper I probably wouldn't read them. You are just so busy with a baby, so I would just probably end up flinging them in the drawer.

Several mothers gave examples of professionals not only talking through issues, but also using physical props to help them to better understand information. For example, one mother commented:

They give you a Ready, Steady, Baby book kind of thing, the midwives give you it and it does give you a lot of useful information, it teaches you a lot of things. But it doesn't really still, I mean it gives you information but it is different doing it to seeing it written down... So it was good to come here [support group] and see it first hand... they actually bring you in and set out a baby bath with a doll, and teach you how to change a nappy and everything.

Several mothers also discussed the important positive role professionals can play in connecting them to other young mothers and support groups. For example, one commented:

If it wasn't for Barnardos, I wouldn't be coming to any baby groups; I would be antisocial; and I'd probably still be in my house. I'd probably take her out to the park once in a while, that would be about it, and going round to see my mum. But if it wasn't for Barnardos, I probably wouldn't join any groups, because it's Barnardos that have made me go to the other one, back in [location], and made me come out my shell more. Actually, I came out of my shell when I had... my son, but they... kind of give you more courage and confidence in yourself, because the baby groups do that.

And another:

Yeah, so I don't really know many people and stuff like that, and ... so she's [support worker] been, every time I move, she looks up groups and encourages me to go to them. I've not gone to one yet, because I'm quite anxious about things like that, but she always tries to encourage me to do it.

And another:

She [support worker] did a lot to get me to do this cooking thing that I wanted to do, I was too nervous about going to it... but she'll take me to it, the first one, so that I'm not going on my own.

Summary

Our young mothers have a preference for interpersonal information interactions with family, other young mothers, and health visitors with which they have formed a relationship. Mothers online, parent group staff, and websites are all used to a lesser degree. GPs, books and other printed material are used very little; and friends without children, librarians, and mobile apps almost not at all.

Our mothers value experiential advice, particularly from their own mothers and grandmothers, and other young mothers. Young parent support groups, and support workers (e.g. health visitors and support group staff), play an important role in connecting young mothers to other young mothers, with many young mothers reluctant to engage in groups including older mothers through not identifying with older mothers, and fear and/or experience of age-related judgement from older mothers.

Effective information interactions with health visitors and other support workers are based on trusting and continuous relationships built over time, and supportive understanding of the problematic context. Such professionals appear to be not only be an important source of information in themselves, but are also an important link to other information sources. FNP family nurses appear particularly valued.

Whilst several mothers indicated moderate use of online sources of information, very few indicated use of state digital health and care services including NHS. Our mothers appear to largely use Google to make general searches for information without reference to specific sources. Some also use social media and online forums to access advice from other mothers, and to share problematic personal situations. Anonymity appears valued in such circumstances, but several mothers nonetheless discussed negative experiences, and some would read posts but not post. Some were also critical of the information shared online. A small number of our mothers also indicated no use whatsoever of online sources because they find the volume of information overwhelming. Several also have limited access to the Internet due to age and/or cost issues.

A number of key factors appear to influence mothers' information interactions with information sources. Mothers described difficulties interacting with complex state welfare and housing systems, negative interactions with a range of professionals across multiple agencies, and issues of information overload, conflicting information, and access to information. Stigma was a recurrent theme influencing interactions with older mothers, professionals, and wider society. With regard to positive factors, mothers valued the peer support of other young mothers, and continuous supportive relationships with professionals, and participatory interactions. In relation, trust is a key factor in interpersonal interactions.

Further reading

The main paper which provides further background to this section including methodological design and theoretical discussion, is currently *in preparation for publication* and should be available online early 2021. Please check Professor Buchanan's University of Stirling webpages for updates (see 'outputs'), accessed at: <https://www.stir.ac.uk/people/1260986>.

Two papers reporting sub-aspects of information seeking behaviours have been published. The paper reporting on young mothers' use of online forums is:

Ruthven, I., Buchanan, S., & Jardine, C. (2018) Relationships, environment, health and development: the information needs expressed online by young first-time mothers. *Journal of the American Society for Information Science and Technology*, 69 (8), pp. 985-995.
<https://doi.org/10.1002/asi.24024>

The paper reporting on young mothers' online searching behaviours and website use is:

Buchanan, S., Nicol, E. (2019) Developing health information literacy in disengaged at-risk populations: insights to inform interventions. *Journal of Documentation*, 75 (1), pp. 172-189.
<https://doi.org/10.1108/JD-06-2018-0086>



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4 The role of support workers as information intermediaries

[I'm] probably their only link between getting information and not getting information.

support worker

4 The role of support workers as information intermediaries

Key points

- Support workers play a key role in helping young mothers to recognise and understand their information needs in the problematic context.
- Support workers play a key role in providing, directing, and connecting young mothers to information, and addressing issues of misinformation.
- Support workers play a key role in tailoring and personalising information for relevance to young mothers, and communicating via incremental and recursive cycles that take into account individual learning needs.
- Continuity of one-to-one relationship between support worker and mother is key to building a trusting relationship that allows progress to be observed, questions to be repeated, and complex topics to be revisited.
- Evidence of dependent relationships raises important questions regarding approaches to the development of independence in young mothers, and in particular, health literacy life skills.

The findings reported here were obtained via interviews and focus groups with health and social care professionals (referred to as support workers) providing support to young mothers. They provide further insight into the information needs and information seeking behaviours of young mothers; and the factors influencing information interactions between young mothers and support workers.



Photo by christianabella from Pixabay

Support worker insights into the information needs and seeking preferences of young mothers

Our support workers described a number of interrelated information needs typically dealt with in their interactions with young mothers, and similar to young mother accounts, spanning issues of parenting, poverty, and personal development. They discussed needs relating to: pregnancy, baby care, money and benefits, family relationships, domestic abuse, playtime, education and employment, parent health, and housing. In relation, they provided insight into issues of recognition of needs amongst mothers, and further evidence of complexity of needs.

Bonding and attachment was described by many support workers as an important need that could often be unfamiliar to young mothers from disadvantaged backgrounds. For example, one participant described attachment and bonding as a need of “greatest importance” requiring additional support, “as they have never experienced that kind of intimacy” during their own childhoods.

