

**HEALTH-RELATED INFORMATION PRACTICES AND THE EXPERIENCES OF  
YOUNG PARENTS**

by

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## **Abstract**

**Background:** Young parents are targeted by a variety of health information interventions, aiming to educate and monitor them in order to improve population health. However, we know little about the ways young parents use health information or experience health information interventions in their everyday lives.

**Objectives:** The objectives of the dissertation are to use a series of article-style chapters to: (1) describe the health-related information practices of young parents (Chapter 3); (2) explore how knowledge and expertise are discursively constructed within young parents' health information worlds (Chapter 4); and (3) examine the functioning and values of population health information interventions in the lives of young parents (Chapter 5).

**Methods:** The analyses presented in this dissertation are based on data collected via ethnographic observation at two Young Parent Programs and individual interviews with 37 young mothers and 2 young fathers ages 15-24 in Greater Vancouver, British Columbia. Data was analyzed in accordance with constructivist grounded theory and situational analysis.

**Results:** Young parents in Greater Vancouver were often sophisticated health information seekers. Information assessment was a major task, for which young parents employed various methods of triangulation. These practices took place in social worlds that discursively constructed the "teen mom" as paradoxically knowledgeable (in matters of sexuality and technology) and ignorant (in matters of parenting and health). Population health information interventions (communication and surveillance) were prominent in these social worlds, and carried ethical implications for social justice. Young parent acceptance varied depending on the positionality of those implementing interventions, as well as their intrusiveness and level of stigmatization of young parents.

**Conclusion:** By investigating, documenting, and theorizing the ways young parents interact with health information in the contexts of their everyday lives, this study generated theory that can help inform information interventions aimed at supporting this public health priority population. Programs and materials for young parents should take into account the heterogeneity of their childcare experience and parenting knowledge, as well as cultural norms. Future research should further explore the intersection between individual information practices and health information interventions, and test the emergent theoretical propositions related to population health information interventions.

## **Preface**

This dissertation was conducted under the primary supervision of Dr. Jean Shoveller (PhD, University of British Columbia) and co-supervision of Dr. Heather O'Brien (PhD, Dalhousie University) and Dr. Joy Johnson (PhD, University of Alberta). The research in this thesis was conducted according to the guidelines of the UBC Behavioural Research Ethics Board. Observation and interviews of human participants was approved by UBC BREB (H13-00415). Data is drawn from an ongoing research study, led by Dr. Jean Shoveller and funded by the Canadian Institutes of Health Research called "Investigating the influences of social context and structure on young people's parenting experiences." I served as a trainee and Graduate Research Assistant within this project.

Each chapter was written by myself, Devon Greyson; feedback from committee members was subsequently incorporated into the final draft. A version of a portion of Chapter 2, titled "The role of information in health behaviour: A scoping study and discussion of major public health models," was accepted for publication in the *Journal of the Association for Information Science and Technology* (Association for Information Science and Technology), with Dr. Johnson as co-author. Contributions from the co-author were consistent with committee or collegial duties. Specifically, the co-author reviewed each iteration of the manuscript prior to publication and offered strategic feedback and critical evaluations. I was, however, in charge of scoping material search and screening, data analysis and preparing the initial and final drafts. Highly valued feedback from external reviewers at JASIST was also incorporated into the current version of Chapter 2. I was responsible for the revisions, following the advice from the journal editor and external reviewers.

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## List of Abbreviations

CIT.....	Critical incident technique
DOI.....	Diffusion of innovations
ELIS.....	Everyday life information seeking
HBM.....	Health belief model
IB.....	Information behaviour
IMB.....	Information-motivation-behavioural skills model
IWM.....	Information world mapping
INSU.....	Information needs, seeking, and use
LIS.....	Library and information science (or studies)
PAPM.....	Precaution-adoption process model
PHIL.....	Population health information intervention
PHIR.....	Population health intervention research
PPH.....	Population and public health
PPHE.....	Population and public health ethics
SCT.....	Social cognitive theory
SMS.....	Short message service (“texting”)
TTM.....	Transtheoretical model
TPB.....	Theory of planned behaviour
TRA.....	Theory of reasoned action
YPP.....	Young Parent Program

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## Chapter 1: Introduction

Human beings interact with information every day of our lives. As we do, we construct information practices, or “organized composites of actions” (Savolainen, 2008, p. 25) in accordance with the ever-changing contexts of our daily life worlds. We identify information needs and sometimes seek to fill them (Belkin, Oddy, & Brooks, 1982; Cole, 2012), encounter information we did not seek (Erdelez, 1997, 1999), and avoid or minimize contact with information we do not want (Case, Andrews, Johnson, & Allard, 2005). We assess and make sense of information we have received (Dervin, 1992), mentally or physically organize and store it, deliberately and unintentionally share it (Savolainen, 2009b), and protect or hide information we do not wish to communicate (Chatman, 1996; Karlova & Lee, 2011). When making decisions, or when seeking to influence others’ decision-making, we draw upon information: novel information we may have sought or received specifically for that purpose, and stored information, including past experiences, beliefs, and other types of scientific and cultural “evidence.” We do this on an individual basis, as well as collectively in social groups (Shah, Capra, & Hansen, 2014) and formal organizations (Choo, 2005).

Health professionals, ranging from clinicians such as doctors to public health planners, construct professional information practices in accordance with their work worlds and their perceptions of the social contexts of the populations they serve. Attempts to use information to promote health, both via population health surveillance (Thacker & Stroup, 2006) and with health communications (Rimal & Lapinsky, 2009), are a major element of clinical and population health intervention repertoire. Health information interventions are frequently

informed by models of health behaviour, many of which include information or education as a key concept, but few of which have truly explicated the role of information therein.

Within the clinical and population health intervention realms, maternal-child health has long been a priority in Canada and internationally (Health Canada and the Public Health Agency of Canada, 2012; World Health Organization, n.d.). This has led to the development of two main types of health information interventions: 1) specialized surveillance systems to formally and informally gather information and monitor the health behaviour of pregnant individuals and new parents, and 2) formal and informal health communication efforts aiming to influence health and parenting decisions. Unwed and young mothers in particular have been considered a high-risk population (Public Health Agency of Canada, 2011; Shoveller & Johnson, 2006) and have been subject to enhanced surveillance and targeted communication campaigns in addition to the general suite of maternal-child health information interventions. Despite widespread use of health information interventions, little is known about the ways these interventions function in the context of the information practices of individuals or specific subgroups of the population, including those groups of people who are frequently targeted by information interventions such as young parents. As the targets of multiple, intensive, formal and informal health information interventions, young parents provide an ideal case study population within which to examine the interplay of individual information practices and health information interventions.

Knowledge gaps remain regarding how young parents seek and use information, as well as the ways knowledge and expertise are understood and constructed within their social information worlds. Furthermore, the effects and ethical consequences of population health information interventions that educate and monitor young parents are not well understood. This dissertation seeks to begin to fill those gaps by exploring the health-related information practices

and experiences of a group of young mothers and fathers living in Greater Vancouver, Canada (see Section 1.4.3.1 for more detail regarding the setting).

### **1.1 Young Parents as a Population**

Teenage pregnancy and parenting has been constructed and understood as a societal problem over the past 40 years (Bonell, 2004; Furstenberg, 1976; Kelly, 2000). An infantilizing and stigmatizing discourse of concern over the alleged crisis of “babies having babies” (Kelly, 1996, p. 429) persists despite trends of falling incidence of teen pregnancy and childbirth over the past four decades (Duncan, 2007; Langille, 2007). The spectre of teenage pregnancy and parenting has been used by social reformers, medical professionals, journalists, and politicians alike to incite moral panic over unsanctioned sexuality among unmarried young women (Nathanson, 1993), fear over abuse of the social safety net, and alarm about a looming public health “epidemic” of early-age pregnancy in lower socio-economic classes (Luker, 1997, p. 81).

The mass media has reinforced popular culture images of teenage mothers as deviants, often employing raced and classed social narratives (Barcelos & Gubrium, 2014). North American news media raised public furor over an alleged Boston-area pregnancy pact among high school girls (McLeod, 2008)—a myth whose busting (Goodman, 2008) received a mere fraction of the attention paid to the original sensational story. Contemporary “reality” television shows, with a stated aim of reducing teenage pregnancy and childbearing (Carroll, 2011; Luttrell, 2011), send mixed messages by creating tabloid celebrities out of young people who are publicly pregnant or parenting. Such hyperbolic depictions of young pregnancy and parenthood are a contemporary twist on the “morally problematic” (Chabot, Shoveller, Johnson, & Prkachin, 2010, p.201) archetypal teen mother who has been constructed as a passive victim (typically of

older predatory male sexuality) or a poor choice-maker (Kelly, 2007), and used as a morality tale about the dangers of illicit female sexuality.

### **1.1.1 Teenage Mothers as a Public Health Priority**

Young childbearing in wealthy countries is associated with higher prevalence of adverse obstetric and neonatal outcomes including mortality, preterm birth and low birth weight among teens, when compared with mothers in their 20's and 30's (Dryburgh, 2000). However, there is lively debate in the literature regarding whether these poorer health outcomes are the result of biology linked with age, or rather the result of social factors associated with both early age childbearing and adverse clinical outcomes of pregnancy and childbirth (Cunnington, 2001; A. M. Fraser, Brockert, & Ward, 1995; Gale, Seidman, Dollberg, Armon, & Stevenson, 1989; Lawlor & Shaw, 2002; Scholl et al., 1992; Shrim et al., 2011). Epidemiologic evidence is mounting to support the theory that, when underlying social determinants are adjusted for, “teenage mothers are as likely as older mothers to bear and raise healthy, successful children” (Rich-Edwards, 2002, p. 555), and indeed that for some socially-disadvantaged populations, infants born to young mothers may at times fare better than those born to older mothers (Geronimus, 1992). There also has long been a perception that early childbearing leads to poorer social outcomes later in the life course for young parents and their children, such as poverty, welfare enrolment, and lack of complete secondary or post-secondary education (Basch, 2011; Hanna, 2001; Hoffman & Maynard, 2008; Rich-Edwards, 2002; Scally, 2002). Again, newer research indicates that such social disadvantages appear to be determinants of early childbearing rather than outcomes thereof (Gold, Kawachi, Kennedy, Lynch, & Connell, 2001; Penman-Aguilar, Carter, Snead, & Kourtis, 2013). Additionally, research has documented the experiences

of young mothers for whom becoming a parent has significantly *improved* their health, education, and social welfare status (Anwar & Stanistreet, 2014; Seamark & Lings, 2004).

The framing of young childbearing as a public health problem persists despite unconvincing evidence that outcomes for teenage mothers or their children are worse compared to older-aged mothers, or that delaying childbirth would improve health or social outcomes in the short or long term. Canada is among the many countries that have invested in prevention of teen pregnancy and childbirth, deeming it a “largely preventable public health issue that is often associated with negative outcomes for both the teen parents and their children” (Public Health Agency of Canada, 2011, p. 94). Breheny and Stephens (2010) found, in an analysis of the discursive treatment of teenage mothers in medical journals, that the public health discourse constructs teenage pregnancy as a socially contagious “disease” that carries risks of medical and non-medical complications, thus requiring surveillance and control akin to that applied to infectious diseases.

### **1.1.2 Childbearing Risk and Intensive Mothering**

Construction of teen pregnancy as pathological occurs within a landscape in which pregnancy and parenting are constructed as risky ventures that require well-educated management. Western medicine contradictorily frames pregnancy and birth in general as both a healthy and normal rite of passage and a vulnerable state of potential disaster requiring close surveillance (Bourgeault, Benoit, & Davis-Floyd, 2004). Despite the physiological advantages that young mothers have over some older mothers (e.g., mothers age 40 and over), teenage pregnancy is frequently understood to be socially and medically “risky” by definition (Shoveller & Johnson, 2006; U.S. National Library of Medicine, 2012). In childbearing, as in nearly all life activities, there is no risk-free participation. However, unlike for example driving a car—an

activity in which one can be considered a safe or unsafe driver—there are no “safe” or “risk-free” pregnancies. All pregnancies are medically classified as either high-risk or low-risk, and the increasing scientific capability to identify risk factors for adverse outcomes complicates the role of the mother. This places pregnant women within a web of risk-based surveillance (Lupton, 2014), including encouraged self-surveillance, which charges women with ensuring the health of their fetuses both by educating themselves about potential risks and by complying with instructions of medical experts.

Lupton (2011) connects the ideology of prenatal risk management with continued pressures on mothers to manage their children’s development, such as those involved in “intensive mothering” approaches. Intensive mothering, a term attributed to Hays (1996), is a gendered parenting ideology that fits within “the neoliberal notions of individual responsibility and risk management” (Romagnoli & Wall, 2012, p. 273), placing the onus on mothers to eliminate risks to children’s physical, socio-emotional, and cognitive development. Intensive mothering ideologies have been linked with specific baby-oriented and mother-oriented consumerism (Afflerback, Carter, Anthony, & Grauerholz, 2013) and with negative maternal mental health outcomes (Rizzo, Schiffrin, & Liss, 2012). Full compliance with intensive mothering ideology involves middle class resources (Fox, 2006), and most of the research on intensive mothering has centred on middle class families. However, in recent work focused on programs aiming to educate low-income mothers, Romagnoli and Wall (2012) found that young Canadian mothers in marginalized social locations experienced targeted intensive parenting advice and education programs as prescriptive and stigmatizing rather than helpful.

While young pregnancy and parenting are seen to be particularly risky within modern western discourses of health and medicine, this occurs within an environment that places

pressure on all mothers, and possibly some fathers, to exercise constant vigilance in their personal risk management. While some adverse outcomes are due only to chance, it is the intensive mother's responsibility to constantly mitigate any detrimental effects to her fetus or child. Much of this work is information work, seeking information to educate oneself, assessing the quality of information with a bias toward that which comes from medical experts, maintaining information that may be useful in the future, using it to make risk-reducing social and medical choices, and, for socially marginalized or low-income mothers, often demonstrating the achievement of a level of education to authoritative figures such as social workers and public health nurses, in order to receive social support and financial benefits.

## **1.2 Information Practices**

Within the field of library and information science (LIS), and specifically the sub-discipline that is commonly called information behaviour, the most commonly studied human information practice is information seeking. Considerable research has also focused on information needs, with information use—a construct that has proven more difficult to define and observe—following behind. In addition to needing, seeking, and using information (the mainstays of information behaviour research, sometimes referred to collectively as INSU), people engage in many other information practices (e.g., sharing and avoiding), which are both shaped by and themselves shape the context in which they are carried out. Information behaviour research examines what people, both individually and collectively, do with information, and how humans socially and cognitively interact with information.

### **1.2.1 Behaviour and Practices**

Information behaviour (IB) is currently the dominant umbrella term “used to describe the many ways in which human beings interact with information, in particular, the ways in which

people seek and utilize information” (Bates, 2010, sec. 1.1). Over the past three decades in IB research there has been a shift away from a focus on systems for information seeking toward a focus on the humans who use (or do not use) such systems, and the contexts in which humans carry out information-related activities (Case, 2006; Talja & Hartel, 2007; T. D. Wilson, 1999). Many contemporary IB scholars draw on behavioural research in the social sciences to study people’s information needs, as well as how they seek, avoid, access, assess, and use various types of information.

Savolainen (2007, 2008; T. D. Wilson & Savolainen, 2009), along with a growing cadre of IB researchers (Fry, 2006; Johannisson & Sundin, 2007; McKenzie, 2003; Oliphant, 2008; Talja & Hartel, 2007), eschews the term “information behaviour” because the term itself is awkward (strictly speaking, information does not *behave*), and because it carries overtones of a dated and limited positivist, or “behaviourist,” worldview. Drawing on the “turn to practice” within social sciences more broadly (Bourdieu, 1977, 1998; Camic, Gross, & Lamont, 2011; N. Fraser, 1990; Reckwitz, 2002), these scholars adopt a “practice” approach. Such an approach shifts the focus away from cognitive models in which information needs trigger seeking and then use, and onto the socially-constructed ways that people “do things” with information (Talja & McKenzie, 2007, p. 100): *information practices*. Savolainen (2007, 2008) asserts that while the concepts of information behaviour and information practice may appear similar, the ontological and epistemological differences in the two perspectives position them differently. In practice, the use of the term “information behaviour” has become so prevalent that it is used for investigations and theories from multiple perspectives; “information practices,” however, has more recently been adopted by researchers seeking a deliberately social constructionist alternative framing for the broad concept of people doing things with information (Savolainen, 2007).

### **1.2.2 Everyday Life Information Practices**

A major focus within information practices research is “everyday life” information seeking (ELIS) (Savolainen, 1995, 2005, 2009a). ELIS investigates information practices (with emphasis on seeking) of people engaged in activities that are part of their personal lives, as distinct from professional, school-related, or work-related information seeking. The shift of focus of some researchers to ELIS marked a departure from previous research that focused primarily on work roles and academic tasks, to more of a sociology of information practices in daily life.

Within health, for example, there has been much information seeking research focused on the behaviours and practices of health care professionals such as doctors, nurses, and health policy-makers. This research has focused on work-related INSU—for example where and how doctors (K. Davies, 2007; Dawes & Sampson, 2003) and nurses (Corcoran-Perry & Graves, 1990; Dee & Stanley, 2005) look for clinical care information, or how policy-makers seek information about pharmaceuticals (Greyson, Cunningham, & Morgan, 2012).

“Everyday life” health information practice research, on the other hand, is concerned with lay health information users (sometimes referred to as patients or consumers). Health care professionals could be included in health ELIS studies only if seeking or using health information for personal use, or as non-professional caregivers—for example for their children or elderly relatives. Health-related ELIS research often focuses on populations identified by a health issue or disease—such as people living with HIV (Veinot, 2010) or experiencing menopausal transition (Genuis, 2010). Such studies also often identify populations of interest by demographics, for example homeless youth seeking online sexual health information (Barman-Adhikari & Rice, 2011) or mothers of twins seeking baby feeding information (McKenzie,

2006b). These studies of personal or “everyday life” information practices have developed and drawn upon different models and theories than the research on professional INSU.

ELIS is not restricted to health. Everyday life information practices may be related to hobbies and leisure (Hartel, 2003) as well as activities such as monitoring news media and making consumer purchases (Head & Eisenberg, 2011). While the term and conceptual development of ELIS is strongly associated with the work of Savolainen, he points to several models that may be considered to be ELIS, some of which predate the term itself (Savolainen, 2009a). These include Dervin’s LIS adaptation of the social science concept of sense-making<sup>1</sup> (Dervin, 1992), Chatman’s (1991) small world theory regarding information practices of social “outsiders,” and Fisher’s “information grounds” for social information sharing (K. E. Fisher, 2005). All of these models may be applied to non-professional information practices, including but not limited to those relating to health.

### **1.2.3 Directional Practices: “Pushing” and “Pulling” Information**

Certain information can reasonably be considered as inherently available in the environment, not providing a message based on any sentient intent to communicate.<sup>2</sup> This class of information would include much of the data gleaned from the study of the natural world, for example in the study of geology, botany, or meteorology. However, messages communicated and perceived by humans might be described as active and passive participation in the

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<sup>1</sup> While in social sciences more generally, this term is often written without the hyphen (sensemaking), Dervin’s (1993) adaptation of sensemaking theory to information science, and most subsequent information studies use of the term/concept, added the hyphen (sense-making). In this thesis, unless referring specifically to sensemaking theory outside of information science, the term will be spelled with the hyphen to indicate use of the information science concept to describe human sense-making with information in context.

<sup>2</sup> While humans filter perceptions of data through social constructions, few would argue in a pragmatic sense that this rock is hard, or this water wet. Accordingly, while some might argue that the natural world has sentient aspects, in dominant Western ontological constructions this is a minority view.

communication of information, as well as resistance to it. Deliberate communication and seeking/retrieval of information may be classified by directionality, using the discourse of information “push” and “pull.” Push and pull both occur on individual, community, and institutional bases, and the push/pull flow is multidirectional.

Individuals push information on a regular basis. For example, a pregnant woman might report health experiences and behaviours to her prenatal care provider, offer baby-feeding advice to her peers, and model community norms by abstaining from drinking alcohol. The same individual might pull information by asking her health provider questions, reading books on childbirth, or looking online for advice on exercise during pregnancy. Her partner might participate in related health information push and pull, as well, seeking and sharing information related to pregnancy, birth, and parenting.

Health institutions also push and pull information. Examples of push include public education campaigns such as advertisement on public transit about safe infant sleep practices, clinical guidelines for practitioners, and instructions given at health care appointments. Health institutions pull information via research and surveillance systems. Canada as a whole, and certain Canadian provinces in particular (e.g., Manitoba, Ontario, and British Columbia), have developed general and enhanced systems of surveillance for diseases and social issues.

Within public health surveillance, information may be “pulled” through surveys (e.g., the national Maternity Experience Survey), user-initiated reporting systems (e.g., the MedEffect system for reporting adverse effects of use of health products such as drugs), and data collection systems integrated into health and social services provision (e.g., the British Columbia Perinatal Database Registry). Newer “infoveillance” techniques are also being developed in order to monitor and cull epidemiologic data from the Internet (Eysenbach, 2009; Velasco, Agheneza,

Denecke, Kirchner, & Eckmanns, 2014) and personal health surveillance devices such as activity and sleep trackers (Hernandez, 2014). Once collected, these surveillance data can be used by government, academic, or private sector researchers to generate statistical reports and other research publications.

In addition to formal surveillance on the part of government and non-governmental bodies tasked with monitoring health and social issues, informal social surveillance serves to monitor and modify behaviour, sometimes intersecting with formal surveillance systems in cases such as reporting suspected child abuse to protective services. Defined as “the ongoing eavesdropping, investigation, gossip and inquiry that constitutes information gathering by people about their peers” (Marwick, 2012, p. 382), social surveillance differs from formal surveillance in terms of the distribution of power (less concentrated/polarized) and hierarchy (occurring among individuals rather than between an individual and an organized structural body), as well as reciprocity (typically being reciprocal in nature rather than unidirectional). Contemporary constructions of “new momism” (Douglas & Michaels, 2004, p. 1) or “intensive mothering” (Hays, 1996, p. 97) that build on neoliberal individualism and modern developmental psychology rely in part on such social surveillance to guide primary caregivers of children—with a focus on mothers—to enact “appropriate” child-centred practices (Lupton, 2011). As with formal health and social surveillance, new information and communications technologies have expanded and shifted social surveillance practices. Marwick (2012) applies social surveillance concepts to online interactions, where for-profit online companies such as Facebook and Google not only provide ready access to individual behavioural records to government bodies such as law enforcement for formal surveillance, but replicate and extend the reach of social surveillance among peers.

#### **1.2.4 Co-Creation of Practices**

Ideally, information push and pull align in a duet of supply and demand, but this is not always the case, as individual and health institution priorities can differ. Additionally, such information practices, not only meet (or fail to meet) complementary information seeking and communication needs; they also shape and co-create each other. For example, a patient's assessment of the accuracy and usefulness of information provided by a health care provider may shape what personal health information the patient is willing to disclose to that clinician, which in turn can affect the diagnosis or treatment recorded in the medical record. If, for instance, a doctor communicates disapproval of illicit drug use, the patient may not feel comfortable disclosing personal drug use history, which could be relevant to making an appropriate diagnosis. Given that surveillance is often coupled with communication in health information interventions, this type of co-creation of information practices may be assumed to happen frequently.

Surveillance practices are integrated into western medical care (Bauer & Olsén, 2009; Foucault, 2003; French, 2009) and represent a complex construction of power (Foucault, 1980, 1990; Monahan, Phillips, & Murakami Wood, 2010). Such practices may influence the performance (and sometimes also the unobserved behaviour) of those being surveilled, especially if they are aware of the process and potential consequences of such monitoring (S. Dawson, 2002; Perault, 2002). For example, pregnant individuals who engage in practices that are known or suspected to be detrimental to fetal development (e.g., alcohol use) may choose not to disclose this behaviour or seek help in curbing such practices due to fear of stigma and criminalization, altering their information communication and seeking practices in accordance with their perceptions of systemic surveillance. Attitudes regarding public health surveillance are socially

constructed, context-dependent, and may range from a libertarian resistance to any data collection, to a sense of reassurance that the paternalistic state is monitoring the public's health.

Information practices also interact with broader social norms to create and re/produce our understanding of social and public health problems. By systemically monitoring “high risk” population groups, we may increase stigma, even while pulling information with the ostensible goal of improving health and social well-being (Frohlich, Mykhalovskiy, Poland, Haines-Saah, & Johnson, 2012; Lupton, 2012; Patel, 2012). By pushing information about healthy behaviours to the public, we risk oversimplifying and ignoring the underlying social determinants that often have a greater impact on health than individual “choice” of behaviours.

### **1.2.5 Practices Evolve Within Fluid Information Worlds**

Co-creation of information practices is not limited to individuals and formal health organizations. Many levels of information practices, including goal-oriented interventions, overlap and influence each other. People in caregiving roles, such as parents or spouses, may include management of family information needs in the caretaking work they do. Social groups may have informal “information specialists” who are the group “knowers” with expertise on particular topics. Social media fora or face-to-face gathering spaces may serve as “information grounds” (K. E. Fisher & Naumer, 2006) for peer-to-peer information exchange. The active and socially-constructed information environment, referred to by some as an “information world” (Yu, 2012), is subject to change, and is constantly interacting with the information practices of a given individual.

A young mother experiencing challenges with breastfeeding may, for instance, seek help on the Internet, check out parenting books from the library, receive advice (unsolicited or by request) from family and friends, go to a La Leche League meeting, and exchange tips with other

mothers who know each other from a shared childbirth class and continue to meet up postpartum—all in addition to receiving official health system information, for example encountering breastfeeding promotion materials in public locations and receiving advice from a doctor, midwife or lactation consultant. While many information worlds include both “official” or “authoritative” information sources and informal or social information sources, individuals place value and trust in each type of source in different ways. Studies of INSU have found resonance in psychology-rooted theories that acknowledge the general human inclination toward easy access and “good enough” information, such as the principle of least effort (Zipf, 1949) and sense-making (Dervin, 1992; Savolainen, 1993). In practice, these theories suggest that, while “expert” information may be desired, trusted, and even actively sought on certain topics and by certain information users, information sources that pose the least barriers and are the most congruent with the seeker’s life are typically consulted first—be this a quick Internet search (Giustini, 2005) or asking friends or coworkers for their input.

There are many health information practices beyond the basic scope of expert and purposeful information communication and seeking. For example, information avoidance or blunting, and conversely monitoring a field for new information, have been documented in studies of individual level and everyday life health information practices (Case et al., 2005). Identification, construction, and portrayal of authority or expertise of information sources are practices that have been observed on individual and community levels, particularly in areas of health and health care where knowledge is contested (Oliphant, 2008) or uncertain (Genuis, 2010). Further, people assess and re-evaluate information they obtain and receive, organize the information they possess, select which messages to communicate to various other audiences, and

hide or discredit information they wish not to communicate, sometimes promoting misinformation or disinformation in the process (Chatman, 1996; Karlova & Lee, 2011).

All of these practices influence each other and shape the information worlds in which people live. Past information interactions influence future information activities, and social context far beyond information itself influences the extent to which, and the ways in which, individuals and populations construct information practices. While a health information intervention may have specific knowledge or behaviour related goals, the individual targeted by such an intervention may have differing priorities, may assess the information or the methods of delivery as non-credible, or may already have mastered the knowledge or behaviour at issue. All of these conditions—as well as countless more not enumerated here—influence the interaction between individual and population/public health information practices and between information and health behaviour.

### **1.3 Population and Public Health Interventions**

Population and public health interventions reflect organized approaches to “prevent disease, promote health, and prolong life” among an entire population (World Health Organization, 2014a, para. 1) through a variety of interventions, ranging from structural changes that affect large groups of people at once (e.g., bicycle lanes, water treatment) to medical interventions delivered at the individual level (e.g., vaccinations, cancer screening) (Frieden, 2010). Public health protection and promotion interventions may be carried out by governments or private entities, and are distinguished from most clinical interventions by their goals of improving the health of the population as a whole.

The field of public health has historically used a repertoire of strategies to address community level and individual level risks for disease, including prevention, surveillance, and

contagion control, based on a model developed primarily for infectious diseases. In the latter half of the 20<sup>th</sup> century, public health agendas increasingly expanded to encompass social determinants of health, the underlying conditions such as poverty, racism, and lack of education that typically influence health more strongly than individual actions or decisions (Public Health Agency of Canada, 2004). Population health, usually framed as a subset or evolution of public health but occasionally as a distinct approach (Hawe, Ruggiero, & Cohen, 2012; Kindig & Stoddart, 2003), emphasizes social determinants, aiming to reduce health inequities among and within population groups, as well as to improve the health of the population as a whole. Despite increasing uptake of population health approaches, in Canada as in other highly-developed nations with liberal political economies, the actions of the individual have remained a more attractive target for public health intervention than inequitable societal structures (Raphael, 2000, 2008). Over the past several years in Canada, there has been a concerted effort to develop research on population health interventions, in order to generate evidence that will improve the science of using population interventions to improve health and equity (Hawe, Samis, Di Ruggiero, & Shoveller, 2011; L. Sullivan, 2009).

### **1.3.1 Health Information Interventions**

Within population and public health, certain types of information practices have been structured and codified as goal-oriented interventions. These health information interventions may be classified with the language of information “push” and “pull” from the perspective of the public health system. Some information interventions push information; for example an ad campaign promoting folic acid consumption in pregnancy. Other information interventions pull information; for instance a database registry of perinatal care interactions. Some interventions are bidirectional combining pushing and pulling information, such as postpartum public health

nurse visits to both educate new parents on infant health and check to ensure mother and baby are doing well at home.

Although commonly used, population and public health information interventions are not without controversy. Evidence on their effectiveness is mixed (Noar, 2006; Snyder et al., 2004), with current scholarship aiming to understand the ability of context-relevance to improve effectiveness of health information push (including subtle informational “nudges” (Thaler & Sunstein, 2009)) on behaviour change. Techniques used to try to improve the relevance of health information push include: message framing (positive versus negative) (Akl et al., 2011; Banks et al., 1995; J. B. Gray & Harrington, 2011), targeting (to a subgroup) (Schmid, Rivers, Latimer, & Salovey, 2008; Schneider et al., 2001), and tailoring (to an individual) (Cortese & Lustria, 2012; Kreuter, Oswald, Bull, & Clark, 2000; Short, James, Plotnikoff, & Girgis, 2011). However, few studies of push strategies assess behaviour change as an outcome; instead they often focus on changes in attitudes or other psycho-social outcomes such as self-efficacy (Akl et al., 2011). The unintended effects of such interventions are also rarely studied, and may ripple far beyond health to affect constructions of culture and identity (Corones & Hardy, 2009; Rentner, Dixon, & Lengel, 2012).

### **1.3.2 Health Information Interventions and Young Parents**

In light of the public health priority placed on childbearing and protecting infants, health systems have invested resources in several forms of information interventions aimed at pregnant individuals and parents of young children. In the postwar era of the 20<sup>th</sup> century, the medical establishment asserted that the prenatal period was an ideal time to educate the mother on health issues, and that (due to the increasing medicalization of pregnancy and childbirth) health professionals were ideally positioned to deliver such education (A. Davis, 2012)

Because of the persistent conceptualization of teen pregnancy as a social and medical problem, and of teenagers as inexperienced and risky parents, a number of information-intensive interventions have targeted young parents in particular. These interventions may be push education and communication programs, pull surveillance programs, or both in one intervention. The push interventions, as the more publicly visible of the two strategies, have been both touted as a success (Kitzman et al., 1997) and critiqued (Romagnoli & Wall, 2012). The pull interventions have been largely assumed to be invisible to the target audience, and have received little public commentary.

In addition to interventions targeting young parents, there is a set of population and public health interventions, some of which are information-based, aimed at discouraging and preventing young pregnancy and parenting altogether. One stream of interventions aimed at reducing young pregnancy focuses on biological factors, encouraging abstinence and use of contraception—particularly long-acting reversible contraceptives such as intra-uterine devices and injectable contraceptives—among young women “at risk” for pregnancy. An example of this is the CHOICE Project in the United States, which provided no-cost contraceptives and contraceptive information in order to reduce unintended pregnancies in adolescent girls and women (Eisenberg, McNicholas, & Peipert, 2013; Peipert, Madden, Allsworth, & Secura, 2012). In contrast to this approach to preventing early childbearing via contraception are interventions aimed at modifying or delaying young people’s sexual activity, often by offering bleak statistics and testimonials regarding the difficulty of teenage motherhood. New York City’s recent multimedia campaign to discourage teen parenting with images of sad babies and captions such as “I’m twice as likely not to graduate high school because you had me as a teen,” as well as an interactive fiction Short Message Service (SMS, or “text”) based “game” drew both accolades

(Rhoshalle Littlejohn & Karazin, 2013) and a firestorm of criticism (Rankin, 2014; Taylor, 2013) for its blunt and shame-based approach.

Childbearing individuals—particularly young mothers, who are seen as socially and medically problematic—are targeted, surveilled, and advised, under the auspices of improving the health of mothers and children. Despite societal investment in collecting and communicating perinatal health information, we know little about the information worlds surrounding parents in general, and young parents in particular.

#### **1.4 The Current Study**

In this study, I endeavoured to understand, interpret, and theorize socially-constructed health information practices of, and affecting, young parents in the Greater Vancouver area of British Columbia, Canada. Using constructivist grounded theory and situational analysis, I aimed to improve our understanding of the health information practices *of* young parents and the population health information interventions *intended to affect* young parents. I examine young parents' social information worlds and their influence on the experiences being pregnant or parenting as a young person.