Financial needs also arose as important common needs, described by one support worker as one of the “biggest issues”. Support workers routinely helped mothers with understanding state benefit, maternity grant and food and vitamin voucher entitlements, and access to food banks. Financial needs were also often closely linked to housing needs and the fundamental need of the mother to provide her child with a habitable home that in situations of sub-standard accommodation or homelessness could supersede all other needs, including attachment and bonding.

Support workers also discussed that when family relationship issues arose (e.g. child protection, domestic abuse, sexual violence), mothers would often require considerable support to fully understand their situation and needs. Some mothers could fail to recognise and/or normalise abusive and violent behaviours, requiring sensitive sharing of information over time to address. For example, one support worker commented:

We do relationship work... and what a relationship should be like, so we do quite quickly become aware if something is not quite right... we've had parents say 'everyone has arguments and you get a wee slap' and then it's talking about that and saying 'no that's not normal...' It can be like a drip, drip, drip; sometimes lots of little things together can be a catalyst for change.

Support workers described running group sessions that shared information on what were acceptable and unacceptable behaviours in relationships that could lead to constructive discussion, recognition and disclosure. One recalled a single session where, during such information sharing and discussion, three mothers disclosed that they had been victims of rape, and a fourth of serious assault. During such sessions mothers often had questions regarding sexual relationships, and in relation, what constituted consent, one support worker commenting, “That was quite scary, the consent, they didn't know”.

Support workers also provided further insight into the information sources utilised by young mothers. Participants identified themselves as “vital” sources and providers of information. Several believed that many of the mothers whom they worked with would not be able to find the information that they needed without their support. For example, one commented that it was “very rare a parent will research themselves”. Where information provision was out with expertise, participants would signpost mothers to other agencies. However, while some mothers would then access signposted agencies themselves, many would not, requiring support when contacting and engaging with external agencies, including making telephone calls.

Family and friends were recognised as important information sources for reasons of immediacy and trust, and due to a general reluctance amongst mothers to access unknown or unfamiliar external information sources (i.e. other professionals, agencies or even baby groups). One support worker described family and friends as often the “first port of call” of mothers.

Support workers also identified online sources as increasingly important, but they themselves had limited understanding of exactly what was being used or not, and this was of great concern to them due to issues of information literacy. In relation, support workers discussed how many mothers have a preference for interpersonal sources of information over digital sources. For example, one commented that many mothers “want a person to ask rather than look up a computer”.

Books and leaflets were also considered important sources by support workers, but had to be carefully selected and recommended due to reading literacy and learning issues amongst mothers, and given issues of limited engagement with external agencies amongst mothers, provided directly to mothers.

Support worker insights into the issues impacting upon young mothers' information interactions

Support workers discussed a number of issues that impacted on young mothers' information interactions, categorised as: self-esteem, low literacy, misinformation, information overload, upbringing, institutional bureaucracy, and practical access.

Self-esteem was considered a significant issue compounding issues of isolation and lack of peer support.

For example, one support worker commented that, "their [mothers] information needs would be met I think more readily if they had the confidence and self-esteem to access [information]"; and another that:

Self-esteem... plays a massive part because that brings about... shyness and... awkwardness. It's not that they don't want to know, they just can't verbalise how they want to learn. And they... then miss out.

Age-related personal development was considered a contributory factor with many young mothers still dependent to various degrees upon their own parents/carers for many day-to-day tasks including making and attending health appointments, and being reluctant to make appointments themselves that required disclosure of personal information, or to request information on sensitive topics. Mothers could also be reluctant to attend or participate in support groups involving singing, dancing or reading in public. One support worker commented that once attending a support group mothers could still be uncomfortable "bridging from a bespoke group to a wider group", and that this was important as for many mothers such groups could be their main or sole point of contact and socialisation with other mothers. Stigma was considered a significant contributory factor. For example, one support worker commented that many young mothers attending ante-natal classes or support groups felt "judged because maybe they're a young parent, maybe because they're a single parent" and that these feelings extended to recreational activities and travelling by public transport. Another recalled a midwife having told one young mother "that was a bit silly having a child at your age", and then asking "what are you doing this for, is this so you can get a house?"

Low literacy levels, both reading and information, were highlighted as significant issues. Support workers felt that poor literacy discouraged many young mothers from seeking information

themselves, and limited their access to and use of key information commonly distributed via website, books and leaflets. Support workers also discussed difficulties in identifying literacy issues, for whilst some mothers could be very open about their literacy difficulties and reliance on intermediaries to access information, others could be "scared" to reveal such needs. Literacy issues also had to be distinguished from language barriers amongst those who spoke English as a second language.

Information literacy was also felt to be a significant issue. For example, one support worker described Google as "dangerous", with mothers often seeking "quick answers" to health questions that "makes them more anxious", and often not having the "ability to differentiate from good and bad". Another commented, "It's important we give them the proper information because if not they see it on a website and think because it has been published it must be true". And another:

Social media and the internet can be great if you know what you are looking for, but things on Facebook which are run by other parents can be problematic. ...we knew of one... who was giving out advice on Facebook, that... had social work involvement... But then you can see if you are a parent and you are feeling a bit isolated how you could quite easily get sucked into that, even if the information is pretty poor.

Misinformation is another significant issue, and felt to be particularly problematic in the absence of a supportive relationship with a professional, with mothers often sourcing advice from family members rather than accessing external and authoritative sources of information by themselves. Support workers often found advice from family and friends to be contradictory to current recommendations, requiring sensitivity on the part of the support worker to address.

Independent online searches could also introduce misinformation, and lead to issues of incorrect self-diagnosis, described as "increasingly common". One support worker commented, "They are reading about it online and diagnosing their own kids as being autistic or having attention deficit disorder – this is a big problem"; and another, discussing the challenges associated with convincing a mother that they are wrong in situations of self-diagnosis, that, "It's difficult to get through to them once they are convinced of it".

Issues of information overload and inappropriate information formats that failed to take account of low literacy levels and individual learning needs were also discussed. For example one support worker identified "overwhelming volumes of

text” as an issue, another “auto delivery of information”. Another commented:

There is a problem with information overload – sometimes the practitioner is just too focused on delivering the script – they don’t pause to break it down or try to make it understandable.