The specific objectives of the current dissertation include:

- 1) Describe health-related information practices of a group of young parents;
- 2) Analyze the ways knowledge and expertise are discursively constructed in the social information worlds of these young parents; and
- 3) Examine potential ethical considerations arising from population health information interventions that are targeted towards young parents.

### 1.4.1 Definition of Terms

Within information science, sometimes words take on a meaning that carries connotations not obvious outside of the discipline. *Information*, for example, is popularly understood to be a pattern of data communicated from some external source. However, within information science there are multiple and sometimes competing definitions and typologies of information (Case, 2006), some of which include internal sources of information such as personal experience and beliefs, and others that require utility, impact, or truthfulness in order for data to qualify as information. For the purposes of this dissertation, information will refer broadly to organized data in the environment or stored within a human being, whether or not this organized data is useful or “true.” *Information practice(s)* will be the term used to refer to socially-constructed active and passive human information activities and behaviours that have been organized according to social and situated learning (Savolainen, 2008, p. 25), whether performed on an individual or collective scale. Practices of interest include but are not limited to: identification of information needs, information seeking, information assessment, information avoidance and minimizing (also known as *blunting*), various types of information use (such as integration into one’s knowledge base or gatekeeping information for/from others), information exchange, and information dissemination. The term *information behaviour* will be used in the context of a specifically non-practice-oriented perspective or researcher.

For the purposes of this dissertation, the term *youth* refers to *teenagers (teens)* or *adolescents* aged 13-19, as well as *young adults* aged 20-24. Although there is great cultural and regional variation among norms regarding age of childbearing and parents, for the purposes of this study any pregnant or parenting youth may be referred to as *young parents* referring to the contrast between childbearing before the age of 25, and the older and upward trending mean,

median, and mode for age of childbearing within contemporary Canada (Statistics Canada, 2013a).

Finally, some other terms have specific meanings within the realm of health research, including the term *risk*, which will be used to describe attributes or exposures that are associated with an increased probability of a given outcome. Similarly, *social determinants of health* are “the economic and social conditions that influence the health of communities, and jurisdictions as a whole” (Raphael, 2009, p. 1), leading to “systematic differences in health for different groups of people” (Marmot, Friel, Bell, Houweling, & Taylor, 2008, p. 1661). Social determinants (such as, in Canada, education, food security, and social exclusion (Raphael, 2009, p. 6)) are associated with and influence health status outcomes, but are not characteristics that individually and actively control or determine an individual’s health outcomes.

#### **1.4.2 Overview of Methodology**

For this dissertation, I adopted a qualitative approach to investigate the health information practices of young parents, population health information interventions that impact young parents, and young parent social information worlds. A qualitative paradigm enables a “complex, detailed understanding of the issue” (Creswell, 2007, p. 40) and permits investigation of the social processes of interest in a naturalistic context. This study is informed by grounded theory (Glaser & Strauss, 1967), a qualitative research design rooted in sociology, which typically employs comparative analysis of socially-generated data in order to “discover” theory about underlying social processes and how social interaction shapes meaning and practices. Specifically, second generation grounded theory approaches, including constructivist grounded theory (Charmaz, 2007) and postmodern situational analysis (Clarke, 2005), were used in the current dissertation in order to more fulsomely examine the health information practices of

young parents, their social information worlds, and the population health information interventions that target and affect them.

The theoretical orientation of this study draws on several research traditions, most notably information science, population and public health, sociology, and feminist critical theory. Indeed, an objective of this work was to conduct research on health-related human information practices that is theoretically and pragmatically relevant to multiple disciplines, including in particular information science and population and public health. However, beyond aiming to satisfy multiple audiences, or to conduct a multi-disciplinary analysis of a topic from more than one perspective, I aimed to integrate disciplinary “silos” of research theory and methods, in order to generate new ways of thinking about longstanding issues. Thus, a core tenet of my approach in this work is interdisciplinarity, or resistance to the “inward-looking and cliquish nature of disciplines” (Moran, 2001, p. 3).

#### **1.4.2.1 Epistemology and Lens**

My epistemic approach is based on the assumption that knowledge and reality are both to a great degree socially constructed, but that there are commonly shared elements of these constructions that create an achievable, functional, and shared understandings of reality. I join in the tradition of research into the sociology of knowledge, led by Berger and Luckmann (1967) in locating my understanding of *reality* and *knowledge* “somewhere in the middle between that of the man in the street and that of the philosopher” (p.14).

Similarly, I subscribe to a moderate constructivist epistemology, following Charmaz (2009) in explicitly taking a reflexive stance, going beyond “earlier forms of social constructionism that viewed research participants’ actions as constructed but not their researchers’ actions” (p.134), and also eschewing extreme constructivist views that encompass

radical subjectivism to the point of no shared “objective” reality at all. Charmaz asserts that “constructivists enter participants’ liminal world of meaning and action in ways classic grounded theorists do not” (2009, p.131), co-constructing data with participants, and aiming to interpret their experiences and perspectives as faithfully as possible.

As a researcher after “the postmodern turn” (Best & Kellner, 1997), I am also heavily influenced by deconstructionism and multiplicities. Clarke (2003) notes that “postmodernism has shifted emphases to localities, partialities, positionalities, complications, tenuousness, instabilities, irregularities, contradictions, heterogeneities, situatedness, and fragmentation—complexities” (p.555), and indeed my postmodern gaze understands the world as shifting, situated, diverse and faceted.

This orientation toward social construction, constructivism, and postmodernism aligns me theoretically with sociological interests in the ways systems and practices co-create each other, rather than a focus on individual cognitive capacities. Bourdieu’s concepts of habitus (acquired ways of being that are second nature or beyond conscious selection) and his theory of practice (in short, that the social world is based on habitus and various forms of social, economic, and cultural capital) (Bourdieu, 1977; Heilbron, 2011; Swartz, 1998) are strong influences for my understanding of socially constructed practices and the ways in which social structures may constrain choices and individual agency. The emerging body of theory of information practices (McKenzie, 2003; Savolainen, 2008; Talja & McKenzie, 2007) builds on this same foundational understanding of practices, aiming to provide sociologically and contextually-oriented perspectives of practices as products of interactions and “situated learning” (Savolainen, 2008, pp. 23–25). As a result, my work focuses on understanding social information practices—for example the ways in which young parents assess the quality and value of health information in

the context of their lives—as well as how those practices have been shaped by visible and invisible social structures including socioeconomics, racialization, and hegemonic gender norms.

Within this epistemological perspective, I apply a critical, feminist paradigm. I am particularly interested in hearing and amplifying voices within society that are commonly disenfranchised or stifled, and desire to do research that is fundamentally emancipatory in nature. The underlying goal of my research is not just to further knowledge in the abstract, but to advance social justice and make visible power structures within society. I am therefore theoretically sensitized to themes of social inequality and justice, as well as hegemonic and subversive modes of constructing and understanding knowledge and expertise.

Denzin (2010) asserts that qualitative research ought to have a goal of speaking for and with those at the margins. This resonates with my worldview, which is informed by discursive formations of power and oppression characterised by Foucault (1980, 1990). My methods draw on pedagogical insights by Freire (2000) and hooks (1984, 1994), and I take an intersectional (Crenshaw, 1991) view of multifaceted identities informed by feminist scholars such as Hill Collins (2000), Alzaldia (1999; Moraga & Anzaldia, 1984), and Lorde (1980, 1984). This social justice objective carries an imperative to deconstruct discourses and social structures, and to uncover and question power relations and hierarchies, and is related to the influence of critical theory upon my work. I have sought to represent voices that are not typically represented in research on health information, and to investigate the ways that social structures influence the experiences of the population of interest.

Taking a view that assumes context as active co-creator of practices resists not only the individual/cognitivist focus that at times characterises information behaviour research (Savolainen, 2008), but also pathologization of young childbearing (Checkland & Wong, 1999).

It also enables the telling of a more complete story to explain behaviours, by illuminating the multiple forces—including the “non-human” (Clarke, 2009, p. 201)—that enable and constrain choices and actions, shaping individual and group practices.

### **1.4.3 Study Design**

This is a constructivist grounded theory study (Charmaz, 2007), augmented with postmodern visual grounded theory data analysis strategies drawn from situational analysis (A. Clarke, 2005). In keeping with the core tenets of grounded theory, I have attempted to resist committing to a pre-conceived conceptual model or theory in order to maintain the theoretical sensitivity that is requisite for formulating theory based in the data (Glaser, 1978; Glaser & Strauss, 1967). However, my (inter)disciplinary epistemology, worldview, and personal social location necessarily impact my perspective, offering sensitizing concepts that shape my goals and research design (Charmaz, 2007). All these factors converge to influence the way in which I, as a qualitative researcher, act as an interpretive research instrument.

The study described in this dissertation was part of a five-year, multi-site project investigating multiple aspects of the effects of context and structure on the experiences of young parents in British Columbia, Canada. The data on which this dissertation relies was collected by me during the first two years of that study, in one geographic region (Greater Vancouver). The relationship between this thesis and the larger study allowed them to influence and enrich each other. One area in which this influence is evident is in the interview guides (Appendix A), which include topics traditionally considered to be beyond the scope of health information practice studies. The integration of such topics provided rich contextual information for participants’ information practices, and allowed a broad scope for emergent findings.

### 1.4.3.1 Study Setting

In Canada, as in many other developed countries, the average age of first childbirth and the peak age group of fertility have been on the rise. In 2010, the most common age group for first-time mothers was 25-29 years of age, and the most common age of mothers at any birth had risen to the 30-34 age group (Statistics Canada, 2013b). The proportion of births to teenage (15-19 year old) mothers has been declining over the past four decades, falling from a high of 30 live births per 1,000 teenage women in 1974 to 11.4 per 1,000 in 2010 (Social Development Canada, 2006). According to the Canadian Maternity Experiences Survey, over 70% of births to women aged 15-19 were the result of unplanned pregnancies (Public Health Agency of Canada, 2009). British Columbia statistics echo the larger Canadian trends, with 3% ( $n = 1314$ ) of 2010 births in the province to mothers under the age of 20 (Statistics Canada, 2013a). Within the province, however, the teen live birth rate shows great regional variation, from a low in 2008 of 1.27 per 1,000 females aged 15-19 years in Vancouver Westside to a high in the same year of over 85 per 1,000 in the Bella Coola Valley (BC Stats, 2011).

This dissertation research was conducted in “Greater Vancouver,” the largest metropolitan area in the province, where, according to the 2011 Census of Canada, 2.3 million people make their home (Statistics Canada, 2012). While the general trend is toward higher teen birth rates in the more Northern and rural regions of the province and lower ones in the southern metropolitan areas (Kashaninia, 2010), within the highly urbanized southern city of Vancouver itself there is wide variation in teen fertility rate among neighbourhoods, ranging from 1.3 to 9.8 per 1,000 females aged 15-19 years (BC Stats, 2011). This dramatic variation within a small geographic region, along with the density of population, communications, and social services,

made Greater Vancouver an ideal area for an exploratory study related to information practices and young parents' health behaviours.

Within the Greater Vancouver region there is a patchwork of services and service-providing organizations aiming to aid teenagers who are pregnant or parenting. The provincial array of Young Parent Programs (YPPs) are partnerships between community groups and the public sector (Norton, 2005). Nearly every city in Greater Vancouver, and dozens of others around the province, hosts a YPP, which serves as a hub of sorts for collaborative programming among secondary schools, non-profit societies, childcare providers, and public health entities. In addition to YPPs, which receive special provincial “top up” childcare funding for babies and toddlers of young parents who are completing high school, various other programs exist to address the needs of young people who are pregnant and parenting. The BC Nurse Family Partnership/Healthy Connections program (Children’s Health Policy Centre, 2014) is one of these, launched in 2012 with the aim of improving outcomes for children of young and at-risk mothers by providing intensive education and support to vulnerable families. Other provincial-local partnerships include local provision of provincially-funded youth sexual health services, and regional Health Authority action on the provincial perinatal depression framework. A variety of locally-administered community-based programs provide pre- and post-natal support, as well as ongoing young parent support groups and other services, including: transitional residential housing for young mothers and their babies, drop-in evening support groups for young dads, and life skills and job placement programs for young parents.

While this mosaic of programs and services draws on federal data and priority-setting, the bulk of health care administration in Canada falls under the provincial jurisdiction, and most programs are administered by local organizations, either independently or in partnership with the

province. It is clear, based on the statistics collected as well as the programs available, that there is a strong emphasis on the mother within the monitoring of and service provision to teenage parents. Informed in part by assumptions that teenage women are impregnated by older men, in part by stereotypes of young fathers as disengaged from caregiving, and in part by a focus on the biological aspects of childbirth over the social aspects of parenting, information about and services for young fathers have lagged behind those for young mothers.

The setting for this research project centred on the YPPs in Greater Vancouver, as they are a staple of multisectoral young parent support in the province. While participants were not all students at the YPPs, the YPPs are well positioned within local communities to reach and serve a diversity of young parents, are well connected with local public health and other outreach programs targeting young parents, and have a record of collaborating with academic researchers. The YPPs therefore were able to provide a “home base” for much of the data collection and knowledge translation within this project.

#### **1.4.3.2 Recruitment, Sampling, and Data Collection**

The primary modes of data collection for this study were core methods of contemporary fieldwork: interviews with young parents and naturalistic observation at YPP sites based at secondary schools. Data included interview transcripts, field notes, copies and photographs of information sources available in the YPP environment, and visual artifacts generated by interviewees as part of elicitation exercises.

Initial sampling of young parent interviewees was to be purposive, aiming to recruit YPP students who were expecting a child or parenting one or more child(ren), and were affiliated with the YPP program sites at which observation was taking place. The age of sexual consent in British Columbia being 14 years, the lower age limit for participation was set at 15 in order to

reduce the risk that participants would be underage to have provided consent for sexual acts leading to pregnancy<sup>3</sup>. Additionally, non-YPP affiliated, young parents were theoretically sampled to provide perspectives of young parents who were not engaged in secondary education, who may differ in important ways from those youth engaged in secondary schooling.

Within grounded theory approaches, theoretical sampling as a project progresses is a method for developing and checking codes, categories and emerging theory (Charmaz, 2007; Glaser & Strauss, 1967). I acknowledge, however, that any voluntary recruitment process is necessarily subject to a certain degree of convenience sampling, and while I conducted theoretical sampling to augment the study population to the extent that was possible for me, I also endeavoured to remain aware of who might be unaware of the study or declining to participate, and what the implications of those absences and silences might be (Groger, Mayberry, & Straker, 1999).

#### **1.4.3.2.1 Observations**

Ethnographic observation provides opportunities for a researcher to increase the depth of understanding of the context in which participants function, and allows the researcher to transition to somewhat of an emic-etic perspective and role (Chabot & Shoveller, 2011, p. 105). The type of observation I employed in this study was naturalistic; I directly interacted with the group of YPP participants without being one of them. During my fieldwork I aimed to take descriptive, reflective, and procedural handwritten field notes in as unobtrusive a manner as

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<sup>3</sup> Note that in British Columbia reported abuse or neglect of a minor, including disclosure of statutory rape of a research participant by the participant herself, would trigger required reporting to governmental child protective services. This was included in the study ethics protocol and informed consent for interview participation.

possible. I also occasionally took photographs of the fieldwork sites, typically while the students were not present.

I conducted three rounds of naturalistic observations within each of the two school-based YPP sites in this study. Each round involved my presence in the YPP classroom or building (and occasionally on out-trips with the YPP) over the course of approximately two school weeks. The first round of observations was conducted in autumn 2013, the first follow-up round in spring 2014, and the second follow-up in autumn 2014. All students within the YPPs were invited to participate as interviewees as well.

#### **1.4.3.2.2 Interviews**

Participants were invited to enter into the study with an initial 90-minute individual interview. As part of the consent process, they were informed that they would be contacted approximately four to six months later for a shorter (45-60 minute) follow-up interview, in order to prospectively follow development and outcomes of information practices, as well as health decisions and behaviours. All interviews were semi-structured, with open-ended questions aimed at eliciting narratives about participants' experiences with health-related information practices. Appendix A contains interview schedules; note that interviews were permitted to deviate from these guides, as qualitative principles of emergent design (Bruce, 2007; Interagency Advisory Panel on Research Ethics, 2010) and the inductive nature of this type of research required flexibility and the alteration of data collection practices as the project progresses. I conducted all of the interviews myself, in English, as that is the only language in which I am fluent enough to conduct academic research. Interview participants were compensated for their time with \$30 cash for each interview.

When a dyad (e.g., boyfriend-girlfriend or co-parenting individuals) were both participating in interviews, they were interviewed separately and it was made clear that each person's interview would be kept completely confidential from the partner. This was done in order to avoid any ethical concerns that might arise due to prompting intimate partners, family members, or co-parents to potentially reveal stigmatized health behaviours to each other (Bottorff, Kalaw, Johnson, Stewart, & Greaves, 2005).

Within the intake interviews, two different, specific, elicitation devices were employed: the Critical Incident Technique (CIT) and a projective drawing exercise I call Information World Mapping. CIT is a time-tested method for eliciting accurate stories from interviewee's memory, while Information World Mapping is a novel modification of more recent innovations in participatory visual research methods. These two elicitation exercises were intended to complement and triangulate each other, enriching data collection within the interview process.

CIT (Flanagan, 1954) is a longstanding interview method developed within the field of psychology and originally applied to U.S. Air Force pilots, which has been used successfully within LIS (Urquhart et al., 2003). CIT is commonly used in information seeking research, including in studies specifically aimed at exploring information seeking in context (Sonnenwald & Wildemuth, 2001), and has been successfully employed in information seeking research in health care settings for over 25 years. Using this technique, the researcher asks interviewees to recall and describe a specific instance of a phenomenon, rather than attempting to give general responses about their "typical" behaviour or experiences. While CIT is not as comprehensive in breadth as prospective techniques such as journaling, its strength lies in depth of the data, as well as the simplicity of completion when compared to ongoing longitudinal data collection processes such as journaling, with which participants may be unwilling or unable to fully comply.

In contrast with the CIT's aim of obtaining accurate recall of linear narratives, the projective drawing exercise, Information World Mapping (IWM) (Greyson, 2013), aims to enable creative communication about the concept of interest, which in this case is the information world of the research participant. IWM incorporates elements of the photovoice method (Wang & Burris, 1997), relational mapping (Radford & Neke, 2000), and the information horizons technique (Sonnenwald & Wildemuth, 2001), to use participant-drawn maps of interviewees' "information worlds" (Jaeger & Burnett, 2010) from their own perspectives, in order to facilitate rich recounting of information practices in context. A participatory, visual exercise is an appropriate elicitation technique for this study due to multiple factors: the developmental fit of arts-based techniques with adolescent participants, the ability of multimedia elicitation techniques to both draw out richer data and reduce participant fatigue in interviews, the association of postmodernism with visual culture (Mirzoeff, 2002), and a desire on the part of the researcher to explore the utility and effectiveness of arts-based methods within information research. Clarke (2005) found grounded theory effective and versatile in working with visual data, and her visually-based analysis method, situational analysis, was inspired by this attribute of grounded theory.

#### **1.4.3.2.3 Saturation/Sufficiency**

To be completely faithful to the original spirit of grounded theory, one must continue to collect data, testing and verifying an emergent category via theoretical sampling until there is no new data to be found that can contribute to a theoretical category of interest—a concept called "theoretical saturation" (Glaser & Strauss, 1967, p. 61). However, second generation grounded theorists such as Charmaz (2007) and Dey (1999) have called into question this idea that a category can ever be fully saturated, or whether this is an artifact of the researcher's sensitivity

or limited coding practices. Bruce (2007) suggests that attempting saturation could lead to over collection of data and a lack of analytic depth on the part of the researcher. Morse (1995) points out the lack of clarity around the definition of saturation and lack of confidence among qualitative researchers as to when it has been reached, and provides guidelines for identification of saturation. However, even if saturation is achievable, it is unclear how one is to prove that it has been reached.

Dey (1999) proposes the term “theoretical sufficiency” (p.117, 257) to describe the point at which grounded theorists feel it is time to cease data collection related to a particular concept or category. Given that it is impossible to assess whether no new data or coding categories will emerge beyond a given stopping point, sufficiency identifies the point at which a researcher has completed coding that is sufficient to move beyond data collection and initial coding to a more focused and directed stage of coding. This recasting of the concept resonated with me; therefore I continued data collection until my major categories reached theoretical sufficiency to generate testable grounded theory (e.g., a model from which hypotheses for future studies could be based).

#### **1.4.3.3 Data Analysis**

In keeping with traditional grounded theory methods, data collection and analysis were not discrete stages, but rather they were overlapping and iterative processes (Charmaz, 2007). I used constant comparison (Glaser, 1965) to code data across sources (field notes, interview transcripts, memos) and categories, in order to construct interpretations and document *in vivo* discourses. Visual artifacts such as photographs and information world maps were not coded, but used as visual aids to the coding of field notes and interview transcripts. I documented the analytic journey in memos, following Charmaz’ (2007) advice for building codes from the

ground level, beginning in the data and moving from initial open codes eventually, and iteratively, to focused codes, and applying theoretical codes to unite and selectively tell stories of significance.

I did not formally apply axial coding (Strauss & Corbin, 1998) as an analytic framework for exploring categories, agreeing with Charmaz (2007) that this approach may limit and restrict exploration even as it fleshes out categories. However, I did, for Chapter 4, draw upon Clarke's situational analysis mapping techniques (Clarke, 2005) for grounded theory discourse analysis of textual data. I used Clarke's situational maps to identify and classify actors in young parent social worlds, social worlds/arenas maps to understand the multiple and overlapping social information worlds in the young parent arena, and positional maps to diagram discourses of knowledge and ignorance as constructed by these actors in this arena. In contrast with traditional grounded theory, and drawing on more recent critical theory influences on the method, the research and analysis process was informed by reviews of relevant literature. Drawing on Charmaz's innovations of constructivist grounded theory techniques, the focus of my analysis goes beyond exploring social processes to broader learning about social worlds, clearly acknowledging the impact of social location on the multiple truths of participants within the same environment or process, and explicitly assuming that no one perspective can capture a universal truth.

#### **1.4.3.4 Rigour**

Qualitative research does not address positivist issues of reliability and validity in the same way as quantitative research (Aguinaldo, 2004; Golafshani, 2003; Trochim, 2006). Instead, the current dissertation assumed a constructivist approach to research, acknowledging that the results are necessarily context-dependent, and asserting that this is a strength rather than a

weakness. Standard positivist tests of reliability such as replication studies are not useful in assessing how reliable a context-dependent qualitative study's findings are, as context is ever-changing. However, rich description and clarity around methods can support the *dependability* of a qualitative study. Similarly, traditional scientific measures of internal and external validity have a limited applicability in this type of inquiry, as the aim is understanding rather than generalizability, and credibility is seen to vary depending on one's perspective. Yet, thorough description of the research context and acknowledgement of a social constructivist perspective can offer insight into when and how results may be *transferable* to other settings, and may offer *explanatory power* (Strauss & Corbin, 1998) into similar situations. Glaser (1978, p. 142) instructs grounded theorists to strive for theory that "fits the real world, works in predictions and explanations, is relevant to the people concerned and is readily modifiable."

I strove for rich data and transferrable theory that fit the data well, held relevance, and was modifiable. To that end, I employed methods of triangulation in order to enhance the *credibility* (Charmaz, 2007; Crawford, Leybourne, & Arnott, 2000) and *dependability* (Guba & Lincoln, 1989; Shenton, 2004) of the work. Data was collected over a prolonged period of engagement, and observed as well as elicited. Participants were encouraged to member-check their interview transcripts and provide feedback on preliminary findings. Additionally, the theoretical sampling and use of multi-modal elicitation techniques (verbal and visual) in interviews in an attempt to reach maximum variation were a form of triangulation, while at the same time acknowledging that there may always be perspectives researchers cannot ethically access or may be unable to hear (Groger et al., 1999).

#### **1.4.3.5 Reflexivity, Positionality, and Ethics**

Feminist methodologists in the sociology of knowledge tradition have claimed that reflexivity—the process in which a researcher would “reflect upon, examine critically, and explore analytically the nature of the research process” (Fonow & Cook, 1991, p. 3)—is in itself an important data source. This includes the way the research process may impact participants, as well as the presence of power relations between and among the researcher and participants, as research involving human participants is “always and inevitably a social interaction in its own right” (Stanley, 1990, p. 8).

While grounded theory has traditionally focused on theoretical sensitivity (Glaser, 1978), or the ability of researchers to use their own experiences and perspectives to inform their analyses, until recently reflexivity was not a major focus. However, second generation grounded theory scholars who have been influenced by feminist scholarship, such as Corbin (2009), Charmaz (2007, 2009), and Clarke (2005) have begun to discuss not only reflexivity but the researcher’s relationality with research participants as well. Corbin, identifying with “the social justice aims of feminist research” (2009, p. 40), suggests strategies to aid in self-reflective research, such as memoing immediate reactions to interviews and discussions while coding. Hall and Callery (2001) further recommend paying particular attention to attributes of the interviewer-interviewee discourse during interviews, and being sure to include time and space for the research participants to share what is of interest to them, not just the concepts in which the researcher is interested.

Related to reflexivity is the researcher’s positionality relative to the study participants, the amount of disclosure of this, and the power relations it establishes within the researcher-participant dynamic. A researcher’s commonalities with the population under study may be a

source of insight (Sprague, 2005) and “sensitizing concepts” (Greed, 1990, p. 147). However, this must be paired with reflexive practice in order to offer genuine analytic insight, and with attention to power dynamics of self-disclosure, including the potential for fostering social desirability bias, silencing difference, and the generation of fleeting intimacy and the “illusion of equality” (Sprague, 2005, p. 135).

I practiced reflexive research by journaling (process memos), engaging in peer supervision and conversations with my supervisor, and attempting to allow sufficient time for process writing such as immediate post-interview memos. While I had no concerns disclosing my status as a parent (even as a biological mother) to participants, and while it may have been evident that I am a somewhat young parent by Canadian standards, I made efforts to avoid misleadingly portraying myself as a member of the teen parent community or discussing my own experiences in depth with participants in order to build rapport.

I have ethical obligations to conduct research in a way that does not harm participants directly or indirectly. This study followed the guidelines set out within the second edition of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (Interagency Advisory Panel on Research Ethics, Government of Canada, 2010), as well as the more specific policies and guidelines of the Canadian Institutes for Health Research (Canadian Institutes of Health Research, Government of Canada, 2003). All research was approved by the Behavioural Research Ethics Board of the University of Columbia (Approval H13-00415), as well as the school boards of the two school-based YPP sites in which I conducted observations and interviews.

In accordance with ethical research practices, I undertook the following actions: 1) Providing participants with information outlining the study, including any benefits and possible

risks and disadvantages to participation, 2) Obtaining informed consent prior to conducting interviews, being mindful of the literacy levels of participants, which varied, 3) Maintaining confidentiality of participants, using pseudonyms for all quotes and descriptions, and 4) Allowing participants to review transcripts and request “blackouts” (passages that would not be quoted in publications), in order to ensure accuracy, safety, and confidentiality. Although some of the participants in this study were minors (in British Columbia, 19 is the age of majority) ethical approval was obtained for participants aged 15 and older (all participants) to provide their own research consent. As well, I met with YPP managers and staff, in order to plan a minimally-disruptive researcher presence within their programs and to seek ideas as to how the results of the current dissertation analyses could be of use to their work. Within the interviews and observations with participants, and when soliciting participant feedback on analytic themes, I encouraged participants to share what they would like to see come of this research, for example an easy-to-read report, or an arts-based community workshop. This feedback has informed my knowledge translation planning.

#### **1.4.4 Summary of Methods**

A constructivist grounded theory design (Charmaz, 2007, 2009; Morse, 2009) provided the framework for both descriptive analysis and theory-building. My approach is informed by practice theory (Bourdieu, 1977, 1998; Heilbron, 2011; McKenzie, 2003; Savolainen, 2008) and a constructionist sociology of knowledge and information (Berger & Luckmann, 1967; Camic et al., 2011; Tuominen & Savolainen, 1997), augmented by visual mapping techniques (Bagnoli, 2009; Clarke, 2005; Sonnenwald, Wildemuth, & Harmon, 2001). Data collection was naturalistic in nature, combining ethnographic observation at Young Parent Programs and individual interviews with teen parents. Interview participants were purposively sampled from YPP student

participants, with non-YPP interviewee recruitment used to theoretically sample young parents from the broader local community. Data sources included interview transcripts, field notes, copied and photographed information sources available in the environment, and visual artifacts generated by interviewees as part of elicitation exercises. Analysis was inductive in nature, and beginning concurrently with and contributing iteratively to data collection.

## **1.5 Structure of This Dissertation**

This introductory chapter has laid the groundwork for understanding information practices, population health information interventions as a type of information practice, and young parents as a population highly targeted by informal and formal health information interventions. This thesis is structured around multiple manuscripts, each capable of standing alone as a journal article yet woven into one multi-chaptered narrative for the purposes of the doctoral thesis. Each chapter consists primarily of one or more of these article-style manuscripts that has been contextualized and adapted for inclusion in a unified dissertation.

In Chapter 2 I review literature on two specific and complementary questions focusing respectively on information in health behaviour and on health information behaviour, establishing this study's background in public health behaviour research and research on health information seeking within everyday life contexts. This chapter includes two systematic scoping reviews: one that focuses on the role of information within major public health behaviour models, and another reviewing the state of LIS research on "everyday life" health information seeking research. These reviews situate this dissertation research (inter)disciplinarily, and outline a gap in the literature between the information practices of young parents and the information-based health behaviour interventions that target them.

In Chapter 3, I present a constructivist grounded theory study of the everyday life health information practices of young parents, beginning with a narrative overview of health information practices research germane to the health information practices of young parents. In this chapter, I describe the health information practices of a group of young mothers and fathers, generating a descriptive model of young parent health information practices. Further exploration of the substantial task of assessing information leads to theorizing the complex practice of health information triangulation.

In Chapter 4, I focus on social information worlds, presenting a situational analysis of the social health information worlds of young mothers in particular. This chapter explores the discursive construction of young motherhood in relation to knowledge and expertise, and considers the ways that social location interacts with perceptions of a young mother as possessing parenting expertise.

In Chapter 5, an emerging area of research and practice within population health intervention research will be explored: population health information interventions. Using examples of information interventions targeting and affecting young parents, I describe in this chapter three types of population health information interventions observed in the participating fieldwork sites and described in participant interviews. Chapter 5 also begins to theorize potential ethical challenges associated with PHIs that are designed to affect young parents.

In Chapter 6, findings from previous chapters are synthesized. Revisiting the gaps identified at the outset of this study, I discuss the key empirical findings within and across chapters and present implications for theory development, policy and practice, and future research. This chapter also overviews issues pertaining to reflections on the researcher's positionality.

## **Chapter 2: Literature Review**

The current dissertation spans and integrates the theory and research of two disciplines: library and information science (LIS) and population and public health (PPH). Chapter 2 includes two scoping reviews of the literature, both of which employ systematic and transparent scoping methods for search and synthesis. In the first of the two scoping reviews I discuss the state of the literature regarding the role of information as a concept and construct within the dominant theoretical models in public health behaviour research, practice, and teaching. In the second I investigate the state of LIS research on everyday life health information seeking behaviour. Together, these two reviews illustrate the significance of information practices within health behaviour and the ways in which information scientists have been investigating such practices, and highlight gaps in current research regarding everyday life health information practices.

### **2.1 The Role of Information in Public Health Interventions: A Scoping Review of Dominant Health Behaviour Models**

Information interventions aimed at influencing health behaviour are a major element of the public health toolkit. Further unpacking the role of information, and information practices (Savolainen, 2008), within theories of health behaviour may help us better understand how to use information to encourage and support health behaviour change. Health researchers have long aimed to identify aspects of public health communication interventions that contribute to greater effectiveness (Noar, 2006; U.S. Department of Health and Human Services, 2000). With the advent of the Internet, mobile technologies, and near-ubiquitous information streams, public health research is increasingly being conducted on health information practices, such as online

dissemination of and searching for health information (Khechine, Pascot, & Premont, 2008), as well as patient social media use for seeking, sharing, and sense-making (Hamm et al., 2013). However, little to none of this research clearly defines “information” or unpacks the multitude of ways individuals and populations of interest interact with information.

Within the field of library and information science (LIS) there is a rich tradition of discussion and debate regarding the nature of information, as well as a major stream of research and theory focused on information practices. Table 2.1 presents examples of several information practices that may be relevant to health behaviour change processes. Some of these (e.g., accessing and encountering) could be clustered within common public health information-related concepts, such as health communication, while others (e.g., avoiding and recalling) are rarely acknowledged in health behaviour. LIS researchers have developed many models to describe, explain, and predict the ways humans interact with information (c.f., Case, 2006; Chelton & Cool, 2004; K. E. Fisher, Erdelez, & McKechnie, 2005). Yet, health behaviour research rarely draws upon LIS theory<sup>4</sup> when planning or assessing information-based interventions.

The minimal use of LIS theory within public health raises several questions. It is unclear how information is defined and understood within health behaviour models, and whether the conceptualization of information within theories of health behaviour is so rich and nuanced that there is no need for public health to borrow theory from information science.

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<sup>4</sup> While there is an active debate within both public health and information science regarding what is a model versus a theory, for the purposes of this review the terms are used interchangeably in order to focus on content of the models/theories of interest.

*Table 2.1 Selected Information Practices Relevant to Health Behaviour Change*

Practice	Health Behaviour Examples
Accessing	Downloading an article on a health topic of interest.
Assessing	Deciding whether a webpage promoting a particular diet has “truthful” health information.
Avoiding	Declining to read, and throwing out informational brochures provided by one’s health care provider.
Blunting	Procrastinating routine health screenings or not seeking detailed results.
Encountering	Reading a public health ad on public transit, or finding interesting online information while searching on a different topic.
Knowledge Formation	Incorporating information on medical and surgical options, personal beliefs, and other factors in order to select an appropriate treatment plan.
Monitoring	Reading health news with an eye to risk and preventative factors for a cancer than runs in one’s family.
Recalling	Remembering fitness advice given by a trainer or physiotherapist.
Receiving	Listening to instructions for post-surgical wound care.
Processing	Using multiple sources of new and old information on dental health and to create/modify a daily hygiene routine.
Seeking	Asking one’s doctor a question about a particular symptom of concern, or looking up possible side-effects of a prescribed medication.
Sense-making	A recently diagnosed patient cognitively and socially exploring and evaluating treatment options within the context of her/his own life.
Sharing	Telling a pregnant friend one’s own childbirth story and relaying tips for coping with labour.
Use in context	Calling a nurse help line for decision support when caring for a sick child.

An assessment of the treatment of information within health behaviour models can point to ways in which behavioural public health research and intervention planning might benefit from applying LIS theory, in order to better understand the way information practices function to influence health behaviour. Additionally, focusing on health behaviour models that include information as a construct may highlight lessons LIS researchers and practitioners might draw from health behaviour models, which could improve our understanding of health information practices and help us better understand the information-related needs of our user communities.

### **2.1.1 Scoping Method**

In order to assess the extent to which information is explicitly and implicitly integrated into contemporary public health behaviour models, I undertook a systematic scoping exercise (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010) of major current texts dealing with health behaviour theory in public health. Health behaviour is a multi-disciplinary field that has advanced to the point that reviewing the entirety of information-related research in one article would be impractical. Over time a canon has developed, and major publishers have released textbooks on the topic; therefore teaching texts may now be examined as a broad representation of dominant thought and teaching regarding health behaviour models and theory.

### **2.1.2 Objective**

In this scoping study I aimed to explore the conceptualization and use of “information” as a concept within dominant public health behaviour models, and the manner in which information practices are acknowledged and handled therein. In order to fulfill this objective, I scoped the explicit use of “information” within current health behaviour texts, and examined dominant models of health behaviour within these texts for conceptual applications of information practices.

### **2.1.3 Selection of Sources**

Sources were English-language textbooks on health behaviour. The core list was assembled via searches of WorldCat, the world's largest union catalogue of library holdings. Within WorldCat, I searched for English-language, non-fiction books published 2000-2012, using "health behavio(u)r" as a keyword phrase. I ranked the results by number of libraries reporting the item in their collections, discarding those in fewer than 75 libraries. Duplicate versions of the same text (e.g., electronic and print) were combined as one item; for texts with multiple editions, I included only the most recent. Scanning the titles of the resulting records for relevance, I selected all substantively about health behaviour, excluding those focused on specific populations or health topics (e.g., elders, obesity), specific clinical disciplines (e.g., nursing), or a single theory (e.g., the Health Belief Model). I then compared this list of core texts in health behaviour with the top results from the online bookseller Amazon, and sought feedback on the list from academic health behaviour experts, in order to identify key texts I might have missed.

### **2.1.4 Assessment and Mapping**

In order to assess the explicit discussion of information within the texts, I scanned the indexes for "information" and related terms (e.g., information seeking, information technology), reading the relevant sections of the books to understand the context and meaning. I tracked and tallied which and how many sources used each information-related indexing term. In order to identify which health behaviour models were included in each book, I scanned the indexes, tables of contents, and relevant chapters of each text. I considered any presented in at least half of the included textbooks to be "core" health behaviour models. I then created a matrix of the ways information practices were apparent in or related to each of these models.

### 2.1.5 Results

WorldCat searching resulted in a list of eight core health behaviour textbooks (Table 2.2). Amazon searching and expert consultation did not identify any additional key texts; rather these methods served to validate the existing list.

*Table 2.2 List of Core Health Behaviour Textbooks*

Year	Lead Author	Title	Publisher
2000	Abraham	Understanding and changing health behaviour: From health beliefs to self-regulation	Psychology Press
2012	DiClemente	Health behaviour theory for public health: Principles, foundations, and applications	Jones & Bartlett
2007	Edberg	Essentials of health behaviour: Social and behavioural theory in public health	Jones & Bartlett
2008	Glanz	Health behaviour and health education: Theory, research, and practice	Jossey-Bass
2009	Hayden	Introduction to health behaviour theory	Jones & Bartlett
2010	Martin	Health behaviour change and treatment adherence: Evidence-based guidelines for improving healthcare	Oxford University Press
2009	Shumaker	The handbook of health behaviour change	Springer
2012	Simons-Morton	Behaviour theory in health promotion practice and research	Jones & Bartlett

### 2.1.5.1 “Information” Within Health Behaviour Texts

An index is intended to distil key concepts within a text, in order to provide easy access to important ideas. In these eight textbooks, there were 19 information-related top level entries (50 including sub-entries). The majority of these were unique to the book index in which they appeared, indicating a lack of common language around information-related concepts. Two books had zero information-related index terms. Table 2.3 lists the indexing terms that were found in multiple texts, along with the number of texts in which they were found.

*Table 2.3 Information-Related Index Terms Found in Multiple Texts*

Indexing term	# of texts	Information process or practice?
Information-motivation-behavioural skills (or Information-motivation-strategy) model	4	Yes
Informational support	4	Yes
Information processing	3	Yes
Information	2	No
Information exchange	2	Yes
Information seeking	2	Yes
Information technologies	2	No

Most of the information-related index entries found at the back of multiple health behaviour textbooks referred to book sections discussing socially-constructed information practices or processes, and the general conceptualization of information appeared to be as “thing” to be sought, exchanged, or processed (Buckland, 1991). Examples of this include casting information

as a resource that accumulates within an individual's possession, or as a catalyst that spurs or speeds a change reaction.

### 2.1.5.2 Information Within Health Behaviour Models and Theories

Nine models or theories were discussed in at least half of the textbooks. Two of these (the theory of reasoned action and theory of planned behaviour) were typically presented together; thus they are combined in this analysis. All other models and theories were included in three or fewer of the selected books, and excluded.

*Table 2.4 Health Behaviour Models/Theories, by Number of Texts in Which They Were Discussed, Type of Model, and Level of Functioning*

Model/Theory name	# of Texts	Model Type	Level
Theory of reasoned action & Theory of planned behaviour	10 (each)	Value-expectancy	Individual
Transtheoretical model/stages of change	10	Stages of change	Individual
Health belief model	8	Value-expectancy	Individual
Social cognitive theory/Social learning theory	8	Social/environmental	Intermediate
Ecological model(s)	6	Ecological	Multi-level
Diffusion of innovations	6	Social process/ Communication	Group
Precaution-adoption process model	5	Stages of change	Individual
Information-motivation-behavioural skills/strategy model	4	Value-expectancy	Individual

Table 2.4 presents the core models/theories, along with the number of textbooks in which each was discussed, the type of model, and the level at which each model functioned. Models were classified by type as either: stages of change models, which describe stages through which an individual passes on their way to making behavioural change; value-expectancy models, which identify predictive determinants of individual level behavioural change; or “other” models—those that were neither stages of change nor value-expectancy, and may focus on the individual or more collective levels of functioning.

While only one of these models has “information” in its title, many of them contain information-related constructs, processes, factors, and stages. In what ways do leading health behaviour theories include information practices (things people do with information) explicitly or implicitly? The following section reviews the core models, discussing the ways information practices are explicitly or implicitly present in each one, and summarized in Table 2.5.

#### **2.1.5.2.1 Stages of Change Models**

Stages of change models of health behaviour typically contain strong information practice components in the early stages, identifying information as a key instigating factor for behaviour change. The transtheoretical model (TTM) was pioneered by Prochaska (1979; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Velicer, 1997) for application with addictions recovery processes. The TTM proposes that people proceed through five phases or “stages” in order to make intentional behaviour change: pre-contemplation, contemplation, preparation, action, and maintenance. In addition to articulating temporal stages, the TTM identifies ten “processes of change” that help people move through the stages. It is clear that certain processes, stages, and constructs within the TTM imply information practices.

In the precontemplation phase, outside forces provide information to raise the individual's consciousness or awareness of the need for behaviour change. The individual may seek or merely encounter this information, or it may be provided despite the individual's desire to avoid or minimize it. In the contemplation phase the individual, who is now considering change, weighs the pros and cons, assessing the information and making sense out of this information within the context of pre-existing knowledge and beliefs. Embedded within this model is a multiplicity of dimensions of information processing and use, including affective response and actual behaviour change.

The precaution-adoption process model (PAPM) (Weinstein, 1988; Weinstein & Sandman, 1992) takes the stages of change principle of the TTM and adapts it to address specific types of behaviours: protecting oneself against risk of harm. The PAPM also posits that an individual moves through stages over time; however this model has seven stages, one of which is an exit from the model midway. In the PAPM, the unaware stage is followed by an unengaged phase and then a decision stage. The individual may at this point decide not to act or to act, the latter of which is followed by action and maintenance stages.

The emphasis placed on the distinction between unaware and unengaged—stages that are not differentiated within the TTM—suggests that information provision, receipt, and processing are highly relevant to the PAPM, and the PAPM suggests different information-communication or tailoring strategies to people at these two stages. The consideration of a deliberate choice *not* to change behaviour is also a departure from the TTM, and implies a role for the individual's personal assessment of information, as well as stages in which one might engage in protective practices such as monitoring information on a topic without necessarily taking action, as well as avoidant ones such as blunting.

#### **2.1.5.2.2 Value-Expectancy Models.**

In contrast with the stages of change models, value-expectancy models are less cohesive regarding the role of information in health behaviour change. Some of these models merely invoke knowledge or awareness (e.g., of social norms), the acquisition of which depends upon information practices. Others include more explicit and immediate information involvement, for example as a cue to prompt action toward behaviour change. Most invoke the idea of beliefs and values, which are constructed in large part based on information, but typically over a long period of time rather than based on a discrete piece of information.

Ajzen and Fishbein's (1980) theory of reasoned action (TRA) proposes that both one's own attitudes toward a behaviour and the subjective norms of those around oneself influence intention to engage in, or change, a given behaviour. The TRA is further based on the assertion that intention to engage in a given behaviour greatly increases the likelihood that one will do so. The theory of planned behaviour (TPB) (Ajzen, 1991) expands on the TRA to include the construct "perceived behavioural control," which relates to individuals' beliefs about how much control they have over the behaviour in question. The TRA and TPB value-expectancy theories contain very little in the way of constructs of explicit information practice. Rather, the role information plays is indirect, though communication and of social norms and by way of intrinsic information in the form of beliefs (and, particularly in TPB, previous experience).

The health belief model (HBM) (Hochbaum, 1958), one of the oldest health behaviour models, was originally developed by psychologists to explain and predict participation (and lack thereof) in screening programs, and has since been applied to health issues ranging from dietary compliance (Becker, Maiman, Kirscht, Haefner, & Drachman, 1977) to sexual risk behaviours for HIV (Lin, Simoni, & Zemon, 2005). Although the HBM has evolved over the years, the basic

idea remains that one's personal beliefs and perceptions about both a health risk and the behaviour that will minimize the risk affect how likely one is to adopt protective behaviour. In the HBM, perceptions about the severity of the health threat and about one's own susceptibility to the threat are weighed against the perceived benefits and perceived barriers to acting. Unlike TRA and TPB, the HBM includes "cues to action," which may roughly translate into received information, whether intentionally sought or merely encountered, and are thought to activate readiness and increase the odds of taking action. While such cues to action may originate within a person as signs of ill health (e.g., developing a suspicious mole, becoming easily winded by climbing stairs), health communication interventions using the HBM aim to be such cues to action by providing information on the severity of threat, one's susceptibility, overcoming barriers to making change, and the benefit of making change (e.g., cigarette package warning labels, billboards advising new parents to obtain recommended vaccinations).

The information-motivation-behavioural skills (IMB) model, sometimes referred to as the information-motivation-strategy model, is a newer value-expectancy model, created to understand and reduce HIV risk behaviours (J. D. Fisher & Fisher, 1992). The general idea of the IMB model is that many behaviours are skill-dependent, and skills are influenced by a person's levels of relevant knowledge and motivation. It would appear that the IMB model generally uses "information" and "knowledge" interchangeably, although these are arguably very different constructs; one may receive a large amount of information without necessarily increasing one's knowledge. While information comprises messages, knowledge involves cognitive processes such as comprehension, understanding, and learning (T. D. Wilson, 2002) In order for information to be "incorporated to construct knowledge" (Savolainen, 2008, p. 50), which may then be applied to actions such as problem-solving. There are therefore co-requisites such as

literacies, information processing, memory and recall, and ability to appropriately use information in context.

### **2.1.5.2.3 Other Core Models.**

The remaining models do not fit within either the stages of change or value-expectancy paradigms. These models have all originated in other fields and been adopted by public health, and range from highly information-focused to too high level to specify the role of individual practices.

Diffusion of innovation (DOI) theory, first proposed in the 1950s to explain the pattern of farmers' uptake of hybrid seed (Rogers, 1995), has been applied over the years to many health "innovations" or changes. DOI is based on the presumption that communication of information about an innovation helps disseminate the idea, after which people will uptake it over time depending on the innovation's characteristics. Rogers (1995) classified people according to how quickly they were to adopt new things (e.g., early adopters, laggards) as dispersed along a normal curve, based on how quickly an individual progressed through a process similar to stages of change, including: knowledge, persuasion, decision, implementation, and confirmation. Information dissemination is key within DOI, as one is unlikely to adopt a new behaviour about which one is unaware. While mass media is very efficient at disseminating information to large groups, interpersonal communication between people with commonalities (e.g., friends) appears to have greater impact on the adoption of innovations. Information is central to DOI theory, as communication about an innovation is the basis for it spreading, personal communication is highly valued, and knowledge about the innovation is prerequisite for implementation.

Social cognitive theory (SCT), known in early incarnations as social learning theory, was established by Bandura to understand determinants of learning and behaviour (Bandura, 1986).

SCT has since been applied in many disciplines, including health behaviour (Bandura, 2004). According to SCT, individual characteristics (including Bandura's most famous concept, self-efficacy), environmental factors, and the process of "reciprocal determinism"—calibrating one's behaviour and the environment—all contribute to behaviour change. Similar to several other models and theories, in SCT "knowledge" (i.e., receipt, processing, and positive assessment of information regarding health risks or benefits of behaviour change) is a precondition for behaviour change, although other determinants, including belief in one's own power to change (self-efficacy, a concept incorporated into Ajzen's (1991) aforementioned TBP) are also required. This "knowledge" interacts with various forms of internal and external information such as personal beliefs and communication of social approval or disapproval.

"Ecological models" is an umbrella for various models utilizing a similar approach. These were sometimes referred to as "emerging" theories in the textbooks, and did not have clearly defined constructs the way most did, but were included in the majority of the sources and were therefore deemed sufficiently central for inclusion in this analysis. Of these models, which generally relate back to Bronfenbrenner's (1979) ecological systems theory, the most prominent in public health today is the PRECEDE-PROCEED model (Green & Kreuter, 1999) for planning multi-level health interventions.

Ecological models offer an alternative to individual-focused theories, as they centre on the individual in conjunction with multiple levels of environment in which the individual is situated. Relationships between and among these systems levels are assumed to be ongoing and interactive, and a public health intervention is thought to have the best odds of success if it addresses multiple levels in complementary ways. Due to the lack of specificity when we lump ecological models together, information practices can only be assumed to be universally evident

in the interactions between and among the systems levels, and as part of public health interventions targeted at them. That said, some applications and adaptations of ecological models in public health (e.g., Sallis et al., 2006) include the “information environment,” a concept that has also found resonance within LIS research drawing on ecological models (e.g., Steinerová, 2010; Zhang & Kudva, 2012). While the information environment does not include individual level or interpersonal information practices, it does acknowledge many public health information interventions, along with contextual factors such as media policies and activities, and professional health care advice.

*Table 2.5 Health Behaviour Models, Role of Information Therein, and Some Implied Information Practices*

Model	Role of Information	Information Practices
	Stages of Change	
Transtheoretical model	Receipt of information raises awareness of need for change. Various types of information weighed when contemplating change. Use of information in implementing change behaviours.	Communicating Seeking and encountering Assessing and sense-making Blunting Monitoring Tailoring
Precaution-adoption process model	See transtheoretical model; also information memory/storage in precontemplation phase, recall and processing in contemplation phase, and increased emphasis on assessing information when choosing whether or not to make change.	Accessing Communicating and receiving Tailoring Processing Assessing

Model	Role of Information	Information Practices
Value-Expectancy		
Theory of reasoned action & Theory of planned behaviour	Beliefs and attitudes develop over time as a result of receiving, assessing and integrating information.	Communicating and receiving information, including subjective/community norms Using internal/intrinsic information
Health belief model	See theory of reasoned action; also new information received and assessed as valuable can act as a “cue to action,” inspiring behaviour change.	Using internal/intrinsic information Communicating Receiving Assessing
Information-motivation-behavioural skills/strategy model	Receiving, processing, remembering, and being able to apply information can provide basis for knowledge/skills, as well as necessary motivation, for health behaviours.	Receiving Processing Remembering and recalling Appropriately using information in context
Other		
Diffusion of innovations	Receiving information, processing it and assessing it as valuable, applying it to make change. Communicating to others helps spread the idea throughout the community.	Communicating (mass and interpersonal) Receiving Processing Assessing
Social cognitive theory/ Social learning theory	Acquisition of information helps build knowledge, which is precondition for change, as well as beliefs including self-efficacy.	Acquiring Using internal/intrinsic information Communicating social norms
Ecological model(s)	Various	Unspecified communicating among systems levels, including the information environment

#### **2.1.5.2.4 Stress and Coping Theories**

In addition to the dominant models of public health behaviour reviewed in this scoping exercise, health information science researchers have incorporated theory from medical sociology and psychology that overlaps substantially with health behaviour change models. As with the major models of health behaviour, LIS research has begun to clarify information concepts within theories of social support and coping.

Social support as a determinant of or contributor to health outcomes has been a topic of interest within sociology and psychology for decades. Social support has come to include informational support by those in one's social circle as well as other types of caregiving (Cohen & Leonard, 1985; Schaefer, Coyne, & Lazarus, 1981). Health information science literature has, in recent years, taken up specific research questions related to the assistance, potential hindrance, and functioning of social support networks both online (Godbold, 2012; Yan Zhang, He, & Sang, 2013) and off (Veinot, Kim, & Meadowbrooke, 2011). Much of this work has focused on chronic illness communities.

Within health psychology and the psychiatric literature, coping with the stress of change and illness has long been a topic of interest, with information seeking, suppression and blunting, and sharing identified as adaptive coping techniques (Hamburg & Adams, 1967; Skinner, Edge, Altman, & Sherwood, 2003). The most influential model of human coping response to health-related stress is the Transactional Model of Stress and Coping (Glanz, Rimer, & Viswanath, 2008, pp. 213–219; Lazarus & Cohen, 1977), a model that has been extended at times to include information seeking. Health information science literature has begun to build on such coping theory to investigate and theorize information activities and practices—such as seeking and

avoiding information, and information network development—among people in positions of medical uncertainty (Rubenstein, 2008) or facing chronic illness (St. Jean, 2012; Veinot, 2010).

### **2.1.6 Discussion**

Information practices are commonly included or implied in core health behaviour models. Such models typically frame information as a resource, with which people do things such as seek, receive, or share. Within the field of health behaviour, there appears to be a lack of common language around information-related concepts and practices. Information is a near-ubiquitous “thing” acknowledged to influence health behaviour, but it is often unclear what exactly we are talking about when we talk about information.

The portrayal of the role of information within health behaviour models raises some concerns. One is the common conflation of the words “information” and “knowledge.” There has been much discussion within information science regarding not only the definition of “information” but the distinction between this and “knowledge.” While some (c.f. Buckland, 1991) have discussed the use of the term information to represent knowledge, it is commonly accepted that while information may attempt to *represent* knowledge (e.g., in writing) (McCreadie & Rice, 1999), there are multiple information practices and processes at work in *creating* knowledge (T. D. Wilson, 2002), and even more so in developing an identity as one who is knowledgeable. The dominant interdisciplinary model of this is the variously-attributed data-information-knowledge-wisdom hierarchy (Ackhoff, 1989). The core health behaviour models, however, appear to frequently treat these terms as if they were interchangeable concepts, as if receiving or possessing information renders an individual knowledgeable.

A second issue is the frequent decontextualization of information; the idea that information just exists, and acts the same within individuals or social groups no matter how the information

is acquired. The lack of examination of communication processes within some health behaviour models is potentially problematic, as there are multiple ways of communicating, all of which carry connotations and evoke responses beyond merely delivering information, and do not influence people uniformly. Within both information science and health behaviour, increasing attention has been paid to the importance of social context as a critical influence on behaviour, and this should be extended to examining the role of context in health-related information practices.

#### **2.1.6.1 Unpacking the Relationship Between Health Behaviour and Information Practices**

Collaborative, interdisciplinary research groups spanning health and information science have begun to investigate the relationships between information practices and health behaviours, using and expanding models that contain clearly articulated information constructs, strengthening predictive models and clarifying the constructs within conceptual models. Hirvonen and colleagues (2012) augmented the TTM with health information behaviour measures, finding correlations between particular “stages of change” and various self-reported information behaviours such as avoidance, recognition of needs, scanning, and actively seeking information. Meadowbrooke, et al. (2014) generated an expanded TPB model for predicting health behaviour intentions, which incorporated self-reported knowledge and three health information behaviours (seeking, encountering, and use in decision-making), substantially increasing the model’s predictive accuracy compared with the non-adapted TPB.

Wathen and Harris (2005) assert that the information practice elements to the TTM are so strong that the model may be viewed as essentially a theory of health information interventions, highlighting theory-based information practices that may complement the TTM, including sense-

making (Dervin, 1992), blunting, monitoring, and information tailoring. While the concepts of monitoring and blunting styles of information seeking/avoidance (Ek & Heinström, 2011; Miller, 1987), as well as health communication tailoring have seen uptake within both information science (Cortese & Lustria, 2012) and health science (Kreuter et al., 2000), some other information practice concepts have not yet been well integrated into the theory and practice of health behaviour.

Ecological and “ecosystem” models have their own history within LIS research, stretching far beyond health topics (Greyson, 2012). Along with the shift toward user-centred studies of information behaviour and practices, context has been an increasingly important element of LIS research, and ecological models have been one way scholars have approached the integration of context as an element beyond a simple “container” (Courtright, 2007) or backdrop for information activities. Some of this work builds on Bronfenbrenner’s Ecological Systems Theory (Williamson, 1998; Williamson & McGregor, 2006), applying ecological behavioural models to information research, while some—including Ecological Interface Design within Cognitive Work Analysis—also draws inspiration from earlier “ecological psychology” (Fidel, 2006, 2012; Given, 2007; Sadler & Given, 2007). Yet other information research uses “ecology” to create analogies to biological environmental settings and ecosystems (Nardi & O’Day, 2000). Although multi-level process models are beginning to emerge, which may incorporate attributes of stages of change, value-expectancy, and ecological modelling (Veinot, 2010), we have yet to see LIS take full advantage of ecological models to inform successful interventions for behavioural change. There is great potential for further experimentation along these lines.

### **2.1.6.2 Lessons for Public Health from Information Science**

Communication of health information is commonly used, in public health as well as clinical settings, as a tool to inspire and support health behaviour change. The success of such interventions is commonly assessed by correlating information campaigns with the desired health behaviour change. Surveillance programs in public health are typically assumed to be relatively invisible to the public, assessed primarily on their utility for disease monitoring and research. However, a richer understanding of the ways in which information does and does not influence health behaviour can lead us to improved effectiveness of health information interventions.

For example, a jurisdiction may have a public health program that provides nurse home visits to postpartum mothers. The program is intended to provide personalized information support and referral to “high risk” parents, as well as to screen for problems such as post-partum depression, baby failure to thrive, and domestic abuse. While the program may increase referrals to support services, and many recipients of home visits may report feeling reassured by such visits, some mothers may conversely report feeling “spied upon” and “lectured” by a “bossy stranger.” Understanding which factors—both maternal and on the part of the health information interventions themselves—influence the perceived credibility, usefulness, and trustworthiness of the home visitors can help refine the program.

Another region may run an advertising campaign against alcohol consumption in pregnancy. Advertisements on television and public transit are accompanied by brochures in clinics, and restaurant outreach, including education of wait staff and warnings in ladies’ restrooms about the dangers of drinking during pregnancy. Although this information campaign is multi-level and widely disseminated, it may fail to be associated with any change in pregnant women’s self-reported drinking choices or with any changes in fetal alcohol syndrome rates. In

order to understand this lack of behaviour change in response to information, we must investigate the target audience's experiences with this encountered information, including the ways in which population members assess the information's usefulness and credibility, sense-make within the context of existing beliefs and knowledge, and apply this information in their individual contexts. While both of these examples may have been designed with strong theoretical grounding in health behaviour models, inquiry into the nature and role of information practices within health behaviour change could improve the success of future public health information interventions.

It must also be noted that information practices—even “positive” practices such as seeking and sharing (as opposed to avoidant or deceptive practices)—may at times lead to individuals and groups choosing *not* to follow the medical advice of practitioners or public health agents. Engaged, self-efficacious, “activated” patients are associated with better health outcomes and care experiences (Hibbard & Greene, 2013), and information practices—such as seeking, accessing, and use—are often part of the description or definition of engagement/activation in health care (Hibbard, Stockard, Mahoney, & Tusler, 2004). The models of health behaviour change most prominent in the public health canon today reflect this general attitude that information is helpful in motivating and supporting positive health behaviour; however this is not always the case.

A clinical example of this might be patients' own modification of their medication dosage or schedules in order to minimize adverse effects, accommodate atypical life schedules, or resist blanket medical advice (Wolf & Veinot, 2014). In public health, parental compliance with routine childhood immunizations is one area in which a better understanding of the role of information practices in health behaviour could be key. Research has correlated online

information seeking with lower perceptions of vaccine safety and effectiveness and increased opting-out of one or more routine vaccinations (Jones et al., 2012). Although it is believed that online information sharing may be important in shaping parental decisions about childhood immunizations, efforts to evaluate the effectiveness of various pro-vaccination Internet-based public health messages have found it challenging to identify any information interventions that increase parental intent to vaccinate (Nyhan, Reifler, Richey, & Freed, 2014). This may therefore be an example of counter-intuitive public health behavioural outcomes related to information practices, and requires further study.

### **2.1.6.3 Lessons for LIS from Public Health Behaviour Models and Approaches**

It is clear that LIS has much to offer scientific understanding of health behaviour, in ways that might improve public health practice and the health of individuals and populations. However, health behaviour change models could also help advance thinking about major concepts in information science. With regard to information need, for example, an examination of health behaviour models raises the question of when a deficit is a need. Is a deficit a need only when an individual is troubled by it (as commonly used in LIS literature)? Is it a need when an expert recognizes that filling that need could improve the individual's life? Or is lack of information under either of those circumstances only a need if the individual is ready to receive and use such information? The precontemplation phase within stages of change models is heavily related to the state of "incognizance" as described by St. Jean (2012), in which a person has not yet gained awareness of an existing information need, and therefore of limited ability to engage in information practices to meet that need. However, St. Jean observed incognizance across multiple stages, indicating that experiencing and overcoming incognizance may be a more

complex and iterative process than a simple accumulation of information as a resource or catalyst to support change.

In terms of information use—a concept that has been in use for a long time, yet which remains to be well plumbed in LIS (Savolainen, 2008, p. 7)—looking at information’s role within process and predictive behavioural models may help clarify certain ways in which people use information in the context of their lives. Regarding context itself, while public health may not have the concept completely figured out, several health behaviour models, including predictive models and ecological models, are more advanced than most LIS models in terms of identifying (and sometimes quantifying) specific aspects of environment, setting, and socio-cultural factors. Information scientists can learn from this as we continue to clarify the importance of various contextual elements in information needs, seeking, sharing, and use.

Furthermore, public health’s use of behavioural models to inform an interventionist approach with information may inform and challenge information science. Behavioural research in information science tends to concentrate on the user side, particularly self-identified needs and seeking. Health behaviour, on the other hand, tends to focus on communications to individuals and populations, whose needs are often perceived more strongly by others. Related to this interventionist perspective, public health as a discipline is highly concerned with policy-making, whereas information behaviour and practices research has rarely sought to extend findings to explicitly influence public policy. By exploring health behaviour models from an information perspective, and applying interdisciplinary behavioural models such as ecological systems theory, information scientists might also adopt a multi-level approach to issues ranging from student plagiarism to accurate assessment of online health information, working with individuals and small groups to change information practices, with communities to collectively address

information issues, and higher level institutions such as governments to facilitate desired public information behaviours and de-incentivize negative ones.

#### **2.1.6.4 Future Work in This Area**

There is much potential for further development of the knowledge base related to the interplay of information practices and health behaviour. Firstly, in order to gain a more in-depth understanding of current understandings and use of “information” within empirical research and practice within health and health care, researchers might undertake full systematic reviews of specific questions focused on high-priority health topics (e.g., cardiac care, childhood immunizations), given information practices (such as patient information seeking or mass media public health communications), or limited by health discipline (e.g., public health nursing). Such studies could add to, and expand upon the findings of, the current scoping review, possibly indicating more detailed suggestions for information science research and transdisciplinary researcher collaboration.

Second, while I have discussed select outstanding examples of health information scientists working to test, refine, and improve models of public health behaviour, there remains much work to be done in this arena. A particularly salient area within this stream of research is the question of when and how information practices may actually act to diminish health. Both quantitative research (e.g., for predictive modelling and understanding stage-of-change correlation) and qualitative research (e.g., generating phenomenological and ethnographic knowledge regarding sub-populations and deviations to expected health behaviour change pathways) are necessary in this endeavour, and it seems likely that the richest work will emerge from collaborations between information scientists and health researchers.

### 2.1.7 Conclusion

Information is framed as an instigating or foundational element in many core models of health behaviour change. Information interventions, often guided by such models, are a mainstay of public health practice. However, our understanding of the *information* practices involved—in other words *how* information works (or does not work) within the contexts of people’s real lives to impact health behaviour—is quite limited. This limited comprehension hinders our ability to effectively use information to intervene in the health behaviour of individuals and populations.

A lack of critical examination of the multitude of information practices within health behaviour models may lead to a lack of understanding of the potential of a given information intervention. Peeking into the black box of “information” within health behaviour models, and asking how people truly engage with health information, may lead to an improved understanding of causal mechanisms for health behaviour. Borrowing from information practice research and theory, and pursuing further research by interdisciplinary teams spanning information science and public health, can lead us to a better science of health promotion. Unpacking and more deeply investigating information-related constructs and activities within health behaviour change processes can aid us in improving effectiveness of public health information interventions, ultimately strengthening our ability to use information to improve health.

Information science also stands to benefit from such interdisciplinary work. Health behaviour models help advance thinking about major concepts, such as needs, use, and context, in information science. Additionally, behavioural researchers in information science could learn from public health’s interventionist approach, leading to greater impact of information research within and beyond health.

## **2.2 Health-Related Everyday Life Information Seeking Research: A Scoping Review of the LIS Literature**

Within the field of library and information science (LIS), and specifically the sub-discipline that focuses on information behaviour and practices, information seeking is a core concept. Information seeking is used both to refer to a discrete activity—that of “purposive seeking for information as a consequence of a need” (T. D. Wilson, 2000, p. 49)—and more broadly as an umbrella term for a cluster of activities related to information needs, seeking, and use (Savolainen, 2007). The shift in information seeking research toward increased focus on information users, and greater acknowledgement of the contexts in which they operate and live, has led to the emergence of the concept of everyday life information seeking, or ELIS (Savolainen, 1995). ELIS specifically addresses the ways in which people seek and use information within their own socially-constructed contexts or “ways of life” (Savolainen, 2005, p. 143)

Health information seeking research may be divided into two broad categories: 1) research focused on work- or school-related information seeking of health professionals, such as medical practitioners, health policy makers, or health sciences students; and 2) research focused on the health information seeking of non-professionals (or professionals seeking for personal purposes), a group often referred to as consumers, patients, or the public. This second category of health information seeking may be considered health ELIS, as it investigates people seeking health information in the context of their own lives, situated within their own communities, structures, values and norms.

Drawing on Case’s recognition that work-related roles and non-work-related roles are not entirely distinct (Case, 2006, p. 246), I will treat health ELIS as information seeking of any

people (including health professionals) when performed for personal or social reasons (e.g., helping a relative), as opposed to for a work task (e.g., diagnosing a patient). The “everyday” nature of health ELIS does not imply that health ELIS is necessarily an activity that takes place every day of one’s routine life (although for some it might), but rather that this non-professional type of seeking of information for oneself or members of one’s community happens within, and interacts with, the context of the constructed space of one’s social groups (e.g., those based on social class, ethnicity, gender), geography, and era. Health ELIS may be of critical importance, for example seeking information after a new cancer diagnosis, or not very personally significant, such as in the case of researching to satisfy one’s curiosity about a celebrity’s health condition. It may be extremely time-sensitive, as in the case of information urgently needed to assess the seriousness of a child’s injury, or it may be low-grade and ongoing, for example when monitoring sources for healthy recipes.

The widespread availability of the Internet has brought health ELIS to new prominence, as non-professionals may now in many cases access medical information previously restricted to health professional audiences. In the years since the birth of the consumer health movement, advent of the World Wide Web, and conceptualization of ELIS, there has been an increase in health information seeking research, including health ELIS research. However, it is unclear the extent to which health ELIS research is addressing health issues that have been deemed important by clinical or public health priority-setters, including a diversity of participants, and incorporating the concept of context.