In such circumstances, support workers felt that assumptions of information comprehension could be incorrectly made, compounded by issues of concealment. For example, one support worker commented that young mothers would often not admit, “that they did not understand what they were told”. In such circumstances individual responses were considered important. For example, one support worker discussed the need to be able to “sensitively explore” understanding “one to one”. Support workers discussed how such individual responses could be difficult, if not impossible, within group settings.

Upbringing can also be an issue, often affecting awareness of information needs, and engagement with professionals. Support workers discussed how the way in which mothers had themselves been parented or cared for could then impact upon how they interacted with their own children, and that those with difficult and/or traumatic backgrounds might not be aware of different approaches to parenting, and would not seek out such information, and/or find it hard to contextualise such information and put into practice (e.g. attachment and bonding). Previous professional interactions in traumatic circumstances could also influence how mothers view professionals, and how receptive they are to intervention and advice.

Institutional bureaucracy is also an issue. Support workers discussed how many mothers found essential state services such as the benefits system too complex to understand and navigate, and had problems understanding terminology and completing forms. Often possessing multiple complex needs difficult to articulate, mothers often found themselves being repeatedly signposted between agencies involving multiple appointments and long waiting times. Support worker assistance was often required, but not always with success. One support worker commented:

... sometimes you’ve maybe took two or three hours out of your diary to do something with a young person ...and by the end of that you’ve still not actually achieved anything. So if that’s what it’s like for you, what’s it like for them?

Instances of mothers being given incorrect or conflicting information whilst interacting

with multiple agencies and professionals were recounted by several support workers; and a lack of continuity in who mothers interacted with (e.g. multiple midwives) was also considered a significant issue that could discourage effective interactions (i.e. discouraging mothers from asking questions where no pre-existing relationship existed). Several support workers also recounted witnessing poor treatment of young mothers when accompanying them to external appointments, with mothers often left feeling ignored or dismissed before they could access the help and information that they needed. For example, one support worker commented:

I have went to places with young people. And I suppose I have a feeling around about how invisible they might be... How differently people speak to them and they speak to me even if I’m standing next to them.

Practical access issues related to transport and technology, time and/or cost of travel, accommodating infant routines, and difficulties travelling with prams on public transport could all discourage mothers from accessing support groups. Support workers also discussed how many mothers did not possess a computer and that those that did often could not afford or were not eligible for home internet; and that while smartphones were more common, usage could be limited by prepaid credit.

Support worker insights into the factors contributing to effective information interactions with young mothers

Support workers discussed a number of factors that contributed to effective interactions, categorised as: continuous and trusting relationship; tailored and personalised information; and incremental information cycles involving walkthrough, demonstration, and repetition.

A recurrent theme was the importance of building a continuous trusting relationship, described as an often difficult and gradual process. Support workers discussed how mothers could be initially resistant to the involvement of professionals in their lives, one commenting that many mothers felt that professionals would “try and catch them out” or “tell social work”. Another commented that some mothers genuinely feared their “child would be taken off them”. Another discussed how during this period, when they often knew little of the individual, finding a personalised “hook” to gradually share information in meaningful terms could be difficult. Identifying those in most need of help could also be difficult (with early intervention

considered critical). Once a trusting relationship was established, mothers were generally more willing to share problems and ask for advice and assistance. For example, one support worker commented "They are quite guarded... so they get to know you and [then] they trust you and... speak to you about things, or tell you things that are going on". Trust was also felt to be important to acceptance of information. For example, one support worker commented, "If you build trust with them and you tell them that something is valuable... if they trust you then they'll accept that and then maybe try it out". And another:

I've got to have trusting relationship... it's a very intensive caring relationship, but a professional relationship. And there [are] maybe times... where you have to be quite direct... it could be something like... safe practice. So it could be... they're putting the baby on their tummy in the moses basket... contrary to health advice.

Continuity of relationship also provided time to convey information in meaningful terms, addressing issues of comprehension. One support worker commented:

In 10 minutes, they [health visitors] go through so many appointments. Rather than... saying, 'No, don't wean until he's six months' and then leaving, the worker that's there all the time might say, 'How are you? Oh, you've started weaning? Well, you know, you shouldn't really wean 'til six months. Here's the reason why.' And it's... because they've got more time. And that's what the girls are... saying 'aye they did say that but they don't tell us why. So I just fed him at four months'. Once you tell them what the research is saying that they could get allergies if you wean them too early, it's like, 'All right, I didn't know that.'... it sticks in her head.

Continuity of relationship also allowed support workers to observe progress, and whether mothers needed more or less individual support, with participants listening to and responding to individual needs over time, and gradually building up the mothers' confidence and self-efficacy. For example, one support worker commented:

You hold that person's hand, support them and show them how to do it... It might take two or three times for them to do it but eventually they will build up the confidence to... do it themselves. But the handholding is necessary... they do feel stigmatised, they go into places and do feel stigmatised by older

parents... Whether that's there or not, it's in their head that they are being frowned upon cos they are a young parent.

On-going relationships provided opportunity for regular positive feedback, however small, and to build confidence and self-esteem amongst mothers, particularly in isolated and/or difficult circumstances. For example, one support worker described themselves as often the "the only person that's managed to say some nugget of something positive in amongst it all". Another described the importance of "positive experiences" and "meaningful, thoughtful interventions". On-going relationships also allowed support workers to build positive relationships with partners and family members, and via wider acceptance of their professional support role, help reduce potential sources of misinformation.

Tailored (group) and personalised (individual) information was considered key to supporting information and learning needs, and to ensuring comprehension; and considered difficult within the practical constraints of support groups, and compounded by some mothers concealing needs and/or pretending to understand, described by one support worker as "reading but not understanding". It was therefore considered important to make information resources accessible and meaningful, and to personalise delivery. Support workers discussed the need for streamlining of printed resources, easy to read pictorial resources, and the use of demonstrative tools such as foetal dolls. Support workers described utilising visual aids and/or encouraging personalisation of resources. One commented, 'Some... have literacy problems which compound the problems of information overload since they can't process the material they are given – we know they won't read big bits of literature'. Several described utilising visual aids and/or encouraging personalisation of resources. One described using foetal dolls to show various stages of baby development; another described reading through books and encouraging mothers to write in them and mark pages with post-it notes to, "make it relevant and make it their book" and to "use it whatever way will be helpful".