Previous reviews have employed a variety of approaches in order to synthesize portions of the immense, multidisciplinary body of work on health information seeking. The majority of these have focused on the biomedical and health sciences literature. A concept analysis of health

information seeking behaviour research from 1982-2006 that was indexed in health databases (Lambert & Loiselle, 2007) identified a lack of clarity around the concept of health information seeking behaviour within health research articles and books. Abubakar and Harande's (2010) bibliometric "snapshot" of information seeking behaviour publications 2000-2007 indexed in MEDLINE created a picture of a rapidly growing field of study, dominated by English- and French-language literature in nursing and psychology. A recent review of adolescent health information behaviour research 2000-2012 (Kim & Syn, 2014) echoed that finding of a growing field of study, and reported on methods, interdisciplinarity and international collaborations within the literature.

Three reviews have focused specifically on online "consumer"<sup>5</sup> information seeking, often justified by statistics on the high and increasing numbers of members of the public who report seeking health information online. Boot and Meijman (2010) conducted a multidisciplinary systematic review of handbooks and reviews, in order to identify motivations for online health information seeking. The European Centre for Disease Control and Prevention produced a report (O. Higgins, Sixsmith, Barry, & Domegan, 2011) that summarized 43 English-language studies published from 2006–2010 in various disciplines, compiling a brief profile of online health information seeking by consumers and professionals. Cyrus (2014) reviewed 10 studies published from 2012–2013 in the biomedical literature that focused on internet access

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<sup>5</sup> While much health ELIS research could also be called "consumer health" information seeking research, the phrase consumer health carries a variety of implications. Connotations of the term range from a philosophy of service user oversight of and input into health services (Moloney & Paul, 1991) to positioning health care as a normal market good and health as a form of capital (Jost, 2007). The terms consumer, customer, client, and citizen are all sometimes used to refer to users of health services (Hunt, 1997), although some laypeople do not identify with any of these labels, and not all consume, or use, health services. Given the variety of connotations to the term "consumer," and the non-identification of some non-professional health information seekers with a consumer identity, this review will instead use the LIS-native term "everyday life."

and use for health information seeking, focusing on persistent findings of age- and race-based disparities in access. There has yet to be a published overview documenting and analyzing the LIS literature investigating health ELIS. In this review I therefore aim to summarize the range and nature of published LIS research investigating health ELIS and to identify gaps and opportunities for future health ELIS investigations, via a systematic and transparent scoping review that maps the literature.

### **2.2.1 Methods**

In order to explore the health ELIS literature, identify trends and themes therein, and map the use of theories, methods, and sources of evidence, I undertook a scoping study (Arksey & O'Malley, 2005; Grant & Booth, 2009; Levac et al., 2010). Following the Arksey and O'Malley (2005) framework, this involves: identifying the research question, identifying relevant studies, selecting studies for inclusion, data extraction, and reporting the results.

#### **2.2.1.1 Objectives**

This scoping review aimed to assess the ways everyday life health information seeking has been studied. Within this overarching objective, several specific questions emerged:

- What are the trends in health ELIS research, in terms of publication year, journals, author country?
- What methods and types of data are used in this research?
- What populations are studied, in terms of age, sex, geographic location?
- What health issues and conditions are studied?
- What theoretical framing, if any, is used to guide and inform these investigations?
- In what ways is context incorporated into these studies of ELIS?

### **2.2.1.2 Inclusion Criteria**

I sought empirical research articles, chapters or monographs that focused primarily or entirely on health-related everyday life information seeking. Eligible study populations were humans engaged in “everyday life,” consumer, or patient health information seeking. No interventions or comparison groups were necessary for eligibility. Outcomes were required to relate to information seeking actions, practices, or values. All empirical (observable data-based) study designs were eligible for inclusion: observational and experimental studies; qualitative, quantitative, or mixed/multiple method; with any data collection and analysis methods including literature reviews and meta-analyses. Grounds for exclusion were articles that: did not contain a human health focus, did not contain a substantive focus on information seeking, were program evaluation rather than research, or were commentary or theory rather than empirical articles.

### **2.2.1.3 Search Strategy**

In order to identify LIS research on everyday life health information seeking, I searched within three LIS-focused databases: Library, Information Science, and Technology Abstracts (LISTA); Library and Information Science Abstracts (LISA); and Library Literature & Information Science with Full Text. Searches combined synonyms for health (e.g., health OR medical OR illness) and information seeking behaviour. Results were limited to English, French, or Spanish language. Appendix B contains the exact searches run within each database.

### **2.2.1.4 Study Selection**

All citations from the database searches were exported to a RefWorks citation management database. These were de-duplicated and then subjected to three levels of screening to assess whether each article met inclusion criteria: title/citation level screening, abstract

screening of all articles included after title screen, and full-text screening of the entire articles that passed the abstract screen.

### **2.2.1.5 Data Extraction and Mapping**

All articles included after full-text review were put through a data extraction process in which they were abstracted into an Excel spreadsheet for analysis. This spreadsheet captured citation data as well as information on the study's research question, population, and methodology. Appendix B contains a list of all fields in the data extraction template. Based on the extracted data from the included studies, descriptive bibliometric analysis was conducted, along with mapping of the health issues, populations, methods, and theories that appeared in the literature.

## **2.2.2 Results**

### **2.2.2.1 Search and Screening**

A total of 424 articles were imported into the citation management database. De-duplication removed 75 for 349 remaining references. These citations were then subject to three levels of examination for possible inclusion in the literature mapping analysis.

Title level citation review was first conducted to remove the following: conference abstracts; articles written in any language other than English, French, or Spanish; studies focusing on the work-related information seeking of health care providers, health sciences students, academics, librarians, and other professionals; studies examining only intention-to-seek and not actual information behaviours, and other non-relevant items. Following title screening, 176 citations advanced to abstract screening.

Abstract level selection resulted in the removal of additional citations that were commentaries, articles with a non-health focus, focused on information systems or programs

rather than users, investigating non-seeking information activities, or centred on professional health information seeking. After abstract screening, 110 citations remained for full-text review.

Full text review was conducted on all 110 articles. Twenty-one of these articles were excluded due to failing to meet inclusion criteria (reasons detailed in Figure 2.1); the remaining 89 were put through the data extraction process. The complete citation screening and selection process is portrayed in a modified PRISMA 2009 Flow Diagram (Liberati et al., 2009) in Figure 2.1.

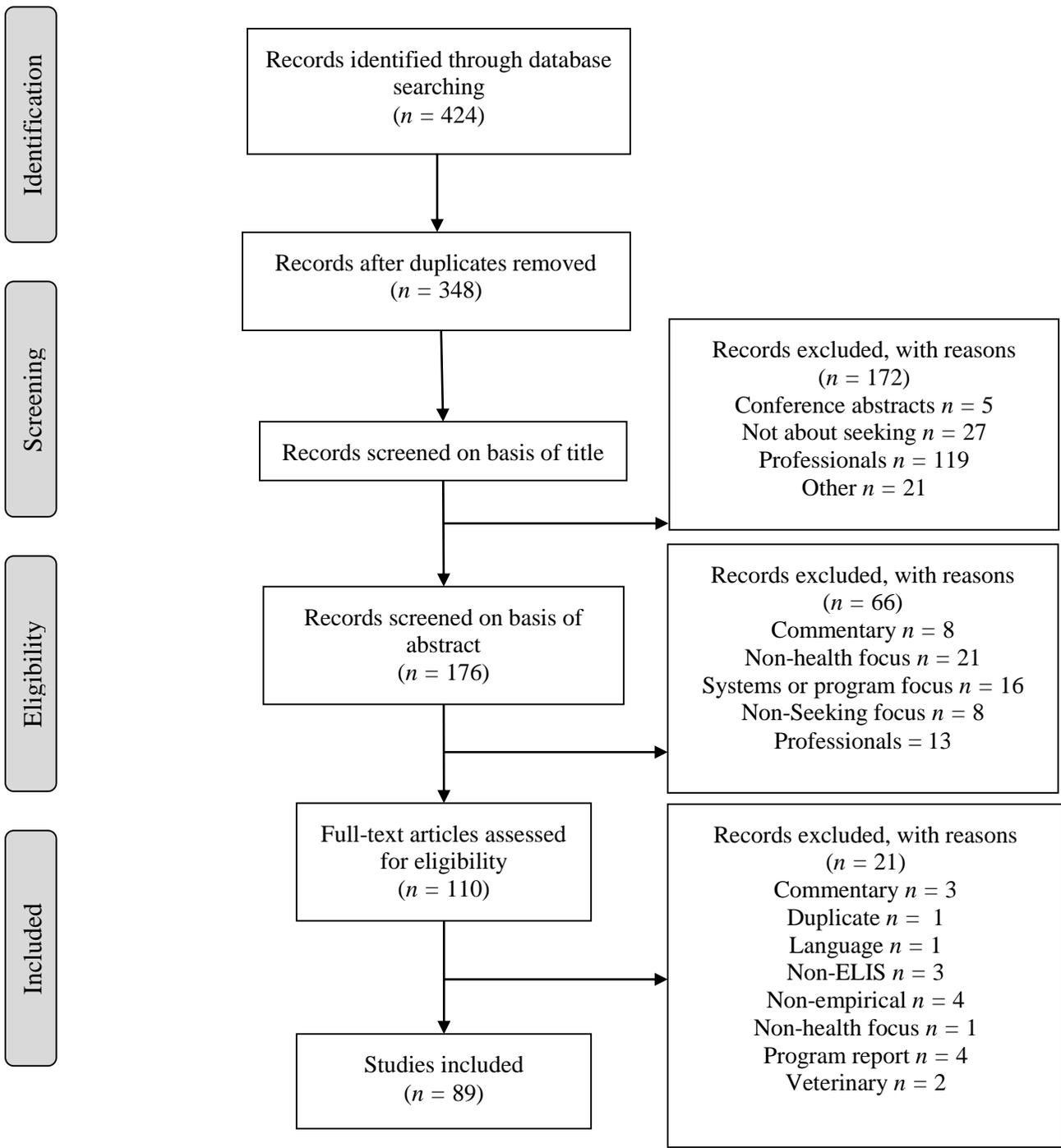
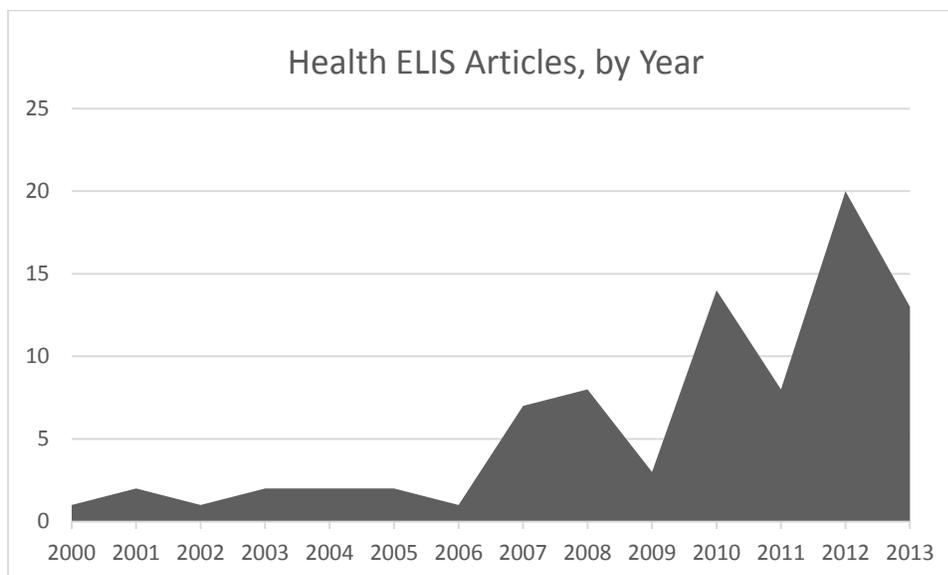


Figure 2.1 Modified PRISMA Flow Diagram of Search and Screening Process

## 2.2.2.2 Literature Mapping

### 2.2.2.2.1 Publication Trends

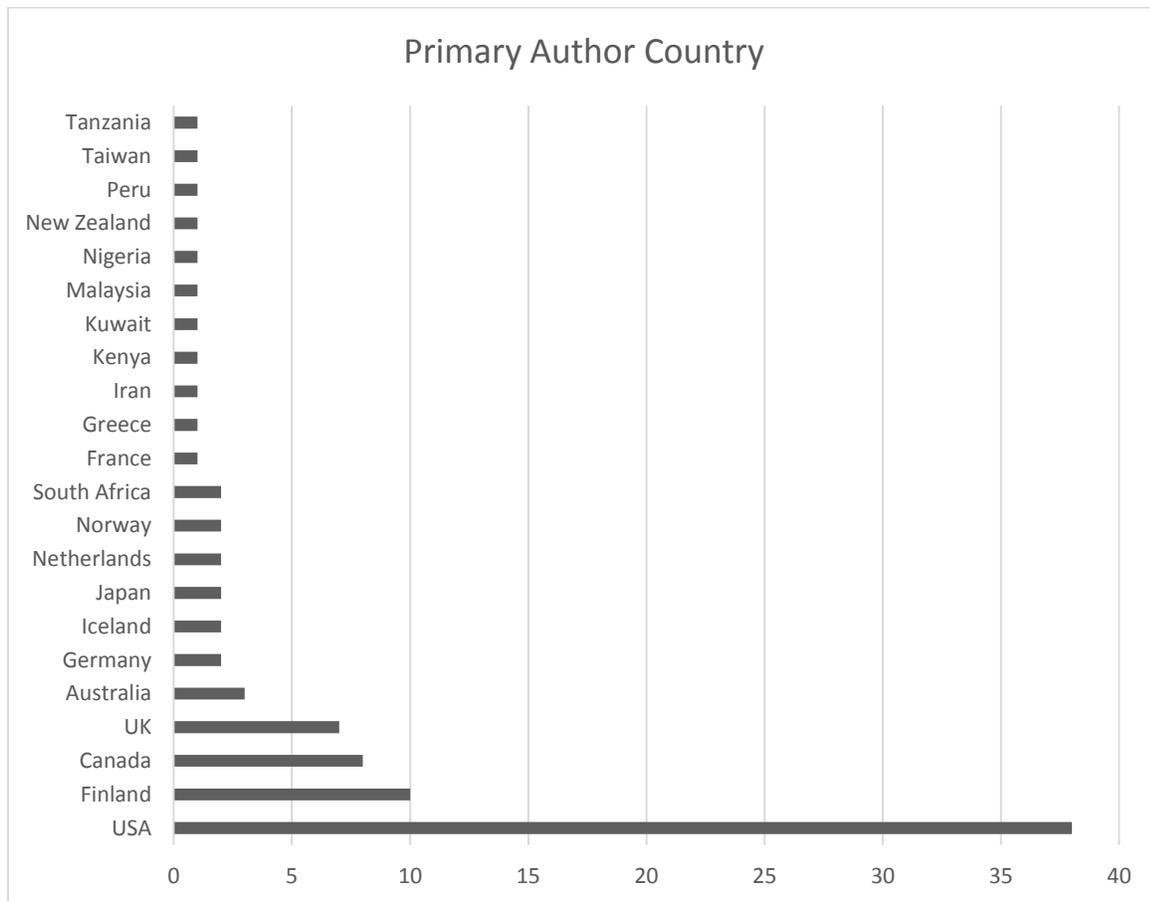
The earliest article within this sample was published in the year 2000. One or two articles were published per year through the early 2000's, until a sudden rise ( $n = 7$ ) in 2007. Each year since then has seen publication of more than a couple health ELIS articles, ranging from a low of three in 2009 to a high-to-date of 20 in 2012. The literature search, conducted in early August 2014, resulted in nine articles published in 2014; however, this set of articles has been omitted from the figure in order to avoid a misleadingly incomplete tally for the year. Figure 2.2 illustrates the upward trend in publication of health ELIS articles since the turn of the century.



*Figure 2.2 Health ELIS Articles, by Year of Publication*

The 89 included articles were included in a wide range of journals indexed in LIS databases. Thirty-seven journals total were represented in this sample, with over half ( $n = 23$ ) of them publishing only one included article. The journals with greater than two published Health ELIS articles were *Information Research* ( $n = 10$ ), *Journal of Medical Internet Research* ( $n = 9$ ),

*Journal of the Association for Information Science & Technology* ( $n = 9$ ), *Health Information and Libraries Journal* ( $n = 6$ ), *Health Informatics Journal* ( $n = 5$ ), *Journal of Documentation* ( $n = 5$ ), *Journal of the Medical Library Association* ( $n = 4$ ), *Library and Information Science Research* ( $n = 4$ ), and *Journal of Consumer Health on the Internet* ( $n = 3$ ).



*Figure 2.3 Health ELIS Articles, by Primary Author Affiliation Country*

Health ELIS research is an international endeavour, even as represented within databases that strongly favour English-language publications. First (or sole) authors of articles within this study hailed from 22 countries, representing all six populated continents (see Figure 2.3).

However, fully half of these countries were only represented by one first-authored article within

this sample. Most primary authors hailed from the wealthier countries within the group. While the United States (USA) was by far the most represented among first authorship affiliations, with 38 articles in total, Finland ( $n = 10$  articles) and Canada ( $n = 8$ ) published more Health ELIS articles per capita population, and the United Kingdom (UK) ( $n = 7$ ) was roughly as productive in this area as the United States.

#### 2.2.2.2.2 Research Methods and Data Sources

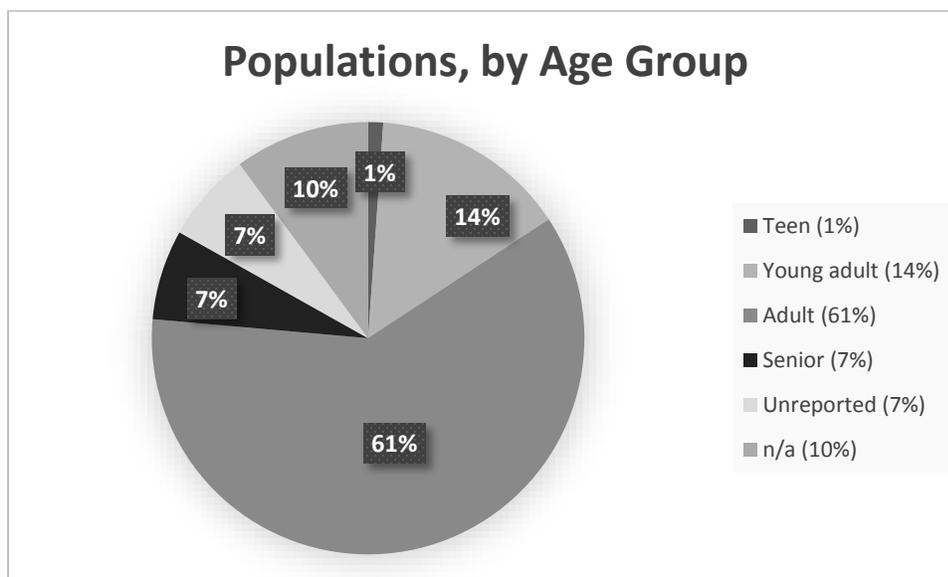
Within the 89 included articles, approximately 50% ( $n = 45$ ) employed quantitative research designs. Twenty-four percent ( $n = 21$ ) were qualitative in nature, and about 16% used a combination of qualitative and quantitative methods (classified in this study as “mixed” method). Additionally, there were nine literature review articles, two of which were meta-analyses: one quantitative and one mixed-method.

*Table 2.6 Health ELIS Data Collection Method, by Research Method*

Quantitative ( $n = 45$ )		Qualitative ( $n = 21$ )		Mixed ( $n = 14$ )	
Survey, in-person	24	Interviews	13	Interviews	9
Survey, telephone	12	Observation	4	Surveys	5
Survey, mail	9	Web content	3	Web content	3
Survey, online	7	Focus groups	2	Observed searches	2
Observed or logged searches	4	Survey, online or phone	2	Focus groups	1
Secondary use of dataset	2	Secondary use of narratives	1		
Internet data	1				

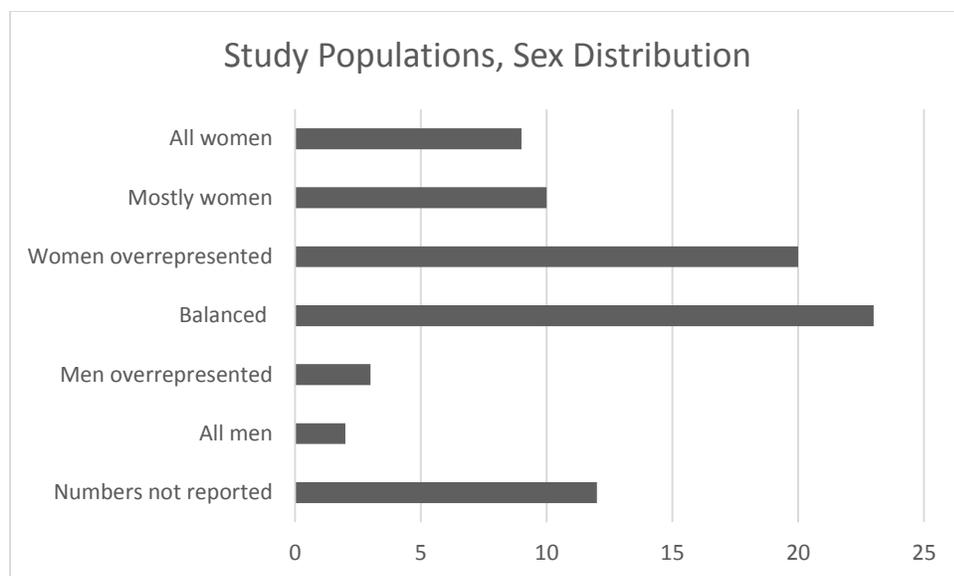
#### 2.2.2.2.4 Study Populations

Some studies included in this review did not have human study participants or subjects per say, due to employing methods such as content analysis of online data of unknown origin. However, most did have what one would call a study population. The smallest population in any of the included studies comprised eight participants, while the largest was over 130,000. The majority of these studies ( $n = 54$ ) investigated the health ELIS of adults (see Figure 2.4).



*Figure 2.4 Ages of Populations Studied within Health ELIS Research*

Adult was defined, however, in different ways depending on context—for example in one setting it might be 15 and over, while in another it might be 18–65. Young adults were the second most commonly studied age group ( $n = 13$ ), and this age range while still somewhat more variable was consistently within the range of 17–30 years. Senior, also referred to as elder and fourth age, populations were the subject of six studies, and one study focused on teens (age 11–19). Six studies did not report their participants' ages, possibly intending the reader to infer that they were adults. An additional nine studies were reviews or did not have human subject data to report.



*Figure 2.5 Participant Sex Distribution within Health ELIS Study Populations*

It appears that women may be overrepresented in health ELIS research overall (see Figure 2.5). While 13% ( $n = 12$ ) of all included studies did not report the sex breakdown of participants, the majority did. Among those reporting participant sex,<sup>6</sup> 26% ( $n = 23$ ) had a balance of male and female participants, with balance defined as no greater than a 55% majority of either sex. In 22% ( $n = 20$ ) of the studies, women were overrepresented (within 56–69%) for no apparent theoretical reason in the participant population, and in 11% ( $n = 10$ ) of the studies participants were mostly (70–99%) women. Three studies included a population in which men were overrepresented. A subset of studies—two focusing on men and nine on women or girls—

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<sup>6</sup> In some—indeed many—cases the “sex” recorded for a participant may have been gender (e.g., gender as perceived by the interviewer or identified by study participant) rather than strictly legal or biological sex; however there was rarely description of the method of classifying people, and in all but one study the only reported categories were the hegemonic gender binary of male/female or man/woman. In absence of any more nuanced presentation within the literature in general, this review is presenting the demographics as presumed sex rather than gender.

were single-sex only; however, these acknowledged the gendered and sexed nature of their populations in ways that other studies rarely did.

Geographically, the populations that have been studied closely align with the countries of the primary authors of the studies. American populations were studied in 30 articles, Canadians in nine, Finns in eight, and populations within the United Kingdom in seven. Eight studies did not know or did not report the geographic location of their populations, often due to using online data collection methods. When grouping the populations of the remaining studies by region, there were eight studies of populations elsewhere in Europe, four in African countries, four in Australasia, three in the Caribbean (including Puerto Rico, which was not included in the USA in this classification scheme), two in Asia, and one in South America.

#### **2.2.2.2.5 Health Topics of Interest**

Fully half ( $n = 47$ ) of the articles in this sample focused on no particular health topic or issue. Beyond that, there were 23 different health topics represented in the literature. Five studies focused on general health/nutrition/wellness, and five also on HIV/AIDS. Four were on general cancer information, and four also on diabetes-related issues. Two studies each investigated ELIS related to breast cancer, child illness, health or information literacy, perinatal (maternity) health, and sexual health/STIs. The remaining 13 health topics were featured in just a single study within this sample.

#### **2.2.2.2.6 Conceptualizing Health ELIS**

Use of theory and conceptual models within this literature were inconsistent. Thirty-five articles did not appear to have any particular theoretical grounding. Among the remaining 54 articles, 55 models or theoretical approaches were used. The origins of these models spanned disciplines, including: psychology, sociology, LIS, health behaviour, informatics, and computer

science. Forty-three of these theories and models were only cited in a single article; however certain ones were drawn upon in multiple articles.

The most commonly-cited conceptual models within this set of articles, with four studies claiming to use them as conceptual framework, were both core LIS-originated<sup>7</sup> theories: Savolainen's everyday life information seeking (ELIS) (Savolainen, 1995, 2005, 2009a) and Wilson's information behaviour models (various revisions have been grouped for this analysis) (T. D. Wilson, 1981, 1994, 1997, 1999). Three studies were based in each of positioning theory (Harré & Langenhove, 1998; Harré & Moghaddam, 2003) and the theory of planned behaviour (TPB) (Ajzen, 1985, 1991), with one additional article citing the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980), predecessor to the TPB. Positioning theory and the TPB/TRA originate in psychology and have, respectively, an emphasis on social construction of norms and on predictors of health behaviour.

An additional eight models or theories were the explicit basis for two studies in the sample. Four of these could be said to come from LIS: Fisher's information grounds model for social information exchange (K. E. Fisher, 2005; K. E. Fisher, Durrance, & Hinton, 2004; K. E. Fisher & Naumer, 2006), Kuhlthau's information search process based on student information seeking (Kuhlthau, 1991; Kuhlthau, Heinström, & Todd, 2008), Dervin's sense-making (Dervin, 1992), an adaptation of social sciences sensemaking theory to information practices, and the technology acceptance model (F. D. Davis, 1989), an information systems adaptation of TRA.

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<sup>7</sup> I acknowledge the slippery use of the word "originated" when applied to theories and models, especially within relatively modern disciplines such as LIS (as opposed to, for instance, philosophy). While naturally LIS models build on theory from other disciplines, there are some that have been adapted and branded strongly enough to LIS that, they as a group may be considered to be "owned" by LIS as a discipline. They are distinguished by that fact from models that may be used in LIS research but borrowed from other disciplines (e.g., psychology) and not substantially changed by application to information behaviours, issues, and practices.

The four that come directly from other disciplines were: practice theory (Bourdieu, 1977), regulatory focus theory (E. T. Higgins, 2005), stress and coping theory (Lazarus & Cohen, 1977; Lazarus & Folkman, 1987), and locus of control (Rotter, 1966). These “borrowed” social science theories are most strongly associated with sociology (practices) and psychology (the other three). The remaining 43 models span disciplines, including LIS, computer science, health behaviour, psychology, sociology, and general social sciences theories.

#### **2.2.2.2.7 Context**

Few studies explicitly discussed context within these health ELIS studies. Nearly half ( $n = 43$ ) did not incorporate information user context in any way. The most common ways context was made visible within the articles was via consideration of geographic place (either physical such as Texas or conceptual such as online) ( $n = 16$ ), by aiming to take into consideration individual level characteristics as influencers of information seeking ( $n = 15$ ), and considering cultural factors such as norms and values ( $n = 12$ ). An additional eight articles considered the context of the specific health care system as affecting health ELIS, four included situational factors (e.g., being an immigrant), another four addressed social networks, three included the disease or condition, and two the social determinants of health.

#### **2.2.2.3 Limitations**

This scoping study was not exhaustive in nature, as a full systematic review would be. Monographs such as dissertations and books were not captured by this study’s approach. The results are not inclusive of the entirety of all health ELIS research, but rather only that subset published in journals indexed in LISA, LISTA, or Library Literature. While many LIS scholars who study health ELIS publish beyond LIS-indexed journals (e.g., McKenzie, 2006), it is reasonable to assume that most also publish within LIS journals; therefore, scoping the LIS

literature should still give us a somewhat representative snapshot of the researchers active in the field. What remains unanswered, however, is whether the health ELIS research published in LIS journals differs from that published in medical journals.

Levac and colleagues (2010) recognize the challenge of balancing desirability of a scoping study with breadth and comprehensiveness. In defining its scope, this study took the approach of a narrow disciplinary reach yet unlimited publication date span in order to observe publication trends over time and validate previous assertions that health ELIS research is increasing. Previous reviews of health information seeking research have concentrated largely on subsets of the biomedical research, typically by health topic (e.g., Cyrus, 2014; Fourie, 2013) or comparing disciplinary approaches to studying health information seeking (e.g., Boot & Meijman, 2010). This scoping review, focused on LIS research and with no publication date limits, makes a unique contribution by mapping literature yet to be synthesized and comprehensively reviewed.

### **2.2.3 Discussion**

According to the World Health Organization (WHO), nearly half the world's deaths are caused by the top two killers: ischemic heart disease and stroke (World Health Organization, 2014b). The next three top causes of death are respiratory/pulmonary diseases and cancers. Several of these deaths, and one in 10 of all deaths worldwide, while officially recorded according to disease, are caused by tobacco. None of these health issues—cardiovascular disease, pulmonary and respiratory health, or tobacco—were the subject of any of the health ELIS research included in this review. Some diseases on the WHO's top 10 list were studied by articles in this scoping review; for example HIV/AIDS and diabetes. The subjects of study in the health ELIS literature align slightly more with the WHO's eight Millennium Development

Goals, including foci of child health, maternal health, HIV/AIDS, and environmental sustainability. However, again, only a minority of articles in this review (14) focused on these topics, with other Goals such as food security left unexplored. Additionally, while some of these health issues, such as perinatal health and nutrition, are pressing health concerns disproportionately in low-income countries and among marginalized populations in higher-income countries, most health ELIS studies concentrated on populations in high-income countries where the lead researchers were located.

Public health priorities should not be the only driver of selection of study location, population, or topic. ELIS research usually has a goal of improving our understanding of how and why humans seek information, and while context (including setting) is significant, these principles are not necessarily tied to particular health priorities. However, some amount of the knowledge generated by health ELIS research holds the potential to improve health services, health communication, and ultimately human health. Researchers should therefore consider the ethics of the gaps left in the health ELIS evidence record. More health ELIS research in the future should centre on priority health issues and populations, rather than defaulting to populations of convenience and issues of personal interest.

It may be the case that men's health ELIS is being neglected, although there is so much missing and unreported sex data in the literature that this is difficult to state conclusively. While women's health has historically been neglected in biomedicine, and women suffer more chronic illness than men, it is also the case that men on average die younger than women. Additionally, the little gender-sensitive health ELIS research we currently have (e.g., Hallyburton & Evarts, 2014; Wellstead, 2011) indicates that there may be some strong gender norms around health information seeking that merit further investigation. Future health ELIS should endeavour to at

minimum report sex or gender of research participants. Ideally, sex and gender based analysis (J. Johnson, Greaves, & Repta, 2009) will see increased uptake as well.

There appears to be little consensus around key theoretical approaches or conceptual models within health ELIS research. While major LIS theorists and core theories of health behaviour were both drawn upon in many studies, few theories or models were used with any regularity across the literature. On one hand, this highlights the strong interdisciplinary nature of the field; however it also raises a concern regarding the lack of consensus around key theories at play, and the frequent lack of any theoretical grounding at all. Assessing the incorporation of context within the included articles was a challenge, due in part to the lack of clarity around the definition of context in LIS (Courtright, 2007; J. D. Johnson, 2003), let alone development of methods or best practices to support such work.

#### **2.2.4 Conclusion**

Health ELIS research appears to be steadily increasing since 2000. While the body of work is highly international in nature, a few wealthy countries dominate the genre: the US, UK, Canada, and Finland. Over half of the published health ELIS research is quantitative in nature, and this is predominantly based on survey data. Qualitative and mixed-method studies most commonly rely on interviews. Adult women in wealthy countries appear to be disproportionately represented in the health ELIS literature, and the health topics of interest within this research shows little accordance with public health priority diseases and behaviours. Use of theory and incorporation of context within this research are inconsistent. This rapidly growing sub-discipline of information seeking research has reached the point at which discussions are warranted regarding the development of a cohesive core body of theory and conceptual

grounding, and the potential for closer alignment of health ELIS research with research into priority diseases and health behaviours.

### **2.3 Gaps in the Literature to Be Addressed by the Current Study**

Within health behaviour models, information is positioned as a key instigating or foundational construct. Information interventions, often guided by such models, are a mainstay of population and public health practice aiming to shape the health behaviour of target populations. While emergent research indicates that explicating the role of information, and specific information activities and practices, may strengthen the utility of health behaviour models, there remains much work to be done in this area. Investigating, documenting, and theorizing the ways health information affects the lives, experiences, and behaviours of target populations can help improve the accuracy of health behaviour models, improving the likelihood that interventions based on such models will be effective.