Support workers also considered it important to walkthrough information rather than simply distributing. For example, one commented "I think there are some mums that would go through everything they are given, read everything, but that's not the norm"; another "It's about us using the material and actually sitting with the leaflet that we have in that day and actually using it with the baby... making it... relevant." Several described scenarios where they began by simply talking through common issues before explaining why particular information is important. For example, one commented:

... the programme gives us an opportunity to really explore... behaviours and ... looking after themselves as well as their baby. So, you know, when they're stressed how.... that will impact on the baby's health... so we spent a lot of time... talking about cortisone and the impact of raised cortisone on a baby.

Support workers discussed role modelling as an effective method of conveying information (managing tantrums, playing and bonding etc.), and discussed how the needs of young mothers were highly individual. For example, one commented:

The best way to get information across is role modelling – how can they do it if they have never seen it being done? ...some of them might have... no experience with babies, or there might be things about the way that they were parented that make it difficult – there is a massive difference between giving them a leaflet and showing them. ...with some families role modelling might... take a week, but for others it could be five years.

Role modelling was often subtly integrated into activities and games and was described by one participant as “showing but... not showing”. Support workers discussed utilising other mothers as role models who participants had previously worked with and had now successfully moved on. For example, one commented:

They listen to other young people...they see that other young people can progress... and have come through the same difficulties... and they know that there can be another option... for them.

Demonstrations were also considered effective methods of conveying information, with it important to ground demonstrations in the situational context. For example, one support worker discussed how information on good nutrition was often supported by participatory practical cookery and tasting sessions that focused on “affordable practical solutions”.

Repetition was also important. For example, one support worker described conveying to mothers the health risks of smoking and substance abuse as “a journey”, and another as “a constantly reinforced message” requiring “revisiting all the time”; another described role modelling as providing information by “drip drip effect”. A recurrent theme amongst support workers was the importance of not automatically assuming comprehension, and utilising on-going relationships to provide opportunities for questions to be repeated, complex topics to be revisited, and sensitive issues to be addressed at opportune times. For example, one support worker commented:

Every day we talk about something different, but having said that, a lot of my work is repetition – we are able to do that here because we have the time to repeat activities or conversations until we get the outcome... we want.



Photo by Sherwood from Pixabay

And another:

If they aren't in the mood [to talk]... but say a month later they want to go back to it. ...you revisit that. ...it's the therapeutic relationship. They know you. They know they can say to you... no I don't want to talk about it... We've all been there. They have all said it's the continuity [that helps], a lot... will say during the anti-natal period, no disrespect to the midwives... but I'm seeing a different face all the time.

Developing health literacy life skills in young mothers

Whilst our support workers clearly provide an important support role to young mothers, evidence of dependent relationships also raised questions regarding the development of independence and self-efficacy in young mothers, and in particular, the development of health literacy skills (understood as information literacy in the health context, and pertaining to the ability of mothers to locate, evaluate, and use information effectively).

We explored information literacy via a case study with a team of NHS FNP nurses involving interviews and focus groups that explored nurse understanding of information literacy, and approaches to information literacy development in young mothers. This also included a survey of the young mothers that the nurse team support, asking mothers to self-rate their abilities to use computers, and locate and read information, without difficulty.

The findings from the survey of mothers are illustrated in Figure 4. With respect to their ability to use computers without difficulty, the median response from mothers was 5, equating to 'strongly agree'. With respect to their ability to find information without difficulty, the median response was 4, equating to 'agree'. With respect to their ability to read information without difficulty, the median response was 4, equating to 'agree'. In total, across all responses, two mothers (7%) indicated experiencing difficulties, one with respect to finding information, and one with reading information. Eight mothers (28%) neither agreed nor disagreed.

Whilst Figure 2 suggests largely confident and capable young mothers, these responses were challenged by the nurse team providing support to these mothers (presented to nurses during focus group discussions). All nurses thought that mothers had overestimated their abilities across all three criteria. For example, one nurse when presented with the summary data, commented, "I'd be sceptical about that", which prompted multiple "yes" responses from others. A discussion ensued with nurses believing that when mothers rated their abilities to use computers and information, they did so largely in relation to social media use. For example, one nurse commented, "I think they have no problem accessing social media and I think that's maybe what their understanding of using computers would be", to which another replied, "Instagram. But when it really comes to getting meaningful information I think that would be a different spin on things". Such comments support previous comments from our wider group of professional

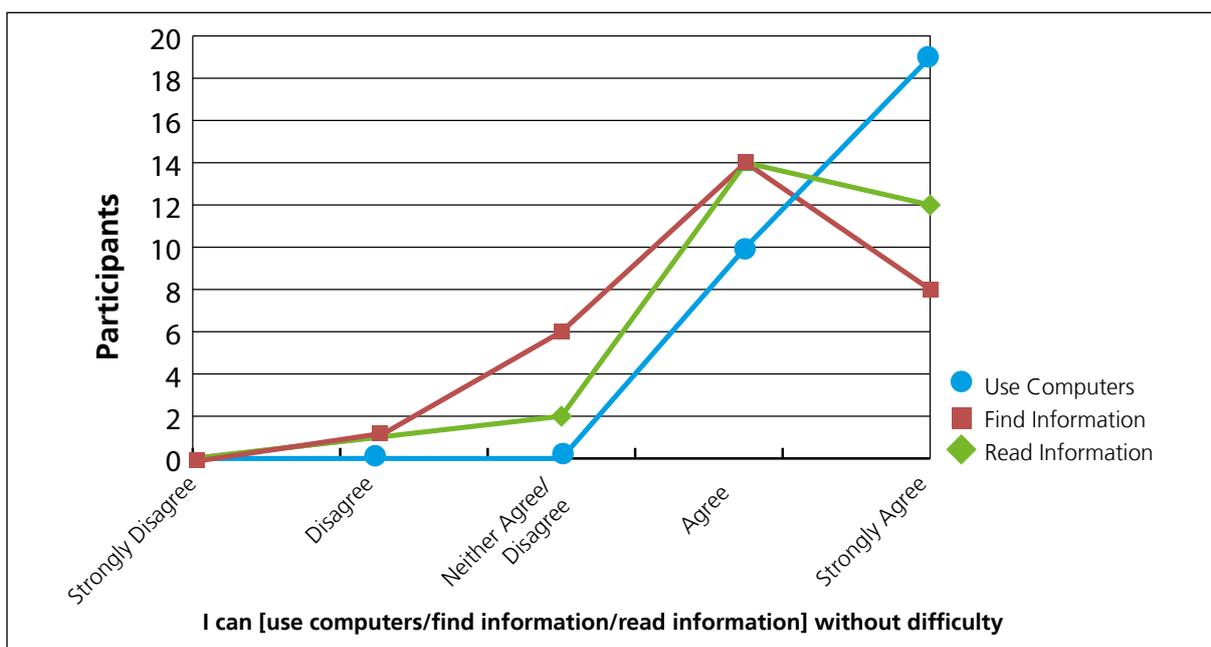


Figure 4. Young mother (n29) assessments of their abilities to use computers, and find and read information (Buchanan & Nicol, 2019).



Photo by Michal Jarmoluk from Pixabay

participants, who discussed information literacy as a significant issue amongst young mothers. It is thus possible that our mothers have overrated their abilities either through a reluctance to reveal difficulties with everyday tasks, or through the existence of the Dunning-Kruger Effect, whereby people with low ability mistakenly assume greater ability through limited understanding (Kruger and Dunning, 1999). In support, Mahmood (2016) has previously reported the existence of the Dunning-Kruger effect in people's self-reported information literacy. Both are important considerations for how we approach information literacy education (i.e. in situations where the need may not be revealed and/or understood).

As part of overarching FNP programme self-efficacy goals, our nurse team recognised the importance of developing information literacy in mothers, and believed that they have an important information literacy education role. For example, one commented, "Well we're not going to be with them forever... we're trying to give these girls the skills to find out information in life". And another:

I do feel I have a [IL] role because... part of the FNP programme is about self-efficacy and about people being able to do things independently and get the best possible information for the best possible outcome for them and their baby.

However, the majority of our nurses were also unfamiliar with information literacy concepts, none had received any information literacy training, and none were familiar with information literacy frameworks. All felt that they would benefit from information literacy training, and described themselves as only 'somewhat' confident in their own abilities to develop information literacy skills

in young mothers. For example, one commented, "I think I would appreciate any [IL] training really – if I was going to be able to help my clients then obviously it would be good for me to feel very confident in what I was saying...". And another, "It [IL] is a critical part of our job when you think about it... although we do a bit around MI [motivational interviewing] in the training, there's nothing really about IL". And another, "I think it's [IL] probably something we would do, it's just we didn't know that it was called that". And another, "We are using it [IL] a lot, but, you know I think I didn't really understand there even was a [IL] framework".

It is also important to note that the team had no means of Internet access on home visits beyond their personal mobile phones.

Further, it is also important to note that FNP nurses, whilst feeling that they have a role and being well placed to develop such skills in mothers (as trusted and valued professionals already in an educational role), also have primary care responsibilities and prioritised learning outcomes to deliver as prescribed by the FNP programme, with additional responsibility for information and health literacy education possibly unrealistic. For example, one nurse commented:

We usually have at each visit a lot of written material... we do a lot of agenda matching as well but we still have a lot of information [to cover] at each visit... we may also have a developmental review to do... we're also maybe going into visits where the situation is chaotic or our clients have their own agendas that we have to address first... sometimes even trying to get any learning into a visit for

some of our clients is a challenging thing to do... if I was to say what probably the most difficult thing is, it would be the time factor.

Nurses also voiced concerns regarding mother capacity for additional learning during interactions. Findings thus raise important questions regarding how we approach the development of important health literacy life skills in young mothers, and via whom.

Summary

Our support workers (health visitors and support group staff) provide important intermediary support to young mothers with complex information needs, not always apparent or revealed, and often within sensitive situations. Via trusting non-judgemental relationships built over time, our support workers play a key role in recognising, understanding and progressing information needs in the problematic context. Extending beyond parenting to individual issues of poverty and personal development, many information needs are out with their primary roles, but are nonetheless supported as many mothers would be unlikely to seek the information that they need without their support, particularly from formal external sources due to issues of self-esteem and stigma, literacy, and practical access. Consequently, beyond being a key source of information in themselves, our support workers play a key integrative role in connecting mothers to other information sources both physical and digital. Our support workers also play a key role in conveying and interpreting information in meaningful terms that account for individual learning needs, with information shared via incremental and recursive cycles involving walkthroughs and demonstrations. This important information intermediary role can be summarised as follows (Buchanan, Jardine, & Ruthven, 2019):

1. In situations of multiple needs, support workers facilitate information needs recognition, and considered purposeful action, that takes account of the problematic context.

2. In situations of insular existence, support workers are a key source of information in themselves, and a key integrative connection to other external sources not otherwise accessed.
3. In situations of poor comprehension, support workers tailor and personalise information for relevance, and communicate via incremental and recursive cycles that take into account individual learning needs.

Our findings evidence an important if not vital intermediary role in support workers with implications for ongoing health and social care policies (including digital aspects), and associated professional training and support. In relation, evidence of dependent relationships between young mothers and support workers raises questions regarding approaches to the development of longer term independence in young mothers including important health literacy life skills.

Further reading

The main paper which provides further background to this section including detailed methodological design and accompanying theoretical discussion has been published as:

Buchanan, S., Jardine, C., & Ruthven, I, (2019) Information behaviours in disadvantaged and dependent circumstances and the role of information intermediaries. *Journal of the American Society for Information Science and Technology*, 70 (2), pp. 117-129.
<https://doi.org/10.1002/asi.24110>

The paper reporting on health literacy aspects has been published as:

Buchanan, S., Nicol, E. (2019) Developing health information literacy in disengaged at-risk populations: insights to inform interventions. *Journal of Documentation*, 75 (1), pp. 172-189.
<https://doi.org/10.1108/JD-06-2018-0086>

5

Study limitations



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5 Study limitations

Our findings should not be considered representative of mothers as a whole as mothers are not a homogenous group. In relation, our findings should not be considered representative of young mothers as a whole as not all are disadvantaged. We thus provide insight into the information needs and behaviours of a particular demographic group, and encourage further studies with further groups.