Information research focused on understanding everyday life health information seeking and practices carries the potential to inform refinements to health behaviour models. However, current research in the field of LIS appears to have little intersection with topics or populations that are considered high-priority by health promotion authorities, limiting the potential impact of such research. If studies of health ELIS were to address populations and health topics of concern to local, national, or global health information efforts, such research could help strengthen the health behaviour models by contributing knowledge about the ways information does and does not affect target populations.

In this dissertation I aim to span the gap between the information practices of young parents and the information-based health behaviour interventions that target them. In order to do so, this study explores the everyday life health information practices of a population that is

considered a public health priority within the North American context (Hill, Uris, & Bauer, 2007; Public Health Agency of Canada, 2011) and is therefore the target of multiple, sometimes intensive, health information interventions built on current understandings of the role of information in health behaviour change. Once a basic understanding of the ways young parents interact with health information within their real-life social contexts is achieved, I focus on the construction of expertise in young parent social information worlds, in order to investigate the ways young parents are positioned with relation to experience and knowledge. Finally, I turn my analytic lens to the population health information interventions that target young parents, documenting the ways that such interventions affect young parents, and considering the ethics of such interventions aimed at improving their health behaviour.

## **Chapter 3: Health Information Practices of Young Parents**

In the postwar era of the 20<sup>th</sup> century, the medical establishment asserted that the perinatal period was an ideal time to educate mothers on health issues, and that (due to the increasing medicalization of pregnancy and childbirth) health professionals were ideally positioned to deliver such education (A. Davis, 2012). As a result, health systems have invested resources in several forms of information interventions aimed at educating and monitoring pregnant women and parents of young children.

Because of the persistent conceptualization of young pregnancy as a social and medical problem within Western modernity (Bonell, 2004; Furstenberg, 1976; Kelly, 2000; Luker, 1997), and of teenagers and young adults as inexperienced and “risky” individuals with poor decision making skills (Kelly, 2007; Shoveller & Johnson, 2006), a number of information-intensive interventions have targeted young parents. Despite societal investment in providing health information to young parents, we know little about the health information practices of young parents themselves.

### **3.1 Background: Health Information Practices of Young People, and of Parents**

While I found no published research<sup>8</sup> that specifically investigates the information practises of young parents, there are related literatures upon which this research may draw. These include research on youth sexual and reproductive health information seeking, studies of parental

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<sup>8</sup> One unpublished student paper was found (Zieroth, 2007), which was delivered at a conference that did not publish full proceedings.

information practices and behaviour, and investigations of contemporary Western practices of intensive parenting.

The body of LIS research focusing on adolescents' information practices is small, since most research focuses on either adults or children (Agosto, 2011). Within the extant literature, everyday life studies of teens are in the minority, compared with those focusing on solo or group school tasks (Bernier, 2007). Researchers have only just begun to theorize the everyday life information seeking (Agosto, Abbas, & Naughton, 2012; Agosto & Hughes-Hassell, 2006) and other non-academic information practices of adolescents. None of this research has addressed the information practices of teenage parents, although a small amount has investigated information needs and seeking related to sexual and reproductive health including sexual orientation issues.

Burek Pierce (2007) reviewed the literature on adolescent sexual and reproductive health information needs, finding that information seeking research on the sexual and reproductive health of youth is primarily being done by other, health-related, disciplines—sometimes with findings that are at odds with LIS theory and practice. LIS literature in this area has noted the presence of information needs, observed the potential for stigma and negative reactions on behalf of information providers, and documented the inclination for online information seeking among youth. This research has focused particularly on topics prone to stigma, centring primarily on access, confidentiality, and use of electronic sources, rather than the face-to-face interactions, mass media, and knowledge/attitudes that are the subject of exploration by health services and sciences research. Youth sexual health researchers outside of LIS are turning increasing attention to the role of the Internet in providing confidential/private information and services to youth (Barman-Adhikari & Rice, 2011; N. J. Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005; Hottes et al., 2012; Shoveller, Knight, Davis, Gilbert, & Ogilvie, 2012), but these studies rarely draw

upon information practices or information behaviour theory. Rather, these studies tend to conduct surveys of practices with little conceptual underpinning, or aim to test or evaluate new online service models. As noted by Burek-Pierce (2007), such research has identified myriad gaps in access to sexual health information for youth, and suggests that increased information could alleviate related health inequities.

Some information research has focused on the information practices of mothers, often focused on maternal-child health. McKenzie's Canadian research on the baby-feeding information practices of mothers expecting twins (McKenzie, 2006b), the midwife-client relationship (McKenzie, 2002, 2004, 2006a, 2009, 2010), and everyday life information practices of mothers (Carey, McKechnie, & McKenzie, 2001; McKenzie, 2003), provide insight into active and passive information seeking practices of mothers, as well as exchanges of information between women and their maternity care providers. Outside of Canada there are a handful of qualitative studies focused on specific populations. Fisher and colleagues explored peer information sharing "grounds" of stay-at-home mothers in the United States (US) (K. E. Fisher & Landry, 2007). Davies and Bath (2002) conducted a focus group and follow-up interviews with Somali immigrants to the UK regarding their maternity information sources, Bernhardt and Felter (2004) conducted focus groups of mothers with young children in the Southeastern US about online perinatal and pediatric health information seeking, and Szwajcer and colleagues (2005) conducted focus group interviews about health and nutrition with women in the Netherlands who were, or wanted to become, pregnant.

All of these projects were qualitative in nature, using various research and analytic designs, and were retrospective in their orientation. McKenzie did attempt to conduct multiple interviews over time in her twin baby-feeding studies, but found that retaining a cohort for

follow-up after birth was challenging. McKenzie, Carey, and Fisher grounded their studies strongly in Library and Information Science (LIS) theory, and included observation as a triangulating data collection method. The other explorations relied primarily on focus groups and concentrated largely on information sources and seeking behaviours, finding preferences for interpersonal and web-based information, credibility assessment concerns with online information, and shifts in information seeking strategies depending on pregnancy stage.

The above investigations into the information seeking behaviours and practices of mothers take place within contemporary western contexts dominated by what Hays (1996) called “intensive mothering.” Intensive mothering (sometimes expanded to “intensive parenting”) is an ideology that places the onus on mothers (or in some cases parents of all genders/sexes) to seek and use authoritative and scientific information to manage the risks to their own child’s safety and development (D. Lupton, 2014; Romagnoli & Wall, 2012). Although highly associated with middle class mothers (Afflerback et al., 2013; Fox, 2006), intensive mothering ideals are promoted and reinforced to marginalized mothers as well (Romagnoli & Wall, 2012). This underlying ideology, while rarely explicitly acknowledged in studies of parental information behaviours, undergirds the research questions, as well as findings, within contemporary western studies of maternal information practices.

### **3.1 Objectives of the Current Study**

The current study describes the health information practices of a sample of young parents in order to:

- 1) Document the ways in which these young parents engage in health-related everyday life information practices such as seeking, use, and sharing;

- 2) Identify how those health-related information practices connect with, contradict, or relate to each other; and
- 3) Examine the ways in which these information practices potentially inform health decisions and behaviour.

## **3.2 Methods**

### **3.2.1 Study Design and Conceptual Approach**

My study design and conceptual approach were informed by practice theory (Bourdieu, 1977, 1998; Heilbron, 2011; McKenzie, 2003; Savolainen, 2008) and a constructionist sociology of knowledge and information (Berger & Luckmann, 1967; Camic et al., 2011; Tuominen & Savolainen, 1997), as well as intersectional feminisms (P. H. Collins, 2000; Hankivsky, 2012; hooks, 1984; Moraga & Anzaldúa, 1984). The techniques used in the current study were guided by a constructivist grounded theory approach (Charmaz, 2007, 2009), including the techniques for sampling, descriptive analysis and theory-building.

This study focuses on socially constructed information practices, rather than taking a psychological (cognitive or behaviourist) approach to information-related activities. It is understood that the meanings of information practices are ever shifting, as part of an active and evolving social, geographical, and political context. Additionally, in this study the significance of each individual study participant's multifaceted identity is recognized, which, along with an individual's life experiences, locates her or him socially within multiple overlapping and intersecting hierarchies of privilege and oppression in western culture—hierarchies that structure access to information as well as other forms of social and economic capital.

### 3.2.2 Study Setting

This study took place in the Greater Vancouver region of British Columbia, Canada. This metropolitan area, the third largest in the country, is home to 2.3 million people (Statistics Canada, 2012). British Columbia echoes larger Canadian trends toward later childbearing, with 3% ( $n = 1314$ ) of births in 2010 to mothers under the age of 20 (Statistics Canada, 2013a). However, within that low overall rate of young childbearing, there is dramatic variation; within the city of Vancouver alone neighbourhood rates of teen fertility range from 1.3 to 9.8 per 1,000 young women age 15-19.

Within Greater Vancouver there is a patchwork of programs and services aimed at supporting young parents, as well as improving the health and welfare of their children. Key among these is the Young Parent Programs (YPPs), a provincial network of school-based, community-partnered, provincially-supported programs for young parents completing secondary education. Nearly every city in Greater Vancouver hosts a YPP, which serves as a hub for collaborative programming among secondary schools, non-profit societies, childcare providers and public health entities. In addition to YPPs, various other programs exist to address the health, social, and other needs of teenagers who are pregnant and parenting, many of which collaborate with, and conduct outreach activities at, the YPPs. These community services for young parents range from pre- and post-natal education to transitional housing for teenage mothers and their children, and support groups for young mothers and fathers. While this mosaic of programs and services draws on federal data and priorities, the bulk of health care administration in Canada falls under provincial jurisdiction, and most programs are administered by local organizations, either independently or in partnership with the Province.

The setting for this research project centred on two YPPs in Greater Vancouver, as they are a staple of multisectoral young parent support in the province. Although not all recruitment and fieldwork took place at the YPPs, the two participating YPPs provided a “home base” for much of this project.

### **3.2.3 Data Collection**

I collected data via ethnographic observation and interviews from October 2013 to December 2014, during three school semesters (Fall 2013, Spring 2014, Fall 2014). The majority of the observation and interview participant recruitment took place at two school-based YPPs in the Greater Vancouver region of British Columbia. Both YPPs consisted of classes taught by public school teachers, supplemental services provided by a youth worker employed by the school board, and various visitors and field trips. One YPP was located in a classroom within the large secondary school with which it was affiliated. The associated daycare facility was also within the main school building. The other was located in a “portable” building near the associated secondary school, with the associated daycare occupying a second outbuilding. During observations I was present in the classrooms and either quietly took notes or participated in activities as was appropriate at the time. I also accompanied the YPPs on out-trips (e.g., to exercise classes, community centres) as scheduling permitted. During the three school semesters during which I collected data, I visited each YPP over the course of approximately two weeks, which translated to 3-10 school days per semester visit, depending on their schedules.

Interview participants were initially purposively recruited from the student populations of the two YPPs. Eligible participants were required to be at least 15 years old and less than 25 years old, and either expecting a child or parenting one or more child(ren). As the study progressed, purposive and theoretical sampling was used to guide the recruitment of participants

from the YPPs as well as from other local community organizations that served young parents: neighbourhood houses<sup>9</sup>, a postsecondary education institution, a non-profit serving street-involved youth, and via service provider word of mouth.

Intake interviews covered a range of topics spanning health, housing, childcare and parenting, income, and social relationships, in addition to information-specific questions, in order to provide ample context for interviewees' self-reported health information practices. Within the portion of the intake interview focused on health information practices, in addition to questions regarding information seeking, avoidance, encountering, use, and sharing, I employed two specific elicitation devices. The first of these, the critical incident technique (Flanagan, 1954) involved a verbal storytelling technique that has been successfully used in for many years in health care (Kemppainen, 2000) and information seeking research (Urquhart et al., 2003), among other disciplines (Butterfield, Borgen, Amundson, & Maglio, 2005). The second, the Information World Mapping elicitation technique (Greyson, 2013), was a drawing activity that prompts interviewees to draw or map their personal information worlds related to the topic of interest—in this case, health information for themselves and their children—and then explain and discuss these maps.

Interviewees who conducted their intake interview in the first or second of three fieldwork rounds were invited to participate in one or two follow-up interviews. Follow-up interviews were spaced approximately four months apart, in order to prospectively follow participants' evolving lives and practices, as well as to test emerging theory. Intake and follow-

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<sup>9</sup> Neighbourhood houses are non-profit centres embedded in communities, offering community services such as childcare, seniors' programming, cultural events, and immigrant settlement support. An international movement, neighbourhood houses have a network across the province of BC

up interview guides, including the guide and handout for the Information World Mapping elicitation activity, are available in Appendix A. As this study was part of a multidisciplinary, five-year longitudinal research project spanning many aspects of the lives of young parents, the interview guides cover many topics beyond those obviously related to information, providing for a rich understanding of participants' everyday contexts and social locations.

### **3.2.4 Data Analysis**

Triple-checked interview transcripts and typed-up field notes<sup>10</sup>, along with photographs of information artifacts (information world maps, as well as information materials in the YPP environment), were imported into NVivo 10 Software (QSR International) for coding via constant comparison (Glaser, 1965; Glaser & Strauss, 1967). Analysis was generally guided by procedures set forth in Charmaz' constructivist interpretation of grounded theory (Charmaz, 2007). Visual artifacts were linked to and used as visual aids to augment the coding of field notes and interview transcripts. Initial open coding across data sources (field notes, transcripts, memos) led to extensive memo writing and an iterative process of constructing more focused codes, diagramming emergent theory, and coding to selectively tell stories of theoretical significance.

### **3.2.5 Ethics**

Written informed consent was obtained by each interviewee at each interview. Interviewees were also requested to select their own pseudonyms for study purposes. Transcripts used only the interviewee's pseudonym, and removed potentially-identifying information such as

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<sup>10</sup> Audio recorded interviews were transcribed and accuracy checked by two different research assistants, before I checked them again and provided copies to interview participants for member-checking. I typed my own hand-written field notes. One participant declined consent for audio recording; notes were taken during this interview instead, which I typed and checked myself in accordance with field note procedures.

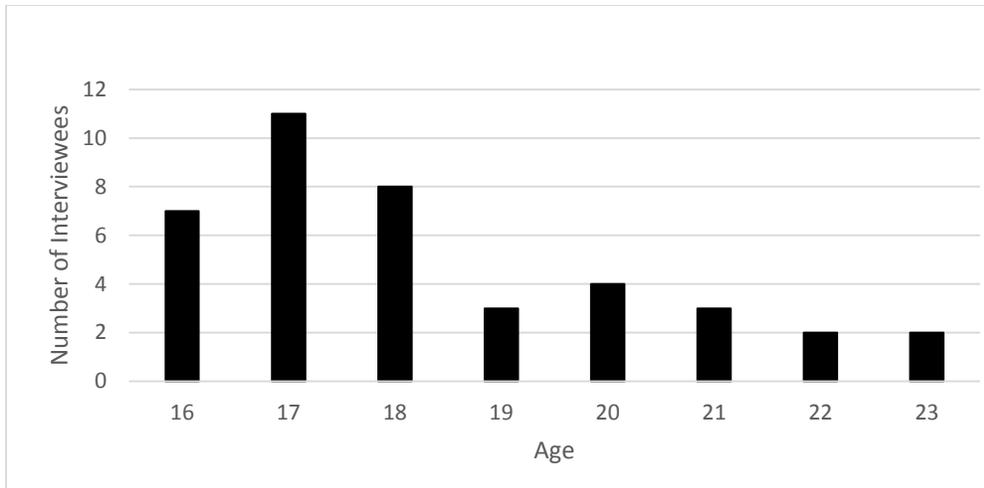
other names, dates, and specific locations. Interviewees were provided with the opportunity to review their transcripts in order to correct errors or request additional anonymization of data they might feel to be too sensitive. Written informed consent was also sought from students and staff present during observations, without which no quotes from or details regarding a non-consenting individual were recorded. This study was approved by the Behavioural Ethics Review Board of the University of Columbia (H13-00415), and given research approval by the school boards of both participating school-based YPPs.

### **3.3 Results**

From October 2013 to December 2014, I conducted 60 individual interviews with young parents. This set of interviews comprised 39 intake interviews, 18 second interviews, and three third interviews (approximately 69 hours of total interview time) with 37 mothers and two fathers. Additionally, I logged 50 days of naturalistic observation at young parent service sites (primarily at YPPs).

#### **3.3.1 Participants**

The young parents within this interviewee cohort were diverse in many ways. While the two participating school-based YPPs had an upper age limit of 19 (the legal age of majority in British Columbia), subsequent theoretical sampling via community recruitment resulted in participants aged 20-23 years as well. Within the entire sample the mean age at time of intake interview was 19, the median age was 18, and the mode was 17. Figure 3.1 shows the distribution of interview participant ages at intake interview.



*Figure 3.1 Interview Participant Ages*

The sample comprised 37 mothers and two fathers. While none of the participants identified as transgender, genderqueer or two-spirit on the intake interview, one self-identified woman also specified that she sometimes felt like a man, but did not identify as transgender; this is captured in the “something else” category in Table 3.1. Most interviewees ( $n = 36$ ), including both fathers, identified as straight; however there were a minority who self-identified as bisexual or pansexual, or as unsure or questioning. In cases where participants’ sexual orientation shifted during the course of the study, both identities are presented in Table 3.1.

The majority ( $n = 28$ ) of the 39 interview participants were currently working on their secondary diplomas. This total includes two participants who had “aged out” of secondary school and were completing adult education diplomas. The one participant who had completed a postsecondary program was an immigrant who had done her schooling in her home country, thus completing it at an earlier age than would be typical in Canada.

*Table 3.1 Interviewee Demographic Characteristics*

<b>Gender Identity</b>	
Woman	37
Man	2
Transgender	0
Something else	1
<b>Sexual Orientation</b>	
Straight	36
Lesbian/Gay	0
Bisexual/Pansexual	3
Questioning/Unsure	2
<b>Education Level at Intake</b>	
Incomplete secondary	3
Secondary in progress	27
Completed secondary	4
Currently in college/university	2
Completed college/university	1
Completed postsecondary trade program	1
Other postsecondary certificate	1
<b>Immigration Status</b>	
Self: Born in Canada	32
Self: Born Elsewhere	7
Parents: One parent born elsewhere	7
Parents: Both parents born elsewhere	9

Interview participants had a variety of cultural and ethnic backgrounds. While most young parent interviewees ( $n = 32$ ) were born in Canada, the seven born elsewhere hailed from six different countries, representing five continents. In addition to those seven, nine additional participants (for a total of 16) had one or more parent born outside of Canada. Twenty-eight participants identified with a single ethnicity, while the remaining 11 identified with two or more ethnic backgrounds. Figure 3.2 illustrates the self-selected ethnic identifications of participants,

including whether the identification was with a sole ethnic group or with multiple. Within the study sample, most participants identified as Caucasian, Latin American, and Aboriginal (inclusive of First Nations, Metis, Inuit, and non-status Canadian Native, as well as Indigenous populations from other parts of the world).

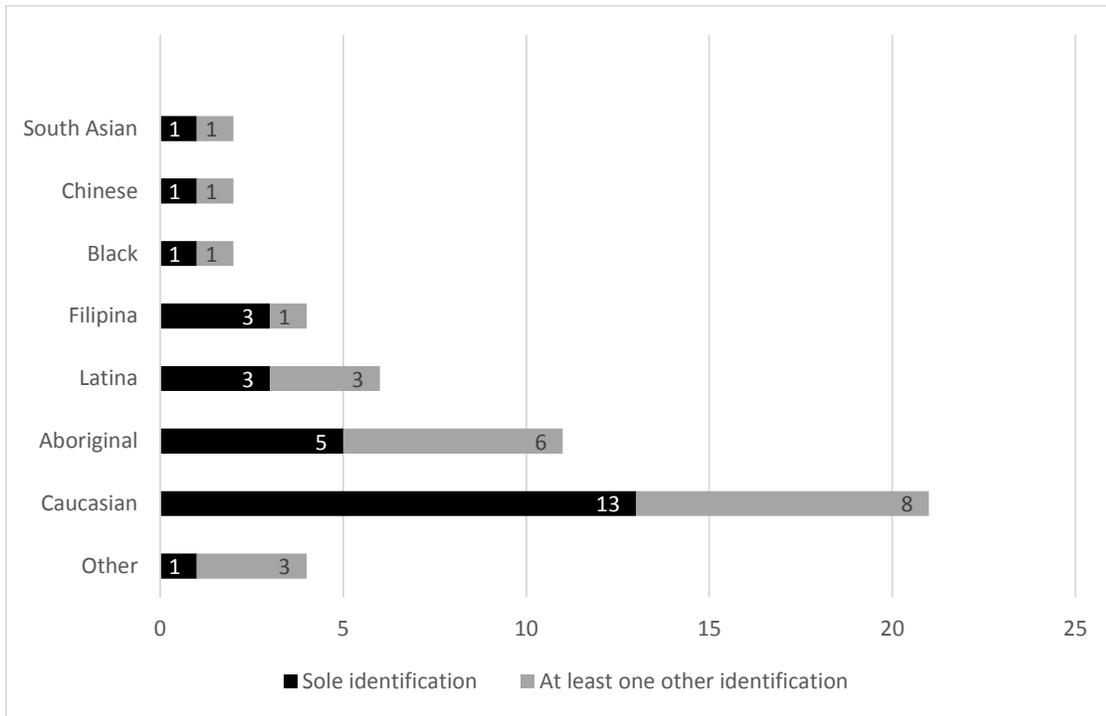


Figure 3.2 Interviewee Self-Identified Ethnicity

Most of the interview participants ( $n = 28$ ), including both fathers, had one child at the time of intake interview. Three mothers had two children; one of these was parenting one step-child and one child to whom she had given birth. In addition to the five mothers expecting their first baby, two were expecting their second, and one was unsure whether or not she was pregnant again at the time of intake interview. Over half of the participants ( $n = 26$ ) had never experienced a pregnancy that was not carried to term, but 13 mothers did disclose a previous therapeutic abortion ( $n = 6$ ), known miscarriage or molar pregnancy ( $n = 5$ ), or both ( $n = 1$ ).

*Table 3.2 Participant Reproductive Histories at Intake*

Lifetime Pregnancies	Participants
One	25
Two	10
Three	4
Births	Participants
Zero (currently expecting)	8
One	28
Two	3
Pregnancies not carried to term	Participants
Zero	26
One	12*
Two	1
Reason: Abortion	8
Reason: Miscarriage	6

\* One pregnancy not carried to term was twins

Although participants disclosed previous pregnancies (not carried to term) as young as age 13, the age of discovery of the first pregnancy that participants (or, for male participants, their own age at the time of a partner’s pregnancy) carried to term ranged from 14-22. The age range of first born children of the young parents in the study ranged from zero (not yet born) to four years at time of intake interview.

### **3.3.2 Describing and Theorizing the Health Information Practices of Young Parents**

Over the course of the year’s observations and interviews, I observed and heard about a wide variety of health information practices. Some of these practices aligned with previous findings on health information needs, seeking, and use, while others advance our

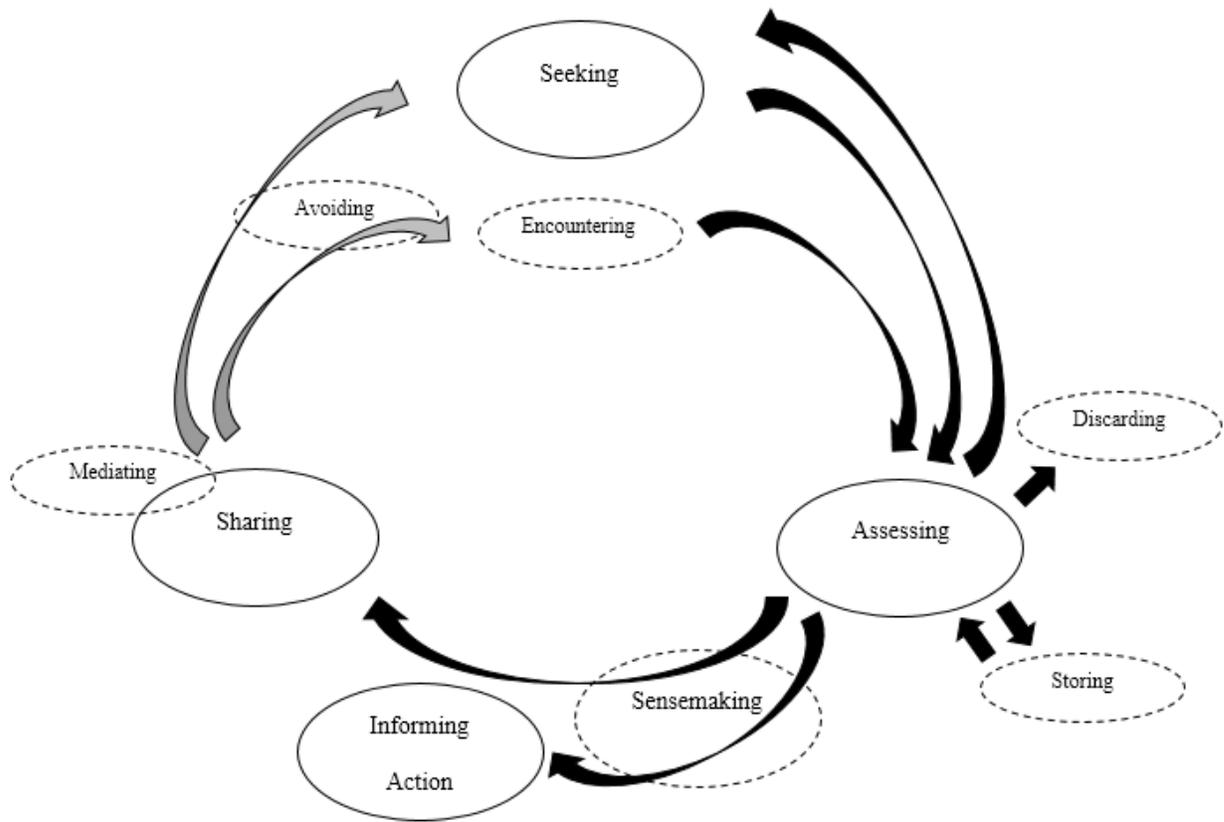
conceptualization of everyday health information practices. In some cases, this cohort of young parents behaved in ways that fit common conceptualizations of the life-worlds of teens, “teen moms,” or young men. In other cases, however, the demonstrated and narrated information practices challenged such stereotypes.

In my analysis, I generated a model to depict the relationships among the three primary classes of information practices that I observed and heard about within the habitus (ways of life) (Savolainen, 2008) of young parents: (1) ways of getting and not getting health information; (2) ways of dealing with health information one has received; and (3) ways of using health information. I then focused in on the practices that explicitly informed health decisions, with a special eye to those decisions or actions made controversial or difficult due to an element of contested knowledge. Within the model, select practices—seeking, assessment, and sense-making—worked in concert to produce information triangulation, an agentic information practice in which young parents engaged as a way of dealing with information and decisions related to contested knowledge.

### **3.3.2.1 A Model of Young Parent Health Information Practices**

The model of young parent health information practices observed in this study (Figure 3.3) illustrates the interconnectedness of the social processes and practices described above. The model that emerged from this study clusters information practices around three “ways of life” clusters: ways of getting (and not getting) information, ways of dealing with information, and ways of using information. This contrasts with Savolainen’s model of everyday information practices (Savolainen, 2008, p. 65), which groups practices within baskets of seeking, use, and sharing. However, within this population and when looking specifically at health information practices, managing and assessing received information emerged as a major process that

involved cognitive, affective, and social elements, whereas sharing appeared to be more a type of use than a separate group of practices.



*Figure 3.3 Model of Young Parent Health Information Practices*

At the top centre of the model of young parent health information practices lies seeking. Seeking occupies a place of primacy in the model because it was the practice most clearly conceptualized, recognized, and expressed by the young parents who participated in this study. Shadowing active seeking in the model is the practice of chance encountering, which does require some amount of receptivity on the part of the young parent. Avoidance is placed to the

left of seeking and encountering, potentially intercepting health information sharing or communications from other sources.

Seeking and encountering both result in information that must then be dealt with, leading us clockwise around the cycle depicted in the model. Some degree of assessment occurs with all information, even if it is a perfunctory assessment that a given piece of information is useless and should be discarded without analysis, or set aside for possible future recall and use. Assessment results in discarding, storing information for later, further seeking in order to make sense out of and further assess a body of information in an iterative process, or in moving to sense-make with information assessed as currently useful.

Sense-making brings us further clockwise around the model to forms of information use: informing actions (health decisions and behaviours) and information sharing. Within the model, an action could lead to the end of information practices on a given topic or incident, but sharing (and the related and overlapping practice of mediating information for others) connects back to seeking and encountering (and is potentially intercepted along those trajectories by avoiding). While young parents' sharing of health information did not cycle back into their own seeking and encountering practices, information sharing did at times communicate information to others, including other young parents. Therefore sharing in the above model feeds into seeking and encountering practices, but in another iteration of the model, conducted by another information user—indicated by grey arrows rather than black.

This model of young parents' health information practices is influenced by, and recognizes, the adolescent developmental “selves” identified in Agosto and Hughes-Hassell's (2006) model of the everyday life information needs of urban teenagers. Further, it is inclusive of the variety of information seeking types illustrated by McKenzie's (2003) model of information

practices in everyday life information seeking. However, by taking a grounded theory perspective and focusing on social processes, I have generated a process model that shows interactions among information practices that together construct greater and more complex social practices, shedding light on the relationship between health information and health behaviour.

Other models that focus in on specific information behaviors and practices may be congruent with this model, for example Kuhlthau's information search process (1991) depicts some of the more formalized seeking processes in which participants engaged, and Erdelez's updated functional model of information encountering portrays the encountering process in-depth. Some of the seeking, encountering, and sharing activities in this model take place in social spaces that functioned as information grounds as described by Fisher (2005). My model functions at a higher level, encompassing a variety of information practices and the ways they interrelate. Given the extent to which this model is rooted in specific and triangulated naturalistic data, it is modifiable and likely applicable to a diversity of individuals across a variety of settings. Below, I explicate the model in further detail, describing the practices within each of the clusters (seeking, assessment, and use), following which I will introduce information triangulation and how that complex practice was used by young parents in this study to navigate contested knowledge.

### **3.3.2.2 Seeking, Encountering, and Avoiding**

Information seeking is perhaps the most studied construct within information behaviour and practices. In this analysis, seeking refers to "purposive seeking for information as a consequence of a need" (T. D. Wilson, 2000, p. 49). Seeking is therefore distinct from needs (not a practice) and use (a separate category within the model). I frame seeking as an active practice, as opposed to accidental encountering (Erdelez, 1999), seeking's more opportunistic counterpart.

Within this practice cluster that is focused on ways of obtaining information, I also consider avoidance (Case et al., 2005), the antithesis of seeking and encountering.

### **3.3.2.2.1 Seeking**

Participants sought health information from people and institutions, as well as online and from print materials. Some questions led them to only one source while others were multi-modal and iterative. They described both proactive and reactive strategies for seeking health information for themselves and others, as well as some factors that hindered or inhibited information seeking. During my time at the YPPs, I also observed examples of passive or subversive information seeking. Topics about which young parents sought health information ran the gamut from common pregnancy questions (e.g., is this safe to eat?) to immediate child health crises (e.g., is this rash a sign of a serious illness?) to ongoing health concerns (e.g., does my child have ADHD?).

Certain types of health information needs—those related to child health emergencies—were consistently described as leading to practices of seeking formally authoritative medical information (e.g., from doctors, hospitals, or if unsure of urgency the provincial nurse helpline). However, for less urgent needs, strategies and sources were more varied. It was common for young parents, especially mothers, to turn to human sources with whom they had close ties and affinity (e.g., their own mothers). However, some placed value in an ethic of self-sufficiency, preferring not to ask family and friends for help.

In contemporary urban Canadian youth culture, where smartphones are ubiquitous, and free access to the Internet is only as far as the nearest café, the information seeking method of least effort and greatest immediacy is frequently an Internet search. Although there were notable Internet non-users within the sample, they were few in number. Most young parents reported

turning to the Internet on a regular basis, not only for convenience but because, unlike human sources (the classic “least effort” source type), Google would never disrespect you for being young (or Aboriginal, or an English-language learner, etc.).

Young father Victor, the oldest interview participant at 23 years of age, and one of the few library users in the study cohort, described an array of health information seeking techniques in which he and his partner engaged. We then discussed the way some types of information seeking appeared to be proactive practices, while others were reactive practices. He distinguished these:

Yeah um, the library, community centres are a pro-active kind of, you know, preparing ourselves for things and, you know, the knowledge. Help line is more like we were... need for something at that second, just, you know, nobody's there to ask a question late at night, right? So yeah.

Victor also included family and friends as information sources that could be consulted in both a proactive (“what to expect”) and reactive (“what to do”) manner. This combination of proactive and reactive strategies, as well as classifying sources as appropriate for either type of seeking, was common, and crossed lines of gender/sex, ethnicity, hometown, and age. Unlike Victor, many of the mothers, however, described a substantial amount of proactive seeking online on social media or websites such as [Babycentre.ca](http://Babycentre.ca).

A rare but notable subset of proactive information seeking that surfaced in the interviews was defensive information seeking—seeking of information to show others that they were educated on certain topics. Young mother Ella, a 17 year old whose family of origin had substantial involvement with child protective services (referred to as MCFD or “the ministry”),

reported deciding to attend several parenting classes while pregnant because she had been warned that the authorities might try to take her baby away. She told me:

I, like, have these big arguments with so many people, like, public health nurses and stuff like that, thinking that I didn't know how to take care of a baby. But, like, I did because...I was in, like, all these different classes. I don't really know the names of them. I was in so many parenting classes—and I did them all on my own, like, MCFD didn't ask me to do these things and I did them.