6

Conclusions



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6 Conclusions

Our study has provided insight into the information needs of young first-time mothers from areas of multiple deprivations, their information seeking behaviours, and the factors influencing their behaviours. In summary, four key findings emerge: the information needs of young mothers are complex; interpersonal information sources are preferred; use of State sources of digital health information are low; and an important information intermediary role is evident in support workers. Each is discussed below.

1. The information needs of young mothers are complex

Our young mothers have multiple and complex information needs of various types and intensity encompassing parenting, poverty, and personal development. A number of key categories of needs are identified: money and benefits; playtime; things to do; housing; work, education and training, early learning and childcare; stress; baby care; legal advice; general health; health terms; helplines; family relationships; and domestic abuse. In comparison to previous studies, a much wider range of everyday information needs are reported.

Our findings suggest that in the majority of instances of information need, young mothers are either unsure of their ability to find the information that they need, or feel that they need help to find the information that they need. Several needs are also sensitive in nature, and not always revealed, in particular needs relating to issues of mental health and relationships; and some needs do not appear fully recognised or understood by mothers. In relation, support workers play an important role in helping young mothers to recognise and understand their needs.

Many information needs are completely new to young mothers, and continually evolving and changing, in particular needs relating to baby care and general health, and welfare and independent living. Many needs are interrelated, for example housing needs are often interwoven with money/benefits needs, and relationship issues and needs; and work, education and training needs with childcare needs, and money/benefits issues. Fluid personal circumstances (e.g. changes to employment, residence, and relationships) can compound issues of complexity, with mothers often unaware of their rights and entitlements, some of which are time limited, and contributing to fundamental welfare problems, that in turn, can impact upon baby care and general health. Several mothers felt overwhelmed by the extent of their needs, and described situations of considerable anxiety and stress. Again, support worker assistance appears important, assisting

mothers with attending to complex needs in the problematic context.

Issues of complexity can be compounded by automatic distribution of information from state and third sector agencies, contributing to issues of cognitive load. Several mothers felt overwhelmed by the volume of printed information that they routinely received, and indicated that they simply put such information out of sight, and out of mind. Some mothers also felt that they received information at inappropriate times, and again discussed issues of receptiveness to information in such instances.

2. Interpersonal information sources are preferred

Our young mothers have a preference for interpersonal sources of information reflective of general human preferences for interpersonal communication (Case & Given, 2016). Our mothers make frequent use of family, other mothers (face-to-face), and health visitors. Other mothers online, parent group staff, and websites are also considered useful, but used less frequently. GPs, books and other printed materials are considered less useful by mothers, and not used very frequently. Friends without children, librarians, and mobile apps appear largely unused by young mothers.

Our young mothers' value and trust experiential advice and support from their own mothers and grandmothers, and demonstrative learning. In instances of close relationships, mothers described being able to share everyday events and questions without involving professionals. However, some mothers also indicated poor relationships with family; and some discussed how intergenerational advice from family could contradict current health policy and advice.

Our young mothers also value other mothers as sources of information. Our mothers discussed age as an important factor, and a preference for support from other mothers of a similar age and socio-economic background, with support

groups providing an important way of connecting mothers to other mothers with whom they closely identify. In relation, several mothers discussed not being able to identify with older mothers, and many discussed feeling judged by older mothers, and indicated that they would not attend support groups or baby groups including older mothers. Some also discussed withdrawing from such groups due to experiences of age-related stigma.

Young mothers also value and trust health visitors as sources of information and support, particularly FNP family nurses. Effective information interactions with health visitors are based on trusting and continuous relationships built over time, and supportive understanding of needs in the problematic context. Several mothers also described health visitors as having played an important role in connecting them to support groups and other mothers. Thus health visitors are not only an important source of information in themselves, but also an important link to other information sources. Support group staff were also discussed as important sources of information and support.

Whilst health visitors and support group staff are valued, several mothers also described negative information interactions with professionals across multiple agencies including, health, employment, housing, and social work. Several mothers felt instructed rather than involved in decisions regarding their own health and the health of their child, and not fully informed. Several felt mistreated, and not listened to, and discussed disengaging from interactions as a consequence. Some recounted infrequent contact with professionals in sensitive and dependent situations; and others discussed how a lack of continuity in who they met with resulted in their complete disengagement from interactions. Mothers also recounted instances of conflicting information from professionals. Negative critical interactions with professionals could also affect their perceptions of themselves as good mothers, and several mothers discussed how fear of judgement stopped them from revealing their needs to professionals. Some mothers also recounted instances of age-related stigma from professionals.

When discussing effective interactions with professionals, mothers described continuous and understanding relationships, and participatory information interactions. Several mothers in continuous relationships with FNP family nurses and/or support group staff indicated close and welcomed support. Several discussed how continuous relationships with such professionals built trust and openness between them, but that this took time due to issues of self-confidence and trust. In relation, several mothers discussed how professionals had assisted them with issues

of confidence via positive feedback. Professionals were also valued for conveying information in practical participatory ways. Several mothers described positive outcomes from professionals who spent time talking through their needs, answering questions, involving them in decisions, and helping them to better understand information via illustrative and practical demonstrative examples.

3. Use of state provided digital health and care services is low

In general, our young mothers make moderate to low use of online sources of information. Other mothers online and websites are considered useful by some mothers, but are used with less frequency than interpersonal sources (family, other mothers face-to-face, health visitors), and some mothers indicated avoiding online sources. Mobile apps are used by some mothers, but to a limited degree during pregnancy and with none indicating use after birth.

Mothers have mixed views of other mothers online, with some considering them useful sources of information, and others considering them sources of incorrect information, or advice not applicable to their own personal circumstances. Some mothers used social media and online forums to access advice from other mothers out with their own social networks, and to share problematic personal situations, and in particular, relationship issues. Anonymity appears valued in such circumstances, but several mothers nonetheless discussed negative experiences and issues of judgement from other mothers online, and many would read posts but not post anything themselves.