Ella, clearly accustomed to using information to advocate for herself, brought a folder of paperwork with her to our intake interview. While describing this defensive form of information seeking, she spontaneously produced documentation to prove that she had completed several classes. She explained:

See, like, I...I did parenting skill development, relationship counseling, so that me and [partner] wouldn't argue in front of her. Uhm...Baby's Best Chance, I did that for really, like, almost a year and a half. Aboriginal infant development, so...like, all these courses that I took uhm...before I even had to go and be on a supervision order and all these other things.

While Ella acknowledged that she had learned things in these classes that improved her parenting skills (e.g., how to recognize and cope with infant “PURPLE crying”), her motivation and primary objective in this intensive information seeking via formal classes was to defend her family by demonstrating her commitment to seeking and mastering parenting skills and knowledge that had been approved by an officially authoritative source.

While spending time at the YPPs, I observed instances of students appearing to be seeking information without asking questions. These encounters typically took place between

young parent students and YPP staff, although other young parent students were sometimes also present and engaged in the interaction. Two specific devices I observed in action as forms of this passive or subversive information seeking were sharing “TMI” and complaining. TMI is a common acronym in contemporary online and youth cultures for “too much information”—in other words the sharing of personal, often taboo information, for example about sex or menstruation. I observed multiple instances in which a student appeared to be “asking without asking” about a taboo topic by sharing personal TMI. A typical instance would be one such as the following scenario from my field notes, which took place in a YPP classroom one morning:

Staff member “Cookie” mentions that she was out earlier in the week due to a medical issue. Student “Crystal,” who is making herself coffee, chimes in that she has to go to the gynecologist because she’s been bleeding for several months and they can’t figure out why.

Subsequent to this announcement by Crystal, Cookie went over to talk with her about her health, and see if she could provide information or support in any way. Although Crystal wasn’t explicitly asking for help or advice, and in fact made her announcement with an air of bravado, in our later interview she revealed to me that she was in fact concerned about the excessive bleeding and related anemia she had been suffering. Her revealing personal health information that could be judged to be TMI in the classroom was, I argue, in fact a masked information seeking technique.

Complaining as information seeking functioned in a similar manner. Eighteen year old young mother Kagome demonstrated this technique many times while I was observing at her YPP, by complaining loudly about a given issue, such as her toddler hitting other children or a male friend making unwanted sexual advances. Although she did not explicitly ask for advice

navigating these scenarios, YPP staff often rose to the occasion, asking questions and offering suggestions and support around these challenges. Within the context of the YPPs, these passive or subversive information seeking techniques occurred in liminal times, such as before class officially began in the morning or during lunch or an outdoor activity. While the YPPs are organized so as to provide formal spaces for information exchange, it is these informal and temporary “grounds” that made space for information seeking and exchange around topics that were too taboo or shameful to formally ask in the classroom setting.

While many methods of seeking seemed to be second nature for some participants—a nearly effortless search on the smartphone or call to the nurse line by a native English-speaker, for example—in other cases seeking was quite challenging. Individual skill-based challenges took various forms, including limits on literacy, health literacy, and information literacy. Socio-emotional challenges, such as worry over a possible negative diagnosis, were reported as hindering health information seeking, even when they did not lead to complete information avoidance. Young mother Aliyah, a 17 year old immigrant woman who had difficulty navigating the health care and social support system at first, reported her stigma-related stress as a challenge to seeking information about childbirth, stating:

[W]hen we came here we're so nervous 'cause I'm scared of talking to everyone 'cause, you know, having a young baby—having a—having a [voice quivers] teenage mom, it's so hard [deep breath].

Over the course of time, Aliyah's English language skills and familiarity with Canadian social systems and norms improved, and by the time of her third interview (a year after the above quote from her intake interview) she was observed helping a new teen mother in the YPP who

had recently immigrated from the same country. Thus, while stigma and minority stress are barriers, an individual's experience with them may be constantly shifting.

A related challenge is the very culturally-based nature of much of the available information on healthy pregnancy and parenting. Not only is a substantial subset of the medical information on these topics lacking clear scientific evidence, the cultural construction of expert advice may directly contradict with social practices among a young parent's own family or culture of origin. This sometimes results in young parents being placed in a position of having to effectively choose to "side with" their own parents or with extra-familial experts such as teachers and nurses. While young parents in this study navigated this tension in multiple ways, in some cases the awareness that cultural and "scientific" norms were likely to vary discouraged information seeking on topics such as baby feeding or infant sleep practices.

#### **3.3.2.2.2 Encountering**

Describing incidental information encountering did not come easily to all interviewees. In some cases, information interactions I would have assumed to be passive encountering were perceived by interviewees as more active engagement—for example reading public health campaign advertisements on public transit. The stories of information encountering participants volunteered typically centred on unsolicited comments containing parenting advice (inclusive of prenatal diet and behaviour). These came from family and sometimes friends, as well as from strangers in public locations. Sometimes such encounters were positive in tone, but the more instructional ones tended to be perceived by the participants to be judgemental or intrusive. These encounters were reported by mothers and fathers alike; parks and public transit seemed to be "hot spots" for such encounters. Eighteen year old young father Saul described an encounter in a park with his toddler that typified this type of information encounter:

[L]ots of people who... you know, they just have different ways of raising their child and... you know, someone comes up and says ‘She’s not supposed to be drinking that’ or something. Like, if she has juice. ‘At that age you’re not supposed to be drinking that.’

Participants often reported feeling put on the defensive by such interventions, especially when they came from strangers. Saul continued the above story, providing context and evidence to justify the decision to give his daughter juice:

You know, lots of people raise their children differently. Like, if [my daughter] wants juice, I’ll give her some juice but I’ll give her half a juice and fill the rest with water or, you know, something like that. Most parents do that. My mom did it. Even apple juice. She gave me half apple juice and half water.

Social media provided a forum in which unsolicited health advice could be encountered in a way that was perceived as less aggressively targeted at a young parent. While specific comments by others left on media posted by a young parent (her “wall,” “post,” or uploaded photo/video) were potentially intrusive in the same way that in-person interventions could be, online acquaintances posting content related to health, nutrition, and fitness to a broader audience was sometimes described as helpful. This form of broadcasting of health information to a curated list of self-selected followers or “friends” contrasts both with general public health information campaigns, which were often perceived as boring and impersonal, and with individually tailored comments, which were sometimes seen as nosy and invasive.

#### **3.3.2.2.3 Avoiding**

Not everyone avoided (or was aware of avoiding) health information. However, among those who did describe avoidance practices, there were clear groupings of avoidance types. The

first of these was avoidance of information related to issues or events that were frightening to the individual. These were topics such as an upcoming childbirth, which were inevitable but culturally constructed to be frightening. Nineteen year old young mother Kim was generally very engaged in information, and as an aspiring scientist she was also quite oriented toward biomedical information. However, she described avoiding frightening information related to possible fetal harms due to her health behaviours early in pregnancy, as she had not learned that she was pregnant until her second trimester, after she had already participated in some “partying” in early pregnancy. Given that she could do nothing about past actions, she said:

I just didn't want to deal with all of the issues of dealing with you being pregnant and knowing you were drinking at your grad ceremony and like – I was just like, ‘This baby has survived this long, I'm not gonna get worried about how many kicks is she doing a day or that kind of thing.’

Kim continued to describe a second, related, type of avoidance: avoiding information so as not to invite trouble or cause unnecessary worry. Other young parents who took a more relaxed approach to parenting echoed this idea of the perils of too much information. This “relaxed” approach to parenting did not appear to correspond to education level, ethnicity, or quantity of active information seeking among parents in this sample. However, those who described avoiding too much information so as not to worry unnecessarily were likely to also engage in a discourse of the “natural” when it came to parenting. Examples of this natural discourse include referring to a “maternal instinct” that would help them know when things were wrong, and considering it more healthy and natural to bear children in one's teens and twenties than to delay childbearing until one's forties when the odds of needing fertility assistance and surgical birth were greater.

A number of interviewees described avoiding information from sources they had assessed to be disreputable. This practice demonstrates the iterative connections between practices of seeking/avoidance and assessment of obtained information. Dismissal of “disreputable” sources was also something I observed in YPP classroom interactions, although the teacher-student dynamic added a layer of complexity to the assessment of what is authoritative (e.g., can a student question a teacher’s information?). Crystal, a 17 year old young mother, described the difficult process of deciding whether or not to vaccinate her infant. Once the decision had been made to give him the routine vaccinations required for daycare entry, she reported that she “stopped listening to” the health advice from those parties that were telling her not to vaccinate, even on health topics unrelated to vaccination.

A final type of health information avoidance that was described by only a few interviewees was that of avoiding information because they had been “too young” at the time to take things seriously or plan for the future. This is a confusing and complex type of avoidance, particularly because it was only narrated to me only by those looking back across time—by young mothers with preschool children describing how they had behaved three to five years earlier. Twenty-two year old young mother Elena described avoiding prenatal classes and other types of childbirth education when she was pregnant with her first child during her teen years, “I was too young to actually think...about what it—like, I just—I didn’t think about it, I don’t think.”

Given how much time had passed since the examples of these “too young” types of avoidance, it is difficult to interpret whether they are actually a subset of avoidance of frightening information, or whether they are indeed a distinct subset of avoidance practices. It could be that this discourse of being “too young” to seek or engage with information is

referencing an early adolescent developmental stage, although the ages at which this avoidance is described is very inconsistent. It seems more likely that being “too young” refers not to age or stage, but to a lack of sense of agency or hope for the future—a feeling that life is happening to them. However, the narration of this across time also implies that the narrator is now, years later, older, wise, and different: more agentic, or more capable of engaging in practices of educated, information-using motherhood.

### **3.3.2.3 Assessing, Discarding and Storing**

Assessment of information emerged as a major element within the health information practices of young parents. In the model of young parent health information practices, assessment served a gatekeeping function—creating a demarcation between getting information and using (or not using) information. Relevance, credibility, and various constructs of authority were all evident within the assessment of information conducted by young parents, along with other attributes specific to the population or topic.

#### **3.3.2.3.1 Assessing**

Assessment of health information for “goodness” (a combination of attributes unpacked below) was ubiquitous among young parent interviewees. Assessment of information, particularly online information, was frequently a challenge, however. Some challenges were skill-based, such as not knowing how to filter and evaluate information, lacking the skills or confidence to resolve conflicts between differing information sources, or not understanding how to apply given information to one’s individual situation. Other challenges were socio-emotional, for example feeling overwhelmed by negative information, pressured to make a health decision quickly, or stressed because an important decision had to be made alone.

At one of the YPP sites, for example, I observed the daycare staff providing a lesson for students on proper preparation of formula bottles, after which one of the students protested that her doctor had given her different instructions. The daycare staff explained that the guidelines had been changed, but the student continued to protest that she was confused by the contradictions between this new information and that recently provided by her doctor. She then added that all this baby feeding information conflicted with the practices of her cultural background, including those of her own mother. Throughout this presentation, staff made allusions to chronic stomach troubles of this student's baby, making it clear that she was the underlying reason they had come to give this presentation. However, by the end of the lesson it was evident that this student was left with an unresolved conflict of information among multiple "authoritative" sources and the cultural practices with which she was familiar, as well as now upset by the implication that she might be causing her baby's symptoms.

Challenges to assessing information had a tendency to be exacerbated in situations of information conflict over contested knowledge—in which various sources conflicted with each other, yet a decision had to be made one way or the other. Twenty year old young mother Sofia described managing uncertainty regarding her own multiple health issues and her child's asthma diagnosis at the same time as quite stressful. Part of the stress was recognizing that this one of the first times in her life that her decisions had serious consequences.

I'm getting, like, anxious and...just so many things going on with health and...[child]'s health and she has asthma. Uhm...so it's like I'm trying to deal with my own, but then I have to deal with her too. I'm the one that makes the decisions if she will...has to go to the doctor. And I think a couple of times...I didn't give her inhaler and she just was coughing all night. And my dad's, like,

it's your fault. [pause] And then I think I got sick too and [pause] [sighs] so it's just...yeah, a lot to handle.

Pressure and anxiety compounded the difficulty of assessing which health information was correct and applicable, making it more difficult to manage medical uncertainty. Sofia described this stress as occasionally leading to “freak outs” that, in retrospect, she believed were based on hyperbolic information she found on the Internet.

While the vast majority of the young parents in this urban cohort had easy access to the Internet and used it frequently for information seeking, access did not translate into ability to accurately assess online information. Yet, interviewees were not always aware of the limitations of their methods—such as trusting the top listed search results or heading directly to popular sites (such as Babycentre, WebMD, or Yahoo Answers)--for identifying accurate information online. “Goodness” of information, however, meant more than just factual accuracy. Health information was assessed on attributes including relevance, credibility and cognitive authority (P. Wilson, 1983). Good health information was indeed accurate and trustworthy, but also timely, individualized, and non-judgemental in nature. Young parents’ social locations—particularly level of formal education, social class, and age—also influenced assessment of “goodness” of obtained information. For example, younger parents, particularly those with less formal education, placed greater value on face-to-face information from human sources, as well as visual information in print/online sources.

The cognitive authority, or socially-constructed trust based on an individual’s assessment rather than solely on credentials or expert status (Rieh, 2009; P. Wilson, 1983), that was placed on the source of the information also played a role in participants’ assessments of the goodness of information. Sources could be good along a number of axes: that of official authority, and that

of relatability. Officially authoritative information sources included government sources and health care professionals. Twenty-one year old young mother Bina, who had been a nurse in her home country prior to immigrating to Canada, placed high cognitive authority in doctors, calling them “the smartest place” for health information. When she had health questions during pregnancy, she took them directly to her clinician. Also officially authoritative, but of a different nature than personal contact with health care professionals, was scientific information, either from authoritative scientific sources such as government websites, or via medical test results.

In contrast with officially authoritative sources for health information, many young parents placed a great deal of cognitive authority on sources they found to be “relatable.” Relatable<sup>11</sup> meant different things to different people, but tended to have to do with commonalities of experience, gender, and culture. Relatability was frequently used as one component of a source’s cognitive authority. Young mothers often felt that their own mothers’ health information fell into this category, and some also classified their young parent friends as relatable. However, this criterion of the relatability of information extended beyond the social circle. Seventeen year old young mother Kristey, for example, did not feel that her male doctor’s information was very useful, explaining, “Doctors... I think more lady doctors give more good advice than guys. Or other pregnant women [also give good advice].” It is possible that part of the reason that Kristey’s doctor’s advice was not useful to her was that she did not feel comfortable bringing up her health issues and questions with him, an older, white, male,

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<sup>11</sup> Note that relatability of a source often correlated with, but did not directly correspond with, relevance of that source’s information. A relatable source might provide information that was not at that time relevant to a young parent, without necessarily losing the relatable qualities of the source. However, repeatedly providing non-relevant information might spur reassessment of how relatable a source actually was to a give young parent.

physician. Ella specifically identified relatability as an attribute of a good information source, telling the following story about her social worker:

“[M]y social worker, she doesn’t have any kids, she doesn’t have any responsibilities. She told me she can go home lay on the couch and drink a scotch and she wouldn’t have anything to worry about till Monday. And I thought that was such a big slap in the face, like, thanks.”

In Ella’s story, the social worker was unrelatable for at least two reasons: first because she was not a parent and did not understand firsthand what that type of responsibility was like, and second because she spoke in such a cavalier manner about alcohol use, which had been a scourge for Ella’s Aboriginal family and community. Due to this lack of relatability, Ella assessed the social worker to be a source lacking in cognitive authority, unable to provide her with credible parenting information.

Participants also had criteria for assessing information as bad. Bad information might be inaccurate (or from a source judged to be ignorant), or might be accurate but unrealistic for one’s own situation. Interviewees provided many examples of potentially accurate information that was nevertheless not useful for them. This ranged from cultural taboos on pregnancy and postpartum behaviours that young mothers felt no longer had relevance in Canada to situations such as the helpline nurse who suggested that Ella’s boyfriend check her cervix for dilation—which Ella made clear she thought was ridiculous and unacceptable to expect him to do. Health information might also be assessed to be bad because it relied on scare tactics or overwhelmingly negative information, was too slow or boring (such as print brochures, which take time to read through) or was perceived as overbearing and annoying.

It is significant to note that the same source could in some cases provide information that

was assessed to be good, while at other times providing bad information. The Internet was described as both good and bad by several participants, as were human sources such as parents and nurses. Twenty year old mother of one, Mary, described her mixed feelings about the information provided by public health nurses: “I put nurses in both columns because uhm, sometimes I ask them for information...and sometimes they share too much information and sometimes they tell me information when I didn’t ask.”

The primary criteria explicitly used for information assessment were the source from which the information came and the attributes of the information itself. However, beneath the surface of these stories was another important criterion for the goodness of information for a particular individual: fit for one’s current socio-emotional and developmental state. Otherwise “good” information could become bad if either the timing was wrong or the information is otherwise alienating to a particular young parent. Eighteen year old young mother Linda described the childbirth education classes she attended prior to the birth of her first baby as poor information sources. However, she acknowledged that this may well have been because her health issue at the time (anemia) left her so fatigued that she was not able to be an attentive member of the class, which was also being taught in her second language. Sofia, now a college student planning to become a nurse, currently enjoys reading health information. However, several years before, when she had been pregnant, print-heavy books and brochures were not good information sources. It was not necessarily that they were inaccurate, untrustworthy, unrelatable, or scary, but rather that as a pregnant 14 year old, “You’re just so tired and hating life...well, not hating life but hating yourself and...I don’t know...confused about what you’ll have to do.”

### 3.3.2.3.2 Storing and Discarding

Storing and discarding information occurred as a result of assessment, but sometimes after only the most perfunctory of assessments. Some young parents had no system for managing or storing health information, seeking information only on an as-needed basis. Others had developed methods of retaining health information they thought might come in handy at a later time. One young mother described recording information in her diary when she learned it. Despite the general disdain for pamphlets and brochures, many of the young mothers had storage systems such as folders or drawers for such handout materials.

Seventeen year old young mother Courtney, who was atypical in her information practices as an Internet non-user, was also one of the few young parents to describe reading pamphlets, even returning to look at ones she had stashed away in her “baby drawer” full of information. Other young mothers kept pamphlets even though they never expected to use them, engaging in a social practice indicative of intensive mothering despite lack of practical use for the pamphlets. Young mother Sarah A, also 17, found pamphlets to be “boring,” telling me,

“I have like, a whole file folder and I just put them all in there. I don’t really throw them out. I just collect I’d say.” When I pressed her as to why she kept them, she insisted that she did not know why, finally explaining, “I dunno; I just kinda keep them. Maybe when I’m *bored* I’ll look at them. But I won’t ever, really.”

Discarding, the opposite of storing, was rarely discussed in depth. While it was not uncommon for young parent interviewees to mention non-use of information materials or advice, the actual act of discarding information seemed non-noteworthy or incidental. Throwing out, recycling or deleting information artifacts was only acknowledged when I specifically asked

about it in interviews; otherwise, participants typically focused on non-use or active ignoring of information rather than active discarding. At the YPP sites themselves, I noted health-related pamphlets and hand-outs lingering for a long time in locations such as on student desks and front-of-classroom tables. This may indicate that while such information artifacts are—at least for some young parents—useless and boring, there is a reluctance to actively discard them. This slowness to get rid of information artifacts may relate to the pressure on young parents not to discard information given to them by experts. Whether this retention of materials indicates a desire to keep them in the environment “just in case” or a desire not to be perceived as an information discarder (and thus failing to conform to ideals of intensive motherhood/parenting) is unclear and may vary person to person.

#### **3.3.2.4 Information Sharing and Informing Action**

Sharing, in organized settings for information exchange, informal social information grounds (K. E. Fisher & Naumer, 2006), and within individual interactions, was one of the major information use practices among young parents. Conversely, young parents reported specific instances of deliberately hiding or selectively withholding information. A subset of sharing information was mediating information, as young parents act as lay information mediaries (Abrahamson, Fisher, Turner, Durrance, & Turner, 2008). The second major use of health information was to inform health decision, actions, and behaviours. Both accurate information and misinformation were used to change health behaviour in this study.

##### **3.3.2.4.1 Sharing**

YPPs, as well as certain other young parent services such as new mother drop-in groups and health and community facilities, provided spaces in which information sharing was intended to take place. At the YPP sites I observed both formal and informal examples of young parents

sharing health information with each other and with the YPP staff. Structured information sharing activities tended to focus on topics of public health priority, such as baby feeding and contraception. In more informal conversation, however, a wide variety of topics was covered, ranging from recipe sharing to tips on finding affordable housing, from daycare advice to information on preferred contraceptive methods.

Non-youth-specific parent-focused spaces also had the potential to become ad hoc grounds for information exchange, for example the baby section within a store, where mothers might casually offer each other tips and advice on products. However, some young mothers reported feeling alienated and excluded by older parents in such places. Kim, for example, perceived that her contributions to conversations at a community centre drop-in group were often dismissed and invalidated due to her young age, and eventually modified her information seeking and sharing practices to only include young parent groups where she felt more respected. Twenty year old young mother Brooklynn did not even attempt to join general parenting information sharing groups, based on the experiences of a young mother friend of hers, who said:

[S]he went a couple times and every time she went that she just felt really singled out. None of the older parents really wanted to talk to her and they were kind of just wondering like, ‘What is this kid doing here? Is she like, the babysitter or something?’

Social stigma, therefore, was a modifying factor in young parents’ health information sharing practices. Despite experiences of being ignored or belittled by older parents, young mothers and fathers in this study did a great deal of sharing of information with other young people, particularly those who were just becoming young parents themselves.

Sharing also took the form of being an information intermediary for others, such as one's partner, family members, or even service providers. Young parents described mediating information for others in two different ways: passing along information one already had, or seeking out, assessing, and then passing along information specifically obtained for that person and purpose. The former type of mediation was described as happening casually on a regular basis among young parents, as well as from young parents to service providers, who were sometimes less aware of young parent services in the area than the parents themselves. The specific and designated form of information mediation was described less frequently, as for example in 21 year old young mother Darkat's story of her reaction to her boyfriend's violence. Darkat described her process of searching online to find the contact information for a program for male abusers, calling to talk with them and assess their information, and finally sharing the group's information with her boyfriend in hopes that he would use it.

There were also times and situations in which young parents attempted to hide or otherwise not share health information. Many of the examples of information non-disclosure centred on stigmatized information such as drug use during pregnancy, abortions, and childhood abuse experiences. However, another group of non-disclosure practices emerged around information that would potentially cause or change government intervention, for example a young mother hiding the fact that her boyfriend lived with her in subsidized housing, or one participant's father asking her to lie to her social worker in order to minimize any changes to their family situation.

#### **3.3.2.4.2 Informing Health Decisions and Behaviour**

In certain situations, young parents engaged in a great deal of deliberate, even formalized research, in order to inform a health decision. Kim, the only of the young parents in this cohort to

have planned to place her child for adoption, engaged in an intensive information seeking and use process that ultimately led to the decision to raise her child herself. She described going over her memories and the memorabilia of her childhood, talking with her mother about what it is like to raise a child, reading the questions and answers on the Babycentre website, and then engaging in a process of integrating and considering those multiple sources of information to decide whether she could cope with parenting. Such extensive research and deliberate sense-making was not conducted by all interviewees, or on all topics, but is clearly within the range of ways young parents use information to make decisions.

In contrast with Kim's in-depth information integration process about whether to raise her child herself, the most common and rapid health behaviour changes, reported by many young parents within this study, were lifestyle changes as a result of finding out one was pregnant. Confirmation of a pregnancy, while on one hand a relatively simple piece of information, carried implications that interviewees—particularly the young mothers—took seriously. Receipt of confirmation of a pregnancy, regardless of whether the pregnancy was planned, hoped-for, or unwanted, led young mothers to make changes in their health behaviours. Many young mothers described cessation of drugs and alcohol when they found out they were pregnant, and others described changes to exercise, diet, and other health behaviours.

Beyond confirmation of a pregnancy, however, there were myriad examples of young mothers and fathers alike making health decisions, typically in an aim to improve the health of their child and family. Saul reported that he and his partner were using a budgeting booklet to try to eat cheaper, healthier food. Victor's dad gave him parenting tips via Skype. Seventeen year old Elizabeth, still pregnant with her first during our interview, was taking her mother's advice to

exercise more, while 18 year old expectant mother Caroline reported heeding her doctor's advice to watch her diet during pregnancy.

Misinformation also informed health behaviour. Kristey, for example, described weaning her infant at an early age because she was unable to quit smoking.

I quit smoking for two weeks after I had her because I didn't want it to go in my breast milk and I heard everything goes through your milk and everything.

And... I started again but I never breastfed her. Like, I just put her on formula because I was too scared to give her, like, nicotine through breast milk and stuff.

Kristey, informed by public health campaigns of the importance of breastfeeding for her baby's health, stopped smoking for two weeks to give her baby colostrum, but then switched to formula because she relapsed into smoking and was scared about passing nicotine to her baby via breast milk. Formula feeding is expensive and does not give certain protective health effects to mom (e.g., breast cancer reduction) as well as baby. Given Kristey's low-income status this switch to formula was likely a move made at substantial expense to her family.

Kristey's switch to formula feeding is an example of a specific type of misinformation, that of public health scare tactics (anti-smoking messages) conflicting with other public health messages (pro-breastfeeding). Kagome told of a similar situation, in which she had switched from coffee to sugary and artificially-coloured Slurpees in order avoid caffeine while pregnant. For an individual trying to sense-make within a climate of conflicting information, including officially sanctioned, authoritative information, as well as mixed social and cultural messages, it can be quite difficult to assess which path is "correct." Unfortunately, in some cases, a reasonable and cautious assessment of the evidence can lead an individual to more expensive or

less-healthy behaviours, a phenomenon public health experts refer to as regrettable substitutions (Scherer, Maynard, Dolinoy, Fagerlin, & Zikmund-Fisher, 2014).

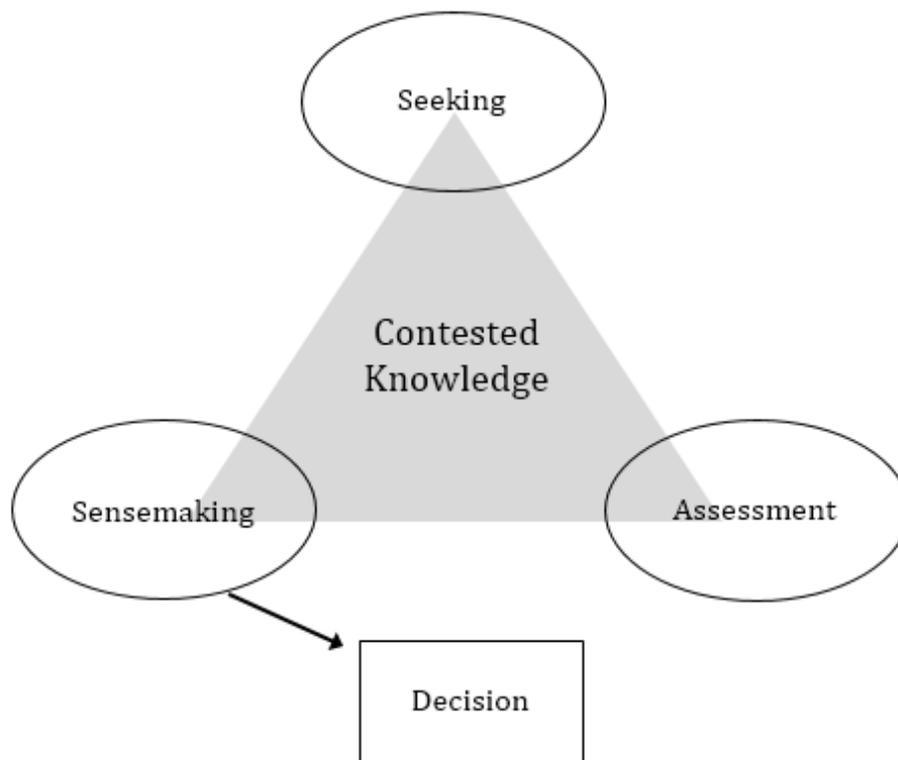
### **3.3.2.5 Triangulating Health Information**

While there may have been instances in which there was a straightforward path from obtaining information, through assessing it, and directly into informing health action, in many cases the processes were more complicated. Within this study's model of young parent health information practices, triangulation emerged as a complex practice that wove together in an iterative manner seeking, assessment, and sense-making in order to inform health action in situations of contested knowledge (Figure 3.4).

The methods of triangulation observed in this study, among a population that is quite diverse yet overall socially marginalized, indicate that: a) individuals may employ methods of triangulation both in order to engage in deference to and as a mode of challenging medical authority, and b) a focus on intensive mothering/parenting, coupled with widespread access to the Internet, make it possible and in some cases necessary for lay people to engage in "scientific" information practices such as triangulation. Amidst contested knowledge on pregnancy and parenting in an era characterized by information overload, within a western setting that encourages patient "activation" and intensive parenting, young parents engage in triangulation as a practice to enable application of information to health decisions.

Despite different standards for determining what type of information was assessed as good or useful, young parents shared a general practice of classifying sources based on their authoritativeness. Due to the commonalities of the social worlds and contexts of the youth in this study, they also demonstrated a measure of consensus around the classification of sources as

authoritative and non-authoritative. Authoritative sources for health information were primarily members of health professions, such as doctors, nurses, and doulas. Non-authoritative sources included friends, family, and the Internet generally speaking (i.e., search engine searches and social media sites, as opposed to specifically identified authoritative sites such as Health Canada). Young parent narratives and the YPP environments provided evidence of cultural deference, in varying degrees, to authoritative sources of health information; however it was often the case that even information from sources perceived to be highly authoritative (e.g., a medical specialist) was not accepted uncritically.



*Figure 3.4 Information Triangulation*

Young parents described and demonstrated triangulation via multiple paths. The first of these was triangulation of health information from non-authoritative sources, by checking it

against an authoritative source. The second, third, and fourth paths of triangulation all involved verification of information from authoritative sources, against, respectively: other authoritative sources, non-authoritative sources, and a mix of authoritative and non-authoritative sources.

#### **3.3.2.5.1 Triangulating Information from Non-Authoritative Sources**

Young parents in this study described triangulating non-authoritative information with authoritative sources. Saul, for example, described a process of verifying questionable advice against a more authoritative source. During pregnancy, he and his partner experienced family and friends giving his partner rules regarding what she should and should not eat or do during pregnancy. Unsure of which of these instructions were myths and which might actually prevent harm to their fetus, Saul and his partner consulted staff at the family services agency with which they were doing parenting classes, and decided to follow or disregard advice based on whether the family services agency staff agreed with it.

Kim, on the other hand, described using the Internet for preliminary information gathering prior to consulting an authoritative source: her infant daughter's doctor. She explained, "I kinda do it just for reference, to know what they're gonna be talking about and bringing up in the appointment so I'm not just going in there with a clear brain." Although Kim recognized the doctor as a more authoritative source upon which to make health decisions, she preferred to pre-research online in order to gain some basic knowledge regarding the health issue at hand, as well as to ameliorate the power imbalance between doctor and patient.

In addition to checking up on questionable advice and preparing for a medical consultation, a third form of triangulating non-authoritative health information emerged within this study. This was a strategy of escalation of authority among information sources in time of information need, in which a young parent would start with a non-authoritative source, attempt to

verify it against a lower level authoritative source such as a teacher or public health nurse, and eventually escalate to a doctor or hospital if necessary. Mary gave an example of following this strategy regarding a red spot on her infant's head. She first used Google and Google images to come to a preliminary conclusion, which she thought explained the spot. With that background information, she went to a young mothers' drop-in group where she knew there would be a public health nurse, who confirmed her hunch. According to Mary, if the nurse's assessment had differed from her own conclusion based on Internet research, she would have then escalated the information search and taken the baby to a doctor. This strategy of information triangulation not only echoes the strategy of preparatory non-authoritative information seeking described in Kim's scenario, but also demonstrates use of a concept of a hierarchy of authoritativeness, which one might ascend stepwise in order to reconcile information and resolve uncertainty.

### **3.3.2.5.2 Triangulating Information from Authoritative Sources**

In contrast with the escalation strategy used when triangulating non-authoritative information, three distinct strategies of triangulating information from authoritative sources emerged: a) consulting multiple authoritative sources, or a "second opinion," b) consulting non-authoritative sources, or non-medical perspective triangulation, and c) consulting both authoritative and non-authoritative sources, or inclusive triangulation.

Triangulating health information from one authoritative source against another occurred when young mothers felt brushed off, or not taken seriously, by the initial health care provider they consulted. Young parents, and mothers in particular, had many examples of the ageist, sexist, and racist ways they were not taken seriously by health care providers and medical office staff. Some employed strategies such as bringing an adult—such as their own parent or a youth worker—to appointments, in order to lend credibility to themselves as information sources in the

eyes of medical professionals. In cases when a young mother (and it was only mothers in this sample who described this type of triangulation) felt that her concerns were dismissed or not well addressed by her doctor, she sometimes consulted another information source.

Sofia recounted multiple instances of feeling brushed off by doctors when it came to her own or her daughter's health, described in one instance a strategy of seeking care from other types of health professionals after failing to get useful information from her doctor. In this case she was having stress-related health problems, and when her doctor was unable to provide her with information regarding what she needed to do to feel better, she then consulted a counsellor, then a nutritionist, who were able to help her identify actions to take to feel better.

Elena described getting multiple medical opinions regarding her baby's respiratory problems the previous winter,

I went [to the walk-in clinic], I think, six times, and this is before Christmas.

And [my younger son] had pneumonia, and I—I knew something was wrong, but I didn't know what it was. And they told me he was fine, he was fine and I'm, like, "Okay, he's not fine." So then I went to my doctor and she sent us for x-rays and he had pneumonia. And then just...I just wanted to see, after I knew what he had, I went back to that clinic and said "I just want to get him checked up again." And they said, "He's fine," and then I actually said to them, "No, actually I just got back from the hospital. He has pneumonia. I came here just to see if you guys...would say that again.

After having her concerns about her baby's coughing and wheezing dismissed multiple times by the doctors at the very convenient walk-in clinic, Elena's strategy was to check their assessment against that of her family doctor, who took her reports of the baby's difficulty breathing seriously

and was able to refer them for tests and appropriate diagnosis and treatment.

In contrast with the strategy of seeking multiple medical opinions in order to triangulate health information, some young parents described verifying information from their doctors against non-authoritative sources. Elizabeth, for example, was worried about the effect of prescription medications in pregnancy. When her doctor would prescribe them, she asked friends and consulted the Internet in an effort to verify that taking a newly-prescribed drug would not result in adverse effects. Caroline described her practice of asking her doctor questions and then consulting informal and non-authoritative sources to verify what he said. For example, she asked her doctor how she would know when her water (amniotic sac) broke, then used Google to search for the answer to that question online. After that, she asked her own mother in order to check with a third source.

Aliyah combined an escalation strategy with triangulating an authoritative source with non-authoritative sources. She prepared for doctor appointments by using the Internet, and then checked up afterward to make sure she understood what the doctor was telling her, and that it made sense within the context of her life. This strategy of using a non-authoritative source to bookend and help interpret as well as assess information from an authoritative source might be particularly relevant to immigrants whose first language is not English, such as Aliyah.

All of the examples of triangulating authoritative sources against non-authoritative sources that emerged in this study involved doctors as medical authorities. This transcended ethnic background and nationality of interviewees, and illustrates the primacy of the doctor-patient relationship within the cultural context of Canada. Canadian universal health care is built on this concept, and despite contemporary fears over possible shortages of family physicians, the primacy of the doctor-patient relationship as the authoritative one for personal health information

was clear in this population. That said, this type of triangulation suggests that while doctors are acknowledged to be the experts in medical information, non-medical perspectives may offer important information that helps interpret, apply, and make sense of authoritative medical information, within the context of individuals' real lives and constraints.

The fourth and final type of triangulation of health information that emerged within this study was that of checking information from an authoritative source against multiple other sources, both authoritative and non-authoritative. Saul described a strategy that is perhaps the opposite of the escalating triangulation strategy, in a case when it was difficult to tell how sick his child was. The doctor had told him that his daughter was ill, but when the family talked to their daycare provider, the daycare's assessment was that the child wasn't too sick to come in. Unsure, Saul asked friends at the daycare what they thought.

Demonstrating an iterative strategy between authoritative and non-authoritative sources, Rey, an 18 year old young mother, explained that the medical clinic was her first stop with health questions for herself or her child. However, she then went through a process of triangulating that information with friends, sometimes consulting a second medical clinic:

[W]hen I ask questions I always go back and, like, ask my friends. Like, just to be...to make sure 'cause some...doctors or nurses would tell you one thing and you go to the next...doctor to...tell you another thing. It's kind of, like, confusing.

When I asked Rey to explain this practice in more detail, she explained that she would call, text, or go over to her friends' houses to find out if they had ever had the same health problem, and, if so, whether they got the same response from their doctor. According to Rey, this type of sharing of personal medical experiences is a reciprocal practice in which she and her friends commonly

engage. If the friend's experience did not validate what Rey's doctor had told her, she would go to a second clinic to see another medical professional in order to reconcile the differences:

[W]hat I'll do, I'll just go to another clinic before I can...do any - yeah, I'll go...different clinic and - and if they say something different I'll tell them what the other doc...what the other doctor told me.

### **3.3.2.5.3 An Information Triangulation Typology**

Triangulation as a practice also served a secondary purpose, which was to assess the trustworthiness of a new information source as a whole. By triangulating representative pieces of information from a given source, individual information seekers were able to establish a track record of verified or contested information from a given information source, which would then inform the decision of whether to seek future information from that source, as well as to what extent to trust it. Figure 3.5 provides a typology of the four forms of triangulation that emerged within this study, including examples from study interviews of information seeking paths within each triangulation type.

Escalating authoritativeness type triangulation was applied to non-urgent health information needs, as was medical/nonmedical perspective triangulation. These could be proactive, as in the case of Caroline wondering how she would know when her water broke, or reactive, as when Mary wanted to make sure the red spot on her baby's head wasn't anything problematic. Second opinion triangulation and inclusive triangulation could be used in urgent health situations, such as Elena's baby's pneumonia, in which the information obtained from the initial authoritative source was not fully satisfactory. However, these could occasionally also be applied in less-urgent situations, such as Saul trying to figure out whether or not his child was too ill to attend daycare.

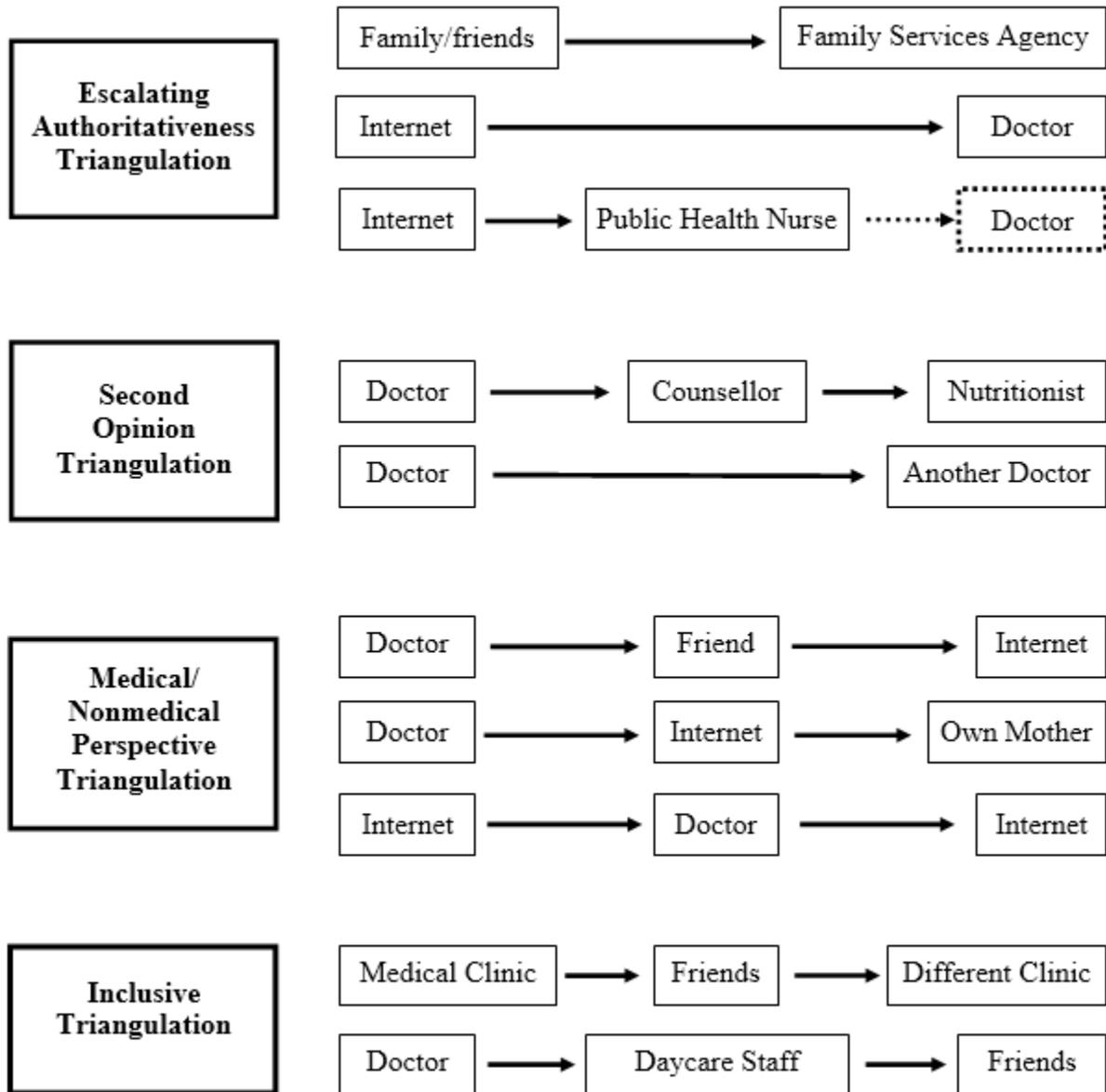


Figure 3.5 Typology of Health Information Triangulation, with Source Examples

### 3.4 Discussion

The current study focuses on young parents' health information practices related to pregnancy and parenting. Obstetrics has a history of being considered less evidence-based than many other medical specialties (Ohlsson & Clark, 2002), and expectant parents and maternity care providers alike struggle with and are often unprepared to assess the evidence for or against

various perinatal health practices (Klein, 2011; Klein et al., 2009) Additionally, the wide variety of cultural approaches to parenting (Bornstein, 2001, 2012) may at times lead parents to differ in practice from the currently recommended scientific advice—even in cases where there is a biomedical consensus. As a result, there is a great deal of contested knowledge in pregnancy and parenting, due both to cases of medical uncertainty (in which the scientific evidence is unclear or unknown) as well as situations in which two or more different of socially-constructed knowledges (e.g., Indigenous cultural practices and western biomedicine) exist in contradiction to or conflict with each other.

In this era of activated or empowered patients within western health care, the onus is placed on members of the public to be educated participants in their own health decisions. This contradictorily exists at the same time as the continued expectation of some degree of deference to medical authority, in particular doctors. This concept of patient activation dovetails with intensive mothering ideology (Hays, 1996; Reich, 2014; Romagnoli & Wall, 2012) that encourages individual level information filtering and risk assessment, and which has resulted in government interventions to promote intensive parenting among socially marginalized parents (particularly mothers).

These factors—the highly contested nature of what makes “healthy parenting,” and the emphasis on parent-patients doing their own information work in order to comply with societal ideals—may in part explain the prominence of assessment practices in the model of young parent health information practices. Although Savolainen’s conceptual framework of everyday information practices (2008, pp. 49, 65) places assessment within the cluster of information use practices, assessment in the current study served a prominent and significant gatekeeping function between getting information and using (or not using) information.

Cosijn distinguishes lay assessment of information relevance from formal relevance assessments (e.g., those done by a search database algorithm), stating that a user “very often intuitively knows whether a retrieved document is relevant or not and relevance is mostly understood in the fuzzy sense” (Cosijn, 2009, p. 4512). Rieh (2009) further argues that assessment of information credibility (believability) and cognitive authority (worthiness) is ubiquitous among information users. These assertions held true in this study, as relevance, credibility, and various constructs of authority were all evident within the assessment of information conducted by young parents, along with other attributes specific to the population or topic.

Information triangulation extends assessment into a complex and agentic practice (Abel & Frohlich, 2012; Popay et al., 2003) that young parents choose to enact in resistance to social and structural constraints placed on them by their marginalized social locations. Rather than accepting the truth of another, even another in a position of great official authority, many young parents demonstrated sophisticated processes of checking, comparing, and verifying multiple forms of health information.

The term triangulation was adopted by researchers from the use of geometric triangles to measure distances. In the research literature, triangulation is generally used to refer to an active practice in which researchers, particularly qualitative researchers, engage. Triangulation, or applying more than one theoretical perspective, data source, research method, or researcher, within a study (Denzin, 1970; Kimchi, Polivka, & Stevenson, 1991; Lincoln & Guba, 1985), is intended to help illuminate a phenomenon from multiple perspectives; such practices are expected to reduce the biases of a single approach. Triangulation of information is a deliberate and sophisticated practice largely attributed to researchers.

However, while less well documented, laypeople may also engage in practices that apply multiple methods or tools, consult multiple sources, and indeed consider an issue from multiple conceptual perspectives. Meyers, Fisher, and Marcoux (2009) observed some evidence of triangulation in a study of tween ELIS, noting that “Some tweens reported understanding and using concepts of triangulation to verify information content, but this was not widely in evidence and varied among the study samples” (p.323). The “tweens” in that study are roughly the same cohort as the young parents in this study, raising the question of whether active information triangulation might be a generational practice, or perhaps a practice growing over time across age cohorts. Future work on the current generation of young adults as they age will be important in order to confirm or dispute this idea, as well as to see if and how triangulation practices evolve over the life-course or chronological time and new technology development.

### **3.4.1 Limitations**

This study’s naturalistic and longitudinal design allowed for collection and co-creation of rich data, providing an in-depth view of health information practices in context. However, the qualitative design, researcher’s positionality in relation to study participants, and setting constraints result in certain limitations. Chief among these is the potential for various types of bias.

Social desirability bias on the part of young parent interviewees could have led to painting a picture of themselves as more successful, healthy, or independent than they are in reality. For example, I cannot discount the possibility that some of the many stories of young mothers quitting drugs and alcohol upon discovering they were pregnant may have been exaggerated. However, the near-universality of the overarching theme in which these stories fall (that of pregnancy as a turning point toward increased caring for a young mother by herself and

others), along with triangulation of self-report data via observation and conversations with service providers leads me to conclude that receipt of information that one is pregnant has a strong (protective) effect on health behaviours and decisions.

Although some of the findings are transferrable to other settings and health issues, this exploratory, qualitative study makes no claims at generalizability to the larger population. While I aimed for heterogeneity within the study sample, recruitment was not based on demographic quotas. In comparison with the 2011 National Household Survey findings for the Vancouver census metropolitan area (Statistics Canada, 2013c): Caucasian and South Asian identified individuals were present in this sample at approximately the rate of the general population, while Aboriginal, Latin American, Filipino, and Black individuals were more common in this study sample than the general population, and Chinese along with several other Asian ethnicities were less represented in this study sample. This is likely due to a combination of trends in young childbearing (comprising variation in sexual activity, contraceptive use, and abortion) among cultural groups, as well as possibly to rates at which members of different cultural groups access young parent services. In the Vancouver area, 40% of the adult population identified as immigrants in 2011 (Statistics Canada, 2013c), which is substantially higher than the (17%) immigrant population within this study population. However it is nearly identical to the 41% of study participants who had at least one immigrant parent, and given that the most common age of immigration is 25-44 years (older than the study participants) the study population may in actuality be representative of their age cohort in this regard.

Additionally, in doing this research it was clear that gender roles and norms played a substantial role in some parenting health information practices, far beyond those issues related to possession of male or female reproductive anatomy. However, the small number of fathers

interviewed and observed for this study makes it difficult to confidently make assertions about the influence of masculinity on young parents' information practices—rather, I was only able to generate hypothesis related to masculinity and parenting information, which should be tested in future research.

### **3.5 Conclusions**

Young parents in this study engaged in several health information practices, including but not limited to seeking, assessing, and sharing information. The model of young parent health information practices offers a visual depiction of the relationships among major health information practices of young parents. Obtained health information that was assessed to be useful by young parents did influence their health behaviours, and this connection could be health-protective (such as in the case of alcohol cessation or improved diet and exercise) or potentially detrimental (such as in the case of early weaning or consumption of sugary beverages).

Assessment emerged as a more substantial concept and practice within this study than in some other everyday life information practice studies. This may perhaps be attributed to the topic being health, including the health of infants and children. Seeking and assessment engaged in an iterative relationship around contested knowledge in health, as young parents worked to sense-make with conflicting information in the context of their own lives. This iterative relationship, which played out in a variety of ways, constructed the complex practice of triangulation of health information. Triangulation was an agentic practice that allowed young parents to both resist and comply with pressures to be engaged in health information work and demonstrate information-intensive practices as part of modern parenting.

Despite social locations of marginalization, young parents in urban Canada today are often sophisticated seekers of health information for themselves and their families. That said, within the very heterogeneous population of young parents, there are attributes beyond simple medical accuracy that make information good and useful. Health information interventions aiming to influence the health behaviour of young parents should be wary of underestimating the information and technological savvy of young parents, while at the same time providing easily accessible and digestible information to fit the pressures and needs of pregnant and parenting youth.

## **Chapter 4: Discourses of Knowledge and Ignorance Regarding Young Mothers: A Situational Analysis of Health Information Worlds**

Young parents actively engage in a variety of health-related information practices, which they co-construct with other actors in their social contexts. In Chapter 3 I used constructivist grounded theory to examine the health-related information practices of young parents, finding that health information assessment was a major task. Assessing and triangulating information was an important practice within the study population due to the competing measures of “goodness” of information and authoritativeness of information sources. The value of information was constructed within the social worlds in which young parents live, parent, and attend work and school.

Chapter 4 uses situational analysis (Clarke, 2005) to examine the social information worlds of young parents. The relationships among information worlds, as well as the way the actors therein negotiate values and norms, all shape the behavior and experiences of both young parents and those tasked with educating them. Particularly germane to understanding health information practices are the ways in which the values of various types of knowledge and expertise are discursively constructed.

### **4.1 Information Practices in Socially-Constructed Worlds**

An information practice comprises an “organized composite of actions” (Savolainen, 2008, p. 25) influenced by social and situated learning. Information practices take place in physical and conceptual spaces that are in a constant state of co-construction with each other and with the individuals and groups therein. While “information worlds” is a phrase commonly used

for such spaces, there remains some lack of clarity around what is intended by the use of this metaphor (Yu, 2012).

Burnett and Jaeger (2008; 2010) integrate Chatman's small worlds of marginalized people in localized contexts (Chatman, 1991) with Habermas' conceptualization of the public sphere (Habermas, 1991). The resulting multi-level theory of information worlds focuses on five elements: social norms, social types, information value, information behaviour, and boundaries at which information worlds come into contact with each other (Jaeger & Burnett, 2010). While the initial applications suggested for this theory of information worlds focus heavily on information organizations (such as libraries) as well as information and communication technologies, it may be applied to a variety of settings in which social worlds interact with and construct information behaviours and practices.

According to Clarke (2005), "Social worlds...generate shared perspectives that then form the basis for collective action..., while individual and collective identities are constituted through commitments to and participation in social worlds and arenas" (p.45). Taking a postmodern, Foucauldian approach, Clarke conceives social worlds as containing structures and actors of various social types. These social worlds engage in struggle with each other over boundaries, social norms, and discourses within arenas that are akin to the highest level of Burnett and Jaeger's (2010) information worlds theory.

Social norms, social types/actors, social constructions of values, and negotiations of relationships and boundaries are common elements of these theories, which may be integrated to focus specifically on social information worlds. By using Clarke's situational analysis methods to investigate social information worlds within the young parenting arena, one may elucidate

values and norms of and about actors within these worlds, providing insight into the construction of their health-related information practices.

#### **4.1.1 Knowledge, Experts and Expertise**

Within health information arenas, there are likely to be individuals and ‘types’ of people who are considered expert information providers (i.e., those with administrative authority (Rieh, 2009). These people tend to be perceived as having a high level of knowledge-related cultural capital (e.g., in the form of professional credentials), as well as those with “lay” or experiential expertise. Both expertise and expert status indicate possession of knowledge; but, these types of knowledges may not be equivalent. Collins and Evans (H. Collins & Evans, 2007; 2002) suggest that the sociology of scientific knowledge shift to encompass studies of expertise and experience, proposing a taxonomy of “expertises” (2007, p. 14) ranging from ubiquitous tacit knowledge shared by members of a society or social group, through more specialist knowledge based on experience and education, and ultimately an expert level of contribution to a scientific/technical field.

Eyal (G. Eyal, 2013; G. Eyal & Buchholz, 2010) builds on this turn toward a sociology of expertise and focuses on interactions between scientific experts and the public sphere—drawing a distinction between “experts” and “expertise.” Expertise in this paradigm connotes mastery of a task or skill. This is distinguished from the concept of being an expert, which requires being part of a social group constructed as the authority on a given topic (although expertise and being an expert are certainly not mutually exclusive). Eyal (2013) refers as an example to the work of Rose (1992), who distinguishes between the expertise of those with personal experience with psychological disorders and the expertise of psychologists. Such approaches to conceptualizing knowledge as belonging variously to laypeople with experience-based expertise and to formal

experts in a field may be used to explore the various discourses of knowledge and ignorance in the young parent social arena.

#### **4.1.2 Construction of Young Mothers as Problematic and Knowledge-Deficient**

Before delving into specific health information worlds related to the young mothers in this study, it is important to recognize the broader social and political climate within which young parent social worlds exist, which casts young mothers as socially and medically problematic and knowledge-deficient. Teenage pregnancy and parenting has long been constructed and understood to be a societal problem (Bonell, 2004; Furstenberg, 1976; Kelly, 2000). Despite trends of falling incidence of teen pregnancy and childbirth over the past four decades (Duncan, 2007; Langille, 2007), an infantilizing discourse over the alleged crisis of “babies having babies” (Kelly, 1996, p. 429) or “children having children” (Fields, 2005) persists.

Multiple social worlds interact to co-construct and reinforce the notion of the “teen mom” as a socially and medically risky (Shoveller & Johnson, 2006; U.S. National Library of Medicine, 2012), and a morally problematic (Chabot, Shoveller, Johnson, & Prkachin, 2010) young person who, in her ignorance, is either a passive victim (typically of older, predatory, male sexuality) or a poor choice-maker (Kelly, 2007). The mass media has reinforced popular culture images of teenage mothers as deviants, often employing raced and classed social narratives to do so (Barcelos & Gubrium, 2014).

North American public health campaigns have largely focused on prevention of teenage pregnancy, rather than amelioration of the stigma, minority stress, and underlying social determinants that may cause poorer outcomes among some young parent families. Breheny and Stephens (2010) found that the public health discourse constructs teenage pregnancy as a socially

contagious “disease” that carries risks of medical and non-medical complications, a finding that is echoed in Barcelos’ (2013) situational analysis of American non-governmental teen pregnancy campaign materials. Social and medical sciences have sent mixed messages regarding the suitability of early age, particularly the teen years, for childbearing. Research has historically found an association in wealthy countries between young childbearing and poorer social (Basch, 2011; Hanna, 2001; Hoffman & Maynard, 2008), and medical (Dryburgh, 2000; A. M. Fraser et al., 1995; Scholl et al., 1992) outcomes for mother and child. However, more recent evidence is mounting to support the assertion that such differences are instead attributable to underlying social determinants rather than maternal age itself (Gold et al., 2001; Penman-Aguilar et al., 2013; Rich-Edwards, 2002). Indeed, for some young mothers, becoming a parent is associated with significant improvements to their health, education, and social welfare status, providing a valued social role, inspiring career aspirations, and bringing community support (Anwar & Stanistreet, 2014; Seamark & Lings, 2004).

By portraying young mothers as “babies” who have made poor choices and been victimized by older men, society, through mass media and public discourse, constructs young mothers as knowledge deficient. Framing young pregnancy as a public health threat leads to the development of health information interventions targeting this population, as education is constituted as essential to stimulating behaviour change (Greyson & Johnson, 2015).

## **4.2 Objective**

The information practices of young parents, as well as those tasked with providing health education to young parents, are situated in socially-constructed information worlds. These worlds engage in tensions and negotiations around information, knowledge and expertise, in order to determine who needs information, who has knowledge, and whose knowledge counts as

expertise. This chapter focuses on the social worlds that host and implement health information interventions targeting and affecting young mothers in particular. The objective of this analysis is to explicate social worlds within which young mothers seek, use, and share health information. The roles and tensions among the various social worlds at play are described. Public discourses of knowledge and ignorance regarding young mothers are characterized, as are the intersections of young mothers' social locations with such discourses.

### **4.3 Methods**

Health information practices play out within, interact with, and work to shape multiple social worlds, fields, or arenas. Visualization is one approach to concretizing social worlds and arenas, particularly when discussing non-tangible concepts such as information. Both researchers and laypeople in their day-to-day lives increasingly use visualization to aid in describing and analyzing social worlds. Use of geospatial mapping and data visualization techniques is on the rise (Deloitte, 2012; Drosopoulou, 2012; Hemerling, 2011; McDonnell, 2011; Steele & Iliinsky, 2010), and contemporary researchers in this postmodern world rich with data increasingly find that mapping achieves new resonance with the increasing visual orientation of our societies.

Space inventories or maps, often incorporating an ecological perspective to highlight relationality among socially-constructed entities such as organizations and types of space, have long been a part of sociology, associated heavily with the Chicago School (Clarke, 2005, p. 41). Twentieth century sociologists, including Anselm Strauss and subsequent grounded theorists in the Straussian tradition, developed social worlds theory to understand the function of conceptual spaces—such as inherited or chosen social and professional groupings—on identity, discourses, and actions. Sociological health researcher Clarke brought grounded theory “around the postmodern turn” (2003, p. 553) by extending Straussian mapping practices to include power

relations (e.g., the Foucauldian concepts of “gaze” and “discipline”) in mapping methods that strive to make visible the silences in empirical data, and question binaries in our conceptual maps. Clarke joins other second generation grounded theorists in distancing grounded theory from its positivist roots (Morse, 2009), while providing new tools for visual data analysis to help shift the focus from social processes to that of “social worlds/arenas/negotiations as an alternative conceptual infrastructure” (Clarke, 2003, p. 558).

Visualization methods were integrated into the design of this study as a way of enriching traditional methods of qualitative research. Within data collection, semi-structured oral interviews included a drawing elicitation activity that invited participants to depict their health information worlds from their own embedded perspective in order to enrich conversations of information practices in context (Greyson, 2013). Here in Chapter 4, I apply situational analysis mapping techniques to the data gathered in a study of young mothers (see Chapter 3, Section 3.2 for details).<sup>12</sup> By using situational analysis, I identify the socially-constructed health information worlds of young mothers in the study and explore the surrounding epistemic fields at play. Situational analysis illuminates structures of and negotiations over power and knowledge in the social worlds and arenas of young mothers.

#### **4.3.1 Study Setting**

This study took place in the third largest metropolitan area in Canada, Greater Vancouver, located on the west coast of the country and home to 2.3 million people (Statistics Canada, 2012). Each city within the Greater Vancouver region is host to a Young Parent

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<sup>12</sup> While the overarching study included mothers and fathers, this analysis focuses specifically on mothers, due to limits on the number of, and therefore the variety of positions taken by, young fathers in this study.

Program (YPP), located partly or entirely within a public secondary school, which serves as a hub for education, health, childcare, and social support programming. External to the YPPs are a variety of services, which often work in collaboration with the YPP and are aimed at providing health and social support to young parents and their children. Such programs range from social support groups and food assistance to prenatal education or transitional housing. The primary locations for this fieldwork were two Young Parent Programs (YPPs) based at secondary schools in different cities within the Greater Vancouver region of British Columbia. Additional data collection was conducted at community organizations that serve young parents, including the non-school based setting for a third YPP.<sup>13</sup>

#### **4.3.2 Data Collection Methods**

The data analyzed in this study was collected via ethnographic observation and individual interviews with mothers aged 15-24 years. Data collection began in October 2013 and continued through December 2014. Participants for in-depth individual interviews were initially purposively recruited from the YPPs, and observations of daily activities at the YPPs were conducted. As the study progressed, interview participants were purposively and theoretically sampled from return visits to the YPPs as well as from other community organizations (e.g., neighborhood house, postsecondary institution with onsite daycare) that provided young parent services. Interviews covered a range of topics spanning health, housing, childcare and parenting, income, and social relationships, in addition to information-specific questions. Interviewees were invited to participate in follow-up interviews approximately every four to six months (for a

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<sup>13</sup> For fuller details on study setting, see Chapter 3, Section 3.2.2, pp 94-95.

maximum of three interviews within the study timeframe) in order to prospectively follow participants' evolving lives and practices.<sup>14</sup>

### **4.3.3 Analysis**

This chapter presents a situational analysis (Clarke, 2003; 2005) of the health-related information worlds of young mothers, centred on the Young Parent Programs. Situational analysis, although growing out of the grounded theory tradition, has a different underlying metaphor than that of social processes. Rather, situational analysis focuses on using visual diagramming techniques to analyze and elucidate the relationships among human and non-human actors in a research situation, the tensions among them, and the discourses they construct.

In situational analysis, social worlds are Straussian “universes of discourse,” through which an individual and social groups co-construct each other (Clarke, 2005, p. 55). Dominant discourses are produced linguistically as well as through discursive practices. They serve to order and discipline social worlds and the individuals therein and are reinforced through institutions. Situational analysis provides a grounded theory-based form of discourse analysis that focuses on the ways that “discourse writ large” (including multiple forms of communication) (p. 148) frames and represents actors in social worlds, producing identities, ideologies, knowledge, and power.

Situational analysis can be conducted with coded data or with uncoded but partially “digested” data (Clarke, 2005, p. 84). In the analysis for Chapter 3, interview transcripts and field notes were coded and analyzed in accordance with constructivist grounded theory (Charmaz, 2007, 2009). For the current analysis, I then engaged the coded data in Clarke’s

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<sup>14</sup> For additional details on data collection and interview contents, see Chapter 3, Section 3.2.3, pp 95-97.

situational analytic data mapping exercises in order to interrogate the health information worlds of young mothers. I used: a) situational mapping to classify and examine relationships among human and non-human actors in the social information worlds, b) social worlds/arenas mapping to focus in on the social worlds within the young parent arena, and c) positional maps to flesh out discourses of ignorance and experience regarding young mothers within this study.

#### **4.4 Results**

Over the 15 months of data collection, I spent 50 days engaged in naturalistic observation at young parent services (primarily YPPs). Thirty-seven young mothers ages 16-22<sup>15</sup> participated in in-depth individual interviews of approximately 90 minutes. Eighteen young mothers completed a second interview of approximately 45-60 minutes four to six months after their intake interview, and three also completed third interviews, which were also 45-60 minutes in length. Over half of the young mothers in this study were visible minorities, 40% of them had at least one parent born outside of Canada, and six of the 37 were themselves immigrants.

In analyzing the socially-constructed health information worlds that made up the young parent arena, three key findings emerged. The first is that while experts from various social worlds in the young parent arena had mandates to educate young parents, young mothers also possessed and developed lay expertise. The second is that young mothers—and particularly those still in their teen years—were discursively constructed as paradoxically ignorant and knowledgeable. And the third is that the relationships among social worlds, as well as the discourses of knowledge and ignorance, were constructed in a gendered and racialized manner.

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<sup>15</sup> See Chapter 3, Section 3.3.1, pp. 98-102, for a more detailed description of study participant demographics.

#### 4.4.1 Health Information Worlds in the Young Parent Arena: An Overview

Through situational mapping, a young parent arena emerged, centred on the YPPs, and containing multiple overlapping health-related social information worlds. Chief among these were the information worlds of the organizations that participate in the day-to-day administration of the YPPs: the secondary school and the associated childcare facility. These two social worlds were ones with which student parents in the YPPs interacted every school day. In addition, professionals from public health, nursing, and non-governmental organizations (both faith-based and secular) were regularly on site at the YPPs, providing programming and recruiting participants for their own services. Figure 4.1 contains a social information world map of the young parent arena, centring on the YPPs (see Appendix C for supplemental ordered situational map of young parent health information worlds).

For many YPP students, support from their family of origin was instrumental in their ability to attend school as they parented, as well as a key source of information and support. Some young mothers who did not live with their families of origin received government support, allowing them to live in foster care while parenting or to live independently in Youth Agreements<sup>16</sup>. Family and “the State” were both social worlds that were ever-present even

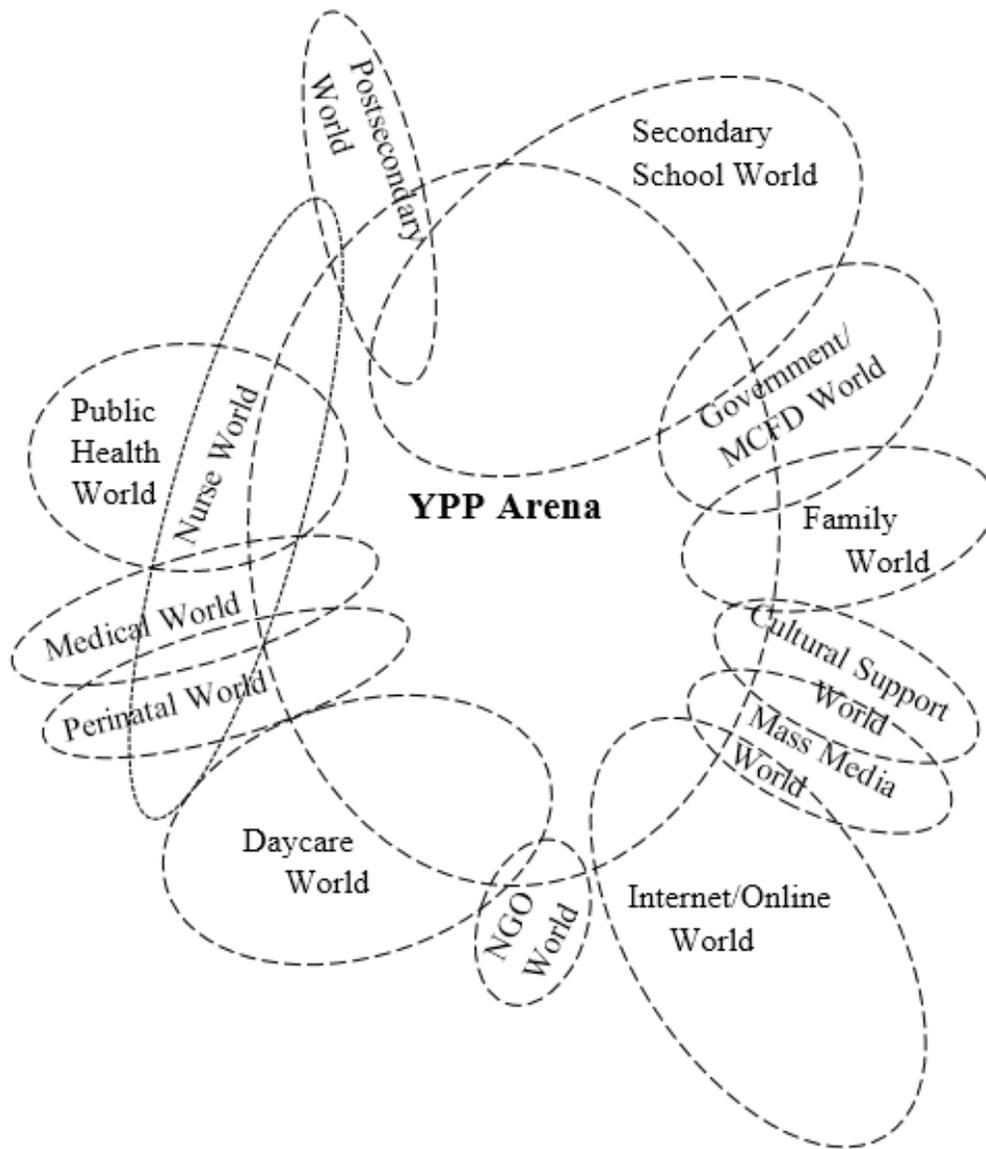
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<sup>16</sup> Youth Agreements (YAs) in the province of British Columbia are legal agreements between the Ministry of Child and Family Development (MCFD) and minors aged 16-18 whose parents cannot or will not safely take care of them. Youth with YAs live independently, are eligible to receive a wider array of services than a recipient of regular income assistance (welfare), and have responsibilities to maintain their eligibility, such as regular school attendance, counselling, or family visitation. British Columbia does not have a legal class of “emancipated minors,” or children legally regarded as adults; thus all youth are legally in care of their parents or other legal guardians or wards of the Crown (in foster care, other residential care, or on YAs). In 2008, the province began offering Agreements with Young Adults (AYAs) to provide up to 24 months of transitional support for former youth in care who have “aged out” of YAs or foster/continuing care at age 19, and who are pursuing education, skills training, or rehabilitation before the age of 24. AYAs provide a lower level of support than YAs, and not all former YA recipients are eligible for AYAs.

without representatives of those worlds physically setting foot in the YPP itself. This presence took the form of family and government support for young parent success, as well as family conflict issues and the constant shadow of government surveillance (and the related threat of child apprehension). Cultural groups, ranging from religious congregations to refugee settlement services to youth groups centred on a given ethnic identity, reflected aspects of students' social arenas, and provided a social world external to the YPPs that played a sometimes-significant role in the experiences and identities of young mothers. Such social worlds occasionally interacted directly with the YPPs (e.g., when a youth group was held after classes at the secondary school).