Mothers also expressed mixed views regarding information from websites, and in relation, indicated very little use of NHS or other sources of state provided digital health and social care information. Our mothers appear to largely use Google to make general searches for online information, and without reference to specific sources. In relation, several felt that the information that they obtained from such searches was too general to be of use to them. Some mothers also discussed actively avoiding the Internet because they found the volume of information overwhelming. Several of those mothers who indicated use of state welfare systems discussed difficulties when seeking information, describing situations of uncertainty and confusion, with many uncertain of where to begin, and unable to complete forms without assistance from support workers.

Several mothers also discussed a range of practical issues that could impede their attempts to access

online information. Several indicated that they did not own or have access to a computer and/or were unable to afford or eligible for home telephone or broadband, with many reliant on their mobile phone for calls and Internet access, and via limited pre-paid credit. Some mothers also possessed old phones with small screens not suited to online searches. A lack of access to printers compounded such issues. Public libraries provide free Internet access, but several mothers indicated a reluctance to visit libraries due to issues of confidence and stigma. Some mothers also discussed limited public transport options that made it difficult for them to access support groups and services, and the practical challenges of attempting to do so with infants. Health and social care workers could also have limited Internet access, particularly in the field (i.e. during visits to mothers' homes).

4. An important information intermediary role is evident in support workers

Our support workers, and in particular health visitors such as NHS FNP family nurses, and third sector support group staff, provide important intermediary support to young mothers with complex information needs, helping mothers to understand and address their needs in the problematic context.

Our support workers described a number of interrelated information needs typically dealt with in their interactions with young mothers, and similar to young mother accounts, spanning issues of parenting, poverty, and personal development. Our support workers described such needs as often competing for simultaneous attention, and having an important role in helping young mothers to address according to situational priorities. In relation, support workers discussed a lack of awareness and/or understanding of some needs amongst mothers, and an important role in helping mothers to understand their needs, some of an extremely sensitive nature.

Our support workers also play a key role in providing, directing, and connecting young mothers to information, and addressing issues of misinformation. In relation, our support workers also discussed a preference amongst young mothers for interpersonal sources of information such as family and friends, and the support workers themselves. Support workers are also an important link to other information sources, and believe that many young mothers would be unlikely to seek the information that they need

without their assistance, particularly from external sources due to issues of self-esteem and stigma.

Our support workers also play a key role in tailoring and personalising information for relevance to young mothers, and communicating via incremental and recursive cycles that took into account individual learning needs of mothers. Support workers discussed the need for streamlining of printed resources, easy to read pictorial resources, and demonstrative learning using aids such as foetal dolls. In relation, continuity of one-to-one relationship between support worker and mother is considered key to building a trusting relationship that allows progress to be observed, questions and conversations to be repeated, and complex topics and issues to be revisited. Such factors are also consistent with mother accounts of the importance of continuous, demonstrative and participatory interactions.

Our support workers also provided further insight into the issues impacting upon young mothers' information interactions, with several again supporting our mothers' accounts. Support workers discussed how low self-esteem and stigma could limit interpersonal interactions and compound issues of isolation amongst mothers. Support workers also discussed literacy as a significant issue that impacted upon many young mothers ability to access and understand information commonly distributed in textual formats, and as something that could also discourage mothers from engagement in support groups involving reading and/or writing activities. Information literacy was also of concern to support workers, with mothers often seeking quick answers online via Google and social media. In relation, misinformation and conflicting information was also of concern, and issues of information overload were also discussed. Support workers also discussed how upbringing could be an issue, affecting a mothers awareness and/or willingness to reveal her needs, and receptiveness to support from professionals. Support workers also discussed difficulties mothers experienced when attempting to interact with government welfare systems, and overarching issues of limited access to the Internet.

Whilst an important support role is identified, evidence of dependent relationships between young mothers and support workers also raises important questions regarding longer term approaches to the development of independence in young mothers, and in particular, development of important health literacy life skills.

7

Recommendations



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7 Recommendations

Four main recommendations arise from our findings and are summarised below.

Recommendation One: The design of health and social care systems for young mothers should recognise and support their holistic information needs.

Our findings raise important questions regarding how we support the multiple and complex information needs of young mothers in our design of health and social care systems, particularly digital. Multiplicity and associated complexity are commonly addressed through meaningful schemas and element interconnectivity (i.e. by needs/topics), but this is largely done so within the limitations of organisational boundaries, with topics then distributed across organisations, and often communicated in universal terms. At best this assumes that the mother can self-identify her needs, and locate and navigate multiple systems to meet her needs; however, our findings suggest that this is often not the case without intermediary assistance. Whilst we highlight this issue in relation to increasingly promoted and prevalent digital services, it is important to note that information provided via print is similarly distributed across agencies and services, and can be similarly difficult for mothers to locate and access.

We thus need to develop health and social care systems for young mothers that provide holistic integrated support for their everyday information needs. Progress towards holistic support is evident in both the National Health Service Scotland ReadySteadyBaby and Scottish Government Parents Club websites, both commendably addressing several of the information needs reported here, but not all.

Our typology of information needs (see Table 1) identifies major categories of needs that can help guide the further development of support systems. With regard to integration aspects, further direction is also provided via a prototype interface that we developed and trialled as part of this study (see Figure 5). The prototype was designed to intentionally mirror ubiquitous smartphone design, and for each category of need to provide a direct link to a single primary source of authoritative information provided by a state or third sector organisation. Cognisant to issues of literacy and cognitive load, this design sought to simplify initial access steps via meaningful visual design (i.e. icons) and simplified information architecture (i.e. single direct links to primary sources). In psychological terms our categories of need can be considered as schemas, which “can be treated as a single element in working memory and thus heavily decrease cognitive load associated with



Figure 5. Prototype integrated interface (Buchanan, Jardine, & Ruthven, 2018).

the performance of later tasks” (Van Merriënboer and Sweller, 2010, p.87). Quality of graphical user interface design is limited by prototype status, but was sufficient for exploratory trial.

During our trial (Buchanan, Jardine, & Ruthven, 2018) our mothers appeared to intuitively understand and interact with this online resource, providing positive feedback regarding usability and usefulness including benefits of simplified information access, but our findings also suggest that longer term usage was likely to be extremely low due to a general low use of online sources, with intermediary intervention and support important to use (see Recommendation 3).

It is also important to note that such systems need to be progressive and constructive in their design, introducing information gradually and at appropriate points, and mitigating for issues of anxiety and stress that can be compounded by information overload. Thus careful consideration must also be given to the information pathways that need to be mapped out within and across categories/topics.

Recommendation Two: The primary form of health and social care communication to young mothers should be interpersonal and interactive.

Our findings identify a preference amongst young mothers for interpersonal sources of information, and in relation, an important intermediary role in support workers. Our findings provide further evidence for continued investment in outreach healthcare professionals and young mother support groups and staff; and also raise questions regarding ineffective interactions with wider groups of professionals.

Our mothers value being able to discuss their needs with others, and often require support to understand and address their needs, many of which are new, and complex. Via continuous supportive relationships built over time, our support workers play an important role in recognising, understanding, and progressing needs in the problematic context. However, our findings also identify ineffective interactions with wider groups of professionals across multiple agencies, largely due to impersonal and simplistic one-way communication. We thus appear to need to increase appreciation across the wider professional community of the importance of interactive communication during interactions with young mothers.

Our information intermediary model (Buchanan, Jardine, & Ruthven, 2019) provides a framework to

communicate and further develop this important intermediary role. Three core and progressive functions are identified, intermediaries: facilitate information needs recognition and considered purposeful action in the problematic context; are a key source of information in themselves, and a key connection to other external sources physical and digital; and tailor and personalise information for relevance, and communicate via incremental and recursive cycles that take into account individual learning needs. Incorporating such steps into interactions with young mothers will encourage professionals to check that information needs are recognised, and that the information required to address the need has been obtained and understood. The model can form the basis of professional training and resource development (e.g. identifying/developing tools and techniques to elicit needs, break down information, check understanding etc.), and has already been adopted by the Scottish Government as part of their Health literacy Action Plan 2017-2015. Wider adoption and further development is encouraged.

Recommendation Three: Community-based ‘bridges’ are required to encourage young mother use of state provided digital health and social care services.

Our findings regarding limited interactions with state digital services compounded by enduring digital access issues have implications for public health policy and associated digital strategies. Whilst our mothers have indicated a preference for interpersonal interactions, digital services nonetheless have an important role and are a core aspect of ongoing public service reforms in health and social care. The Scottish Government (2017) digital strategy seeks to, ‘put digital at the heart of everything we do’ (p.2), with digital considered, ‘key to the transformation of health and social care’ (p.15). The associated digital health and care strategy (Scottish Government, 2018, p.2) states that, “Over the next decade digital services will become not only the first point of contact with health and care services for many people, but also how they will choose to engage with health and care services on an on-going basis.”

We thus need to develop approaches to digital engagement that encourage young mothers to utilise State provided digital services. Given identified issues, we would recommend that interventions be intermediary led and integrated within existing one-to-one and/or support group interactions. Fundamental access barriers need to be resolved through provision of technology to all outreach healthcare professionals and

community support groups; and importantly, digital content needs to be more tailored to young mothers' needs. This goes beyond our recommendation regarding recognition of breadth of needs (#1), to considerations of effective communication and content.

Many of our mothers have literacy issues and individual learning needs to consider. Many have also shown a preference for visual and demonstrative learning. This suggests that effective digital content should limit text in favour of image and video. Given that young mothers identify more strongly with other young mothers, we would also recommend that other young mothers feature prominently in communication. Once access issues have been resolved, and content tailored, support workers can then utilise state digital services as part of their everyday information interactions with young mothers, and demonstrate usefulness. This will place state digital services in meaningful context, and via repeat interactions, help to encourage ongoing use by young mothers.

Recommendation Four: Community-based approaches to health literacy education are needed to develop independent life skills in young mothers.

Our findings evidence support workers as providing an important information intermediary role to young mothers. However, evidence of dependent relationships also raises questions regarding approaches to the development of longer term independence in young mothers, and in particular, the development of important health literacy life skills. This study found no evidence of pedagogical practices to achieve such goals, and also highlights health literacy training

needs amongst support workers, with some unsure of their own skills and abilities. Support workers must rightly prioritise primary care responsibilities, but they are also ideally placed to provide educational support to a group often disengaged from state services including public libraries.

To extend support worker practices beyond support to education requires not only staff training, but also an appropriate pedagogical approach (providing an overarching educational framework to guide interactions) flexibly adaptable to semi-structured and problematic everyday situations. Complexity cannot be underestimated, and design not limited to adoption of existing information/health literacy models. As evidenced, information needs amongst young mothers are multiple, and not always recognised as information problems, or revealed, requiring considered approaches to information need recognition. Consideration must also be given to individual learning needs and issues of cognitive load, with information resources tailored accordingly to facilitate integrated and meaningful interactions (synergistic approaches to recommendation 3 could assist with this goal). Health literacy education must therefore be approached holistically and at multiple levels to address issues of access and behavior in the problematic context. Young mothers' reluctance to engage with state services and the wider community due to issues of confidence and stigma also suggest that approaches should be integrated into existing interactions, either individual (i.e. home visits) and/or within local community support groups. In identifying such issues we further evidence the importance of a broader social ecological perspective of population health literacy, particularly amongst at-risk groups.

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Steven Buchanan is Professor of Human Information Behaviour within the Division of Communications, Media and Culture, University of Stirling.

His human information behaviour research examines how and why people seek and/or accept information (or not), and effective channels and sources of information, and influencing factors. He explores complex access and internalised behavioural factors, the former influenced by policy, media and literacy issues, the latter by social structures and norms. His work provides insight into what information to provide, to whom, and how. Much of his work addresses the enduring limitations of mass communication strategies, informing targeted interventions both physical and digital in the problematic context. Much recent work has examined information behaviours within marginalised and/or disadvantaged groups, and has been funded by the ESRC and AHRC.

He has variously advised the Scottish Government and National Health Service Scotland on matters of effective health communication, digital health service design, and population health literacy. Recent work defining the important role of health and social care professionals as information intermediaries has been adopted by the Scottish Government as a key action in their national Health Literacy Action Plan 2017-25.

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