Medical communities of various types were prominent within the young parent arena, for example the overlapping worlds of western medicine, nurses, public health, and the perinatal health community. The influence of each of these authoritative health information worlds was strong. There was wide variation in the degree of direct contact between these worlds and the YPP programs themselves, with medicine being the most separate and public health nursing the most intertwined.

The Internet was a major social world interacting with the young parent arena, working its way into virtually every health information issue eventually, whether this be via smartphone use in the classroom, as a link for relationship maintenance with peers, as a reference source more frequently consulted than any print material, or as a topic for regular discussion and concern (e.g., regarding online privacy risks and norms). The Internet as used by young mothers in this study for health information was an important 'virtual' social world, which interacted with the mass media such as news, film, and television—most particularly the genre of “reality” television shows such as *16 and Pregnant* and *Teen Mom*.



*Figure 4.1 Social Information World Map: Young Parent Arena*

These multiple social worlds within the young parent health information arena interacted with each other, sometimes directly (as in the case when a student mother’s own parents came to register her for the YPP alternative school) and sometimes indirectly (as when youth workers would help young mothers navigate paperwork to apply for government benefits). While they sometimes worked in concert to reinforce each other’s information, they also engaged in

conflicts over which health information was current and authoritative, as well as the extent to which young mothers were in need of education and surveillance.

#### **4.4.1.1 The Construction of Expertise**

The social information worlds contained actors representing certain positionalities within the young parent arena. Some actors, such as teachers, doctors, parents, and public health nurses were officially tasked with educating young mothers on health-related matters, while others were more arms-length to these information interactions. The degree to which these actors were constructed as experts and non-experts varied, as vertical (within a social world) and horizontal (across social worlds) hierarchies and power dynamics shaped administrative authority. Expert status was conferred via formal credentialing or by approval of someone with administrative authority. However, expertise could be constructed in multiple, sometimes shifting ways. A person could recognize herself as holding expertise based on extensive experience, while others could construct a position of expertise for someone by deferring to or consulting her in matters on which she was experienced.

The actors in the core YPP social worlds of secondary education and daycare included teachers, youth workers, and daycare staff, all of whom were positioned as credentialed experts (in academics, supportive services, and parenting skills) in relation to parent students. Additionally, the YPPs were sites of frequent visits by outside health educators such as public health nurses, student nurses from local colleges, and young parent support workers of various types from local non-governmental organizations, all of whom contributed their expertise to the program by providing various forms of health education. Although not recognized as part of a formal community of experts, young parents acted as information sharers and mediators within

the young parent arena in a variety of ways, some of which conferred a form of lay expertise status.

Other young people within a variety of social information worlds, including schools, cultural support groups, and the family domain, often viewed young parents as lay experts in matters of reproductive labour, inclusive of, but not limited to, childbearing and parenting, and extending to intimate relationships and household management. Young mothers described other youth in their communities approaching them with questions about pregnancy and parenting, often when suspecting or learning that they might themselves be pregnant. Seventeen year old young mother Crystal explained, “I’ve had lots of friends who have, like, had questions about, ‘Oh, I think I might be pregnant,’ or ‘I’m having a...I’m pregnant right now or...what should I do? Should I abort? Should I keep it? What...how was it for you?’” Crystal noted that this position as lay expert in reproductive matters also led to being privy to a great deal of confidential personal information from and about peers.

Young mothers also described friends seeking their advice on family issues beyond pregnancy and infant caregiving. Eighteen year old young mother Rey described her friends as being very active in information sharing. In addition to checking with each other about health and relationship concerns, she explained that sometimes “they come with a question like ‘What do I do when I don’t know how to take care of my daughter’ or, you know, financially and stuff like that.” Rey then described the advice she would give in that example regarding babysitting and finding a job that would enable the friend to better provide for her daughter.

There were some topics in which the YPP students demonstrated a higher level of proficiency and knowledge than the adults formally positioned to teach them. This happened in a variety of knowledge areas ranging from technology to parenting. An area where this was

frequently the case was that of familiarity with information and communications technology. I observed many instances of teachers or youth support workers asking students to either look up a health question online or explain a new social media app or platform. While this type of expertise was frequently devalued in young parent social worlds as a natural attribute of contemporary youth who are “digital natives” (Palfrey, 2008; Prensky, 2001), youth were at times positioned as valued guides and instructors whose knowledge was actively sought by adults. For example, when teacher Roger would ask a student to help find online video tutorials, or when visitors from a young parent support program in the community would ask young parents for information on new smartphone apps.

Some young parents were constructed as local experts within social worlds due to acknowledged work and experience on their own behalf. A few young parents became well-connected in their communities, or continued their education in technical fields that allowed them to develop expertise, such that they found themselves providing information to the professionals assigned to aid young parents like themselves. Twenty year old Sarah B, for example, had her first child as a teen and completed secondary school via a YPP. After beginning college with a career goal of social work or nursing, Sarah B noticed that she had become a resource for the very workers whose job it had been to support her and other young parents. By drawing on the combination of her experience as an young parent and the new health-related information she was learning in college, she noted that, “I’m able to help them out ‘cause they’re not—a lot of them aren’t...health people. They’re just for support. So sometimes I’m able to help with them or share with them.” Although aware that she had developed medical knowledge that was out of scope of the support workers, Sarah B still moderated her explanation of this information mediation, correcting her initial wording to imply that she was “sharing” with

support workers previously positioned as experts to support her, rather than providing help in an area of their weakness.

There were also examples of young parents becoming recognized for expertise with childcare and parenting, who were solicited for advice by older community members. This type of situation arose in this study most frequently in Aboriginal families, including in that of 16 year old expectant mother JBiebs. JBiebs had been participating in the care of her younger brother since his infancy. When I asked JBiebs if there were people who came to her for information or advice about child caregiving, she explained,

Surprisingly, my mom does. ‘Cause I’ve been raising my brother and my brother loves my mom, he loves her so much, but he acts different around her ‘cause he thinks he can get what he wants and stuff and... and I tell my mom... “I don’t raise [my little brother] that way.”...[S]he has asked me a few times, like, “Oh, [your brother] is asking for this” or “[Your brother] wants this, should I give it to him?” I’m, like, “Does he deserve it?” Like, I’ll bring her through those and she can make the decision herself. And she made [the] right decisions. Like, she comes to me for things like that with my little brother. Um... [also] my friend’s mom. I used to babysit her son and her niece at the same time so she always asked me, like, “Oh what do I do, my baby is teething?” And I’m, like, okay, well I just told her, like, “Give him frozen waffles [to suck on in order to soothe his gums]. Like, it helps ‘cause that’s what I did with my little brother.”

Although JBiebs was pregnant with her first child at the time of our first interview, she was already recognized in her family and community as a reliable parenting expert.

Actors in the various young parent health information worlds were engaged in constant negotiations over the boundaries of knowledge and expertise, such as when Roger asked the young mothers to help him use YouTube or Sarah B provided health information to her former youth support workers. Resulting from these negotiations, in the context of broader societal constructions of young mothers were discourses that represented and maintained power relations. The following section presents a positional mapping-based exploration of these discourses.

#### 4.4.2 Discourses of Knowledge and Ignorance Applied to Young Mothers

Actors within multiple social worlds provided health information to young mothers based on the construction of young mothers as information deficient, and a reliance on health behaviour models that suggest that receipt of information leads to knowledge and ultimately behaviour change to improve health outcomes.

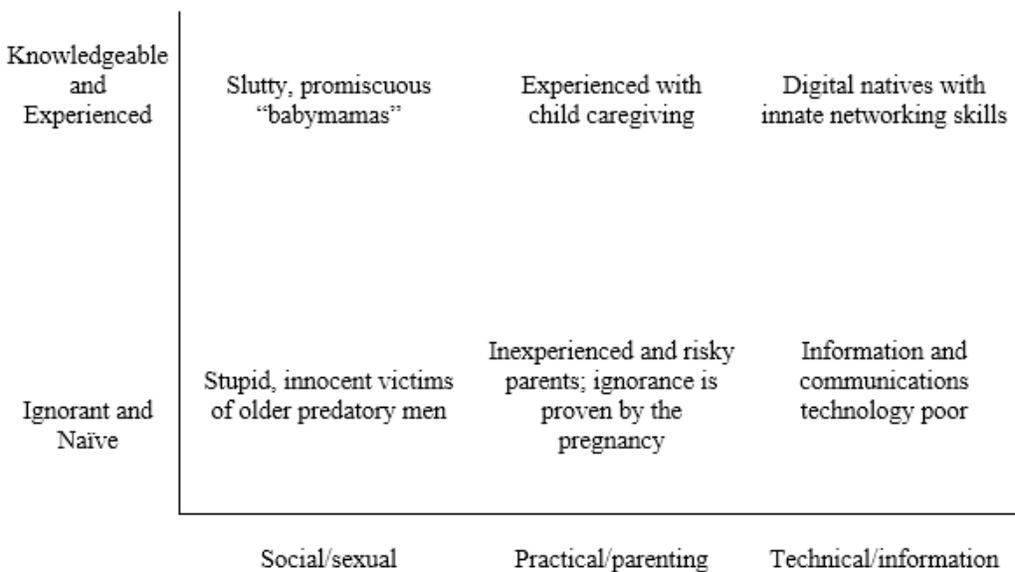


Figure 4.2 Positional Map: Discourses of Young Mother Knowledge and Ignorance

However, within the young parent arena and related social worlds, young mothers were discursively constructed as both knowledgeable and ignorant. These discourses were not uniform

but rather varied and intermingled across and within given subject areas. Figure 4.2 shows a positional map of the basic discursive constructions, plotted as positions along axes of knowledge and ignorance (y-axis) and subject areas ranging from the social to the technical (x-axis).

#### **4.4.2.1 Social and Sexual Knowledge**

Young mothers, particularly those in their teen years, are subject to a great degree of social stigma in health care (SmithBattle, 2013), education (Kelly, 1997), and public discourse (Kelly, 1996; Yardley, 2008). Almost every mother in this study described having been stereotyped as “slutty” by the media, other young people, and older people in the community. Most expressed frustration at the unfairness of this assumption that teenage mothers were promiscuous. As 16 year old expectant mother Cassandra pointed out, “Some people have sex once and get pregnant. But it’s still perceived as you’ve slept with this [large] amount of people.” The “teen mom” was constructed by actors in most of the young parent social worlds as sexually experienced, particularly as compared with non-parenting peers. In some cases these young women were cast as sexually manipulative (e.g., getting pregnant to “trap” a man), while others were portrayed as naïve young girls who had been taken advantage of by older men, removing agency along with blame. The dominant paradox of sexual experience (scheming promiscuity) yet ignorance (presumed non-use or ineffective use of contraceptives) failed to capture the reality of many young mothers in this study.

#### **4.4.2.2 Practical Parenting Knowledge**

Unlike the sexual knowledge category, the dominant construction in the domain of parenting was that of ignorance. Informally, in families and community spaces, it was common for young mothers to receive unsolicited child caregiving advice from what one young mother

called the “community grandmas.” The YPP spaces were explicitly created with the mandate of educating young parents, via both core secondary school curricula and parenting-specific interventions and support. In addition to teacher instruction, YPPs were host to many visiting experts who provided instruction in parenting skills, such as formula bottle preparation and child sleep training, in accordance with current guidelines from local public health authorities.

In interviews, however, it became clear that it was very common for young mothers to have a great degree of previous child-raising experience and confidence, often due to their previous experience in childcare for younger siblings or extended family members (e.g., cousins, nieces, or nephews). The substantial caregiving experience possessed by many young mothers was not often acknowledged or valued by adults. In some cases, this may have been due in part to a conflict between cultural parenting knowledge and western “scientific” or “intensive” (Hays, 1996) approaches to parenting. Jessica, a 17 year old expectant mother who helped care for a younger sister who had a chronic disease as well as their baby brother, explained that her child caregiving experience left her feeling confident about the challenges of young parenting.

I always had that responsibility of taking care of [my sister] ever since I was two years old, taking care of her, taking care—and then when my baby brother came out, you know taking care of him. I just loved him! I’d just always change his diaper. I would feed him, I would burp him, I would play with him, I would, you know, wake up and see him. I was so close to my baby brother. I just loved him. He was my baby. And I still do now.[...]still to this day I always take care of my little brother and I always take care of my little sister. I take them out, I feed them, I take them out to go out, I just—you know, I’m not like [their] sister. I’m just like, more like a second or third parent to them. So when I found out I was

pregnant, I didn't have the problem inside of me where I was just like, "Oh my god, I don't know how to take care of a kid" or "Oh my God it's gonna be terrible. I don't wanna have a kid right now.

Despite many of the young mothers coming to parenting with a great deal of childcare experience, they were typically perceived to be in need of intensive education and surveillance. This construction of young mothers as inexperienced and lacking proper parenting knowledge had multiple elements: lack of life experience (years lived), assumption of social deprivation due to statistics correlating lower socioeconomic status with early childbearing, and the notion that early childbearing must be unplanned and due to contraceptive non-use or misuse.

#### **4.4.2.3 Technological Knowledge**

Although hands-on experience was usually insufficient to qualify young mothers as officially knowledgeable parents, life experience as part of a generation of "digital natives" was adequate to construct them as fluent in information and communications technologies, and consulted by adults for assistance as described above. However, there was an opposing position constructed on this spectrum as well, which applied to the most socially and economically marginalized youth in the study. Although virtually all young parents in the study had access to the Internet and smartphones, those with the most transient and marginal lives had the poorest and least reliable access, sometimes losing or having to sell their phones for example, and rarely having a home computer.

A subset of young mothers in this study had access to technology, but disabilities (sensory, learning, or cognitive) that limited their full participation in information technology. Seventeen year old mother Courtney, for example, had family members with computer skills and

education, but explained that she rarely used computers for schoolwork or social media because she had begun developing migraine headaches whenever she looked at a screen for a prolonged period of time. Given that Courtney came from a middle-class socioeconomic background, neither the polarized discursive construction of the affluent digital native nor that of the marginalized youth without access to computer technology accurately captured her experience. Such positions that deviated from stereotypes were silenced in two ways, as the minimizing of experiences that did not fit the expected narrative (of digital youth) intersected with the stigma and self-stigma (Ali, Hassiotis, Strydom, & King, 2012) that impact youth with disabilities, often limiting their desire to speak publicly about their technology access or use challenges.

#### **4.4.3 Social Locations in Information Worlds**

The young parent social arena and the construction and valuation of young mothers' expertise therein were shaped in part by social constructions of gender and ethnicity. The social locations of individual young mothers shaped their experiences and relationships with social worlds within the young parent arena. In particular, gender and ethnic norms were observed to strongly influence the YPPs and related social worlds, informing information interactions and affecting negotiations over the value of different types of knowledge.

##### **4.4.3.1 Gendered Worlds**

The young parent arena in general, and the YPPs in particular, were highly feminized social worlds. Most health information providers, ranging from teachers and youth workers to family and friends, were women. Male staff in these feminized environments assumed the responsibility of role modeling, regularly commenting on gender equity issues and demonstrating “involved fatherhood” or pro-feminist attitudes—for example teacher Roger describing the way he and his wife balanced night time care of their baby.

Despite the presence of male role models, the participation of young fathers in programs aimed at young parents was low. This absence reflects the intensive focus on young mothers that was evident in the YPPs, as well as more broadly in society, and may also relate to hegemonic norms for young fathers (e.g., pressure to drop out of school and work, or to enter vocational training programs). Historically, most young parent services only accepted mothers, but in recent years many have adopted more unisex names and policies. The YPPs in this study were officially open to young fathers, and occasionally had fathers enrol (usually along with their female partners). However, the YPP staff acknowledged the double bind around father inclusion: on one hand they felt compelled to customize their programs to the actual participants (primarily mothers), but on the other they recognized that this might inadvertently make fathers feel unwelcome. When a young father was present at a YPP, I often observed negotiations over his participation in activities within the program that carried feminine connotations (e.g., crafts such as soap making, or birth control presentations).

A similar focus on young mothers and disregard of young fathers could be noted in several of the other social information worlds in the arena, ranging from government to the mass media. Official statistics on young fathers rarely collected, funding for young father-specific programs was a challenge for community support organizations in this study, and there is no “Teen Dad” reality show. Indeed, the primary discursive construction of young fathers in this study was that of conspicuous silences and absences within the social arena, implying that young fathers would be ignorant and unmotivated to learn about parenting by virtue of the intersection of age and gender.

The interactions and negotiations among social worlds in the young parent arena were also gender-informed. Virtual worlds such as the mass media and Internet notwithstanding,

health information worlds in the young parent arena varied in degree of direct contact with YPPs, and this degree of contact was often gendered in nature. For example, medicine (masculinized world) was quite separate from the YPP, while public health nursing (feminized world) was intimately intertwined. Although the physicians that young mothers were seeing on a regular basis—family doctors, obstetrician/gynecologists, and pediatricians—were among the most feminized fields of medicine (Canadian Medical Association, 2015), medicine has historically held, and continues to carry a much more masculine connotation than nursing (David, 2000; C. Davies, 1996). The influence of both authoritative health information worlds was strong, but in situations in which a young mother’s doctor’s advice contradicted with public health advice, she was likely to place more authority on the information from her doctor. Other masculinized information worlds within the young parent arena, such as government policy, were similarly distanced from the day-to-day functioning of the YPPs yet considered highly authoritative in their instruction and information.

Paralleling the higher authority placed on the more distant and masculinized information worlds within the young parent arena, higher value was placed by service providers on the more masculinized, technical, or scientific forms of knowledge held by young mothers. Discursive positions that attributed expertise to young mothers in technical matters (e.g., “scientific” intensive mothering, information technology) increased their status within many associated social worlds. Experiential expertise in feminized reproductive and domestic matters, while sometimes valued by peers with related information needs, did not grant expert status and associated cultural capital. Experience that was too “social” in nature held the potential to carry stigma, either regarding taboo female promiscuity or by being too culturally (as opposed to scientifically) based.

#### 4.4.3.2 Ethnic and Cultural Norms

The young parent social arena in Greater Vancouver was reflective of the broader cultural norms of the region. While the young mothers in this study were a diverse group, bringing to the YPPs and other shared spaces a variety of cultural practices, the construction of certain knowledges as valued and authoritative gave preferential treatment to health and parenting practices that conformed to Eurocentric ideals and a culture of intensive mothering. Knowledge and practices that were cast as “ethnic,” “old country,” or “native,” generally served to lower young mothers’ cultural capital and increase their positions as information needy in various worlds within the young parent arena, including the YPPs, daycare, with the government, and with health care providers. While many professionals who interacted with the young mothers undoubtedly intended to be culturally sensitive—and some worked very hard to value and respect the home cultures of immigrant students in particular—this was sometimes at odds with the overarching mandate of educational interventions to help young mothers comply with approved Canadian mothering practices.

Tensions arose around the assimilation of immigrant mothers and reduction of cultural parenting practices that contradicted Canadian norms. Young mothers could respond to such pressures by adhering to their traditional practices or by recognizing the differences in context and (at least publicly) changing. In one YPP, during an education session on baby feeding, an immigrant student attempted to disengage from a conversation with staff members who were trying to change her baby-feeding habits by saying, “Us [ethnic group] people; we raise babies kind of differently.” The teacher responded by telling her, “This is not culture. This is scientific.” The student continued to resist the intervention, stating, “I just follow what my mom told me.” Another immigrant young mother from the class was then called upon to share her baby feeding

practices, which conformed to current public health recommendations. Through interactions such as this one, young mothers who maintained the cultural parenting practices of their families of origin were constructed as more in need of information and less knowledgeable than immigrants who were more willing to assimilate.

Aboriginal mothers' cultural parenting and health expertise were sometimes seen as non-authoritative in a manner similar to those of immigrant mothers. In addition, many of today's young Aboriginal mothers are in the position of being the first generation in their families to have grown up outside of residential schools and after the "sixties scoop."<sup>17</sup> JBiebs, whose own mother consulted her for parenting advice, was one of the young Native mothers who discussed this positionality. JBiebs' mother and grandmother had not had the opportunity to be fully raised by their own parents due to colonial policies of removal and forced assimilation, and she herself was a ward of the state. However, like other Aboriginal young mother interviewees, she articulated a strong desire to parent her own child in a blend of "scientific" and traditional practices, and was recognized within her family and community for her parenting expertise even before her own child was born. Elements of this social network dynamic may also be transferrable to other situations in which entire cohorts of children were not raised by their own parents, effectively robbing a group of the ability to pass down parenting knowledge and skills, and placing the burden on the younger generation to acquire these skills and teach their elders. This shifts the dynamics and alters relationships among social worlds in the young parenting arena, as government intervention has historically been to attempt to eliminate traditional

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<sup>17</sup> The "sixties scoop" refers to the widespread practice from the 1960's to 1980's of removing Aboriginal children from family care and placing them in foster or adoptive homes that were usually not Aboriginal (Johnston, 1983; Sinha et al., 2011).

knowledge, and families may in some cases rely on their youth to lead the way with parenting expertise.

#### **4.5 Discussion**

The young parent arena contained multiple social information worlds within which actors including teachers, health professionals, family members, and other youth constructed understandings of expertise and knowledge. Young mothers' experiential expertise was sometimes recognized, but was expected to defer to the knowledge of credentialed experts. Experts such as the YPP teachers, youth workers, and health providers, were subject to some of the same tensions as were young parents. Such mid-level experts were often highly aware of competing systems of valuing knowledges, and the many and varied levels and types of expertise young mothers possessed. However, they did work within a mandate to educate and inform this population in accordance with Western "scientific" and intensive mothering ideologies.

Epistemologists have recently turned their attention to questions related to the phenomenon of ignorance. While a great deal of study has gone into understanding knowledge production, the role of ignorance and the structures that shape it are a newer area of investigation. Proctor, who coined the term agnotology to describe the (study of the) cultural production of ignorance, describes multiple types of ignorance: ignorance as a naïve state that may be remedied by acquiring knowledge, ignorance as a lost realm of knowledge forgone due to concentrating elsewhere, and ignorance as strategic ploy to maintain doubt or uncertainty (Proctor, 2008).

Scheiberg (2004) brings an intersectional perspective to the concept of ignorance as lost realm in her analysis of botanicals being brought back from the West Indies by English colonists, which were imported without also transferring knowledge of their abortifacient properties, thus

deliberately perpetuating ignorance among European populations regarding indigenous women's health knowledge. Proctor (2008) uses the tobacco industry as a major health-related example of active construction of ignorance and doubt regarding the ill effects of smoking. Sullivan and colleagues (2007) theorize the intersections of race with epistemologies of ignorance, exploring complex situations such as black slaves in the Americas feigning ignorance for their own safety and white privileged ignorance of the effects of racism on the lives of people of colour.

While this study has focused on the first and simplest form of ignorance as naïve state, in which young mothers are discursively constructed to be ignorant in ways that may be remedied by applying information, future analyses could explore more deeply the types of ignorance active within young parent social information worlds. In Proctor's agnotology framework, ignorance overlaps with practices of secrecy, apathy, censorship, disinformation, faith, and forgetfulness (Proctor, 2008, p. 2), all of which are present in the lives of young parents and the YPPs.

These ignorance-related practices are prominent in information sociologist Chatman's concepts of information poverty (Chatman, 1996) and life in the round (Chatman, 1999), which lend further insight into the construction and role of ignorance in the social information worlds of young mothers. Chatman's theories were based in her research with social outsiders (e.g., women in prison, poor people) who were also information poor compared with members of the societal mainstream. Chatman found that information poor social outsiders engaged in self-protective behaviours such as secrecy and deception, in situations when mainstream culture insiders had the power to manage and withhold information, and whose insider information was not always credible or relevant to outsiders in the context of their own lives. People living in information poverty also managed their own information tightly in an attempt to control the risks of exposure of their own weaknesses. Chatman's theory of information poverty extends in some

ways to describing the practices of young mothers in this study, but in other ways does not apply. Young mothers in this study did manage their own release of personal information in exchange for health and social services, and at times colluded with their portrayal as ignorant, aware that their expertise would not be welcomed or valued by experts. However, most of the study population lived up to their youth-related reputation for information literacy and connectedness, and were readily able to access information from beyond the bounds of their immediate social worlds via the Internet, decreasing the information imbalance between themselves and insider experts.

#### **4.6 Conclusion**

This analysis explored the health information worlds of young mothers, and examined the construction of expertise according to social hierarchies of power therein. It elucidated discourses of knowledge and ignorance applied to young mothers, in which the “teen mom” is portrayed paradoxically as knowledgeable and networked yet ignorant and inexperienced. Despite the fact the many young parents have a great deal of childcare experience, they are (stereo)typically perceived as in need of intensive parenting education by virtue of their age. Social and cultural expertise, while sometimes respected by individual service providers and expert educators, did not generally increase the cultural capital of young mothers.

This raises questions for those involved with the young parent information arena, particularly those working in central social worlds such as those of the YPPs. While many health education interventions are built on models that portray information as key to building knowledge and changing health behaviours, young mothers may already possess expertise, which may conflict with the authoritative health information being communicated. Navigating

these complexities with nuance, rather than portraying young mothers as unilaterally information poor, may lead to different, perhaps better, outcomes.

## **Chapter 5: Population Health Information Interventions: Definition, Exploration, and Ethical Considerations**

In this dissertation I investigate the socially constructed health information practices of young parents, health information worlds of young parents, and the role of population and public health information interventions within the lives of young parents in the Greater Vancouver region of British Columbia. An important aspect of this work is to highlight and examine potential ethical considerations involved in information practices intended to support the health and social welfare of young parents. Here in Chapter 5, I attempt to undertake such an examination by initially proposing a definition of the population health information intervention (PHII). I then use this concept to examine the functioning of PHII within this study of young parents in Greater Vancouver, while simultaneously drawing on an emergent framework pertaining to population and public health ethics in order to surface potential ethical considerations pertaining to PHII.

### **5.1 Background**

In order to “prevent disease, promote health, and prolong life” (World Health Organization, 2014a, para. 1), public health organizations enact a variety of interventions, ranging from structural changes that affect large groups of people at once (e.g., bicycle lanes, water treatment) to medical interventions delivered at the individual level within a population (e.g., vaccinations, cancer screening) (Frieden, 2010). The field of public health has historically used a repertoire of strategies to address community and individual level risks for disease, including prevention, surveillance, and contagion control, based on a model developed primarily

for infectious diseases. In the latter half of the 20<sup>th</sup> century, public health agendas increasingly expanded to encompass social determinants of health, the underlying social and economic conditions that typically influence health more strongly than individual actions or decisions (Public Health Agency of Canada, 2004). Along with this expanded focus came the development and adoption of population health approaches.

Population health, usually framed as a subset or evolution of public health but occasionally as a distinct approach (Hawe et al., 2012; Kindig & Stoddart, 2003), adds an explicit equity dimension to the public health aim of improving the health of the population. Population health, therefore, aims to reduce health inequities among and within population groups, as well as improve health of the population as a whole. As a result, population health research tends to focus on social determinants of health—those non-clinical factors such as poverty, education, and systemic biases—that carry great influence over the distribution of health outcomes of and within population groups (Government of Canada, 2004; Marmot & Wilkinson, 2005; Raphael, 2009). While public health has historically targeted individual level health behaviours, population health interventions are more likely to aim beyond individual behaviour, in order to alter the social environment for a group of people (Frohlich & Potvin, 1999).

### **5.1.1 Population Health Information Interventions**

Within population health, as in public health more broadly, there is a subset of interventions that use information. These we might call population health information interventions, or PHIs. Many PHIs can be classified with the language of information “push” and “pull” from the perspective of the public health system. Some information interventions push information (e.g., community education campaigns) to the public, others pull information (e.g., population surveillance efforts) from populations, and some interventions combine the two by

pushing and pulling information at the same time (e.g., an education intervention that also collects data on participants).

Interventions that pull health information from populations include electronic medical records and databases, disease-specific registries and surveillance systems, and population health surveys. Public health perspectives tend to assume the value of surveillance, which is “often called the cornerstone of public health practice” (Thacker, Qualters, & Lee, 2012, p. 3). With roots in infectious disease epidemiology and control, public health surveillance, or “the continuous, systematic collection, analysis and interpretation of health-related data” (World Health Organization, 2015, para. 1), has expanded to include monitoring of non-infectious diseases and health conditions, as well as risk factors and related social statistics (Thacker & Stroup, 2006).

In addition to push communication interventions, pull surveillance interventions, and bidirectional interventions that combine the two, there is a minority of PHIs that defy this classification scheme. These include information services or resources made available to the public with the intention of promoting health, but which require active information seeking on the part of the public in order to engage. These might be considered “passive push” or “consumer pull” interventions, and include examples such as websites and health hotlines. While these may be promoted with a push campaign to increase awareness of their existence, in no way do they push themselves into people’s lives without active information seeking on the part of the public. These passive push interventions, as with more active forms of health information push interventions, may also contain a surveillance, or pull, element by collecting user data.

### **5.1.2 Research on Population Health Information Interventions**

Over the past several years there has been a concerted effort to develop and strengthen research on population health interventions. The goals of this effort are to generate evidence that will improve the science of using population interventions to improve health and equity (Hawe et al., 2011; L. Sullivan, 2009). The process of identifying and testing methods best suited for evaluating and understanding population health interventions is ongoing, and has been coupled with an effort to mainstream ethics into population and public health research.

Evidence on the effectiveness of various types of “push” health information interventions is mixed (c.f., Noar, 2006; Snyder et al., 2004), with current scholarship trending toward understanding the ability of context-relevance to improve effectiveness of health information push on behaviour change at an individual level. Techniques used to try to improve the relevance of health information push interventions include: message framing (positive versus negative) (Akl et al., 2011; Banks et al., 1995; J. B. Gray & Harrington, 2011), targeting (to a subgroup) (Schmid et al., 2008; Schneider et al., 2001), and tailoring (to an individual) (Cortese & Lustria, 2012; Kreuter et al., 2000; Short et al., 2011). Relatively few studies of “push” strategies assess behaviour change as an outcome; instead they often focus on changes in attitudes or other psycho-social outcomes such as self-efficacy (Akl et al., 2011).

A focus of today’s population health surveillance research is developing methods to best take advantage of the proliferation of data sources in this information age. This includes syndromic surveillance (real-time, electronic monitoring that combines multiple types of data to look for warning signs of disease outbreaks or other threats) (Henning, 2004), as well as public health infoveillance (using online data sources) (Eysenbach, 2009) and dataveillance (drawing on a variety of sources such as consumer data trails, geolocation, or education data) (R. Clarke,

1988). These methods frequently draw on non-clinical data to dovetail and integrate with traditional forms of surveillance via health records, specialized registries for certain diseases, population surveys, and vital statistics.

Population surveillance findings spur and shape health communication efforts, for example by measuring the need for intervention and evaluating the success of interventions (Nsubuga et al., 2006). In some instances push and pull interventions intertwine; for example via coordinated face-to-face programming such as nurse home visits to educate and monitor at-risk population members (Hill et al., 2007) or through digital advances such as mobile device health messaging coupled with self-monitoring on topics such as diet and exercise (Lupton, 2012). In such cases, coordinating the surveillance and communication agendas, as well as their ethical implications, takes on increasing importance.

### **5.1.3 Ethical Considerations Related to the Use of Population Health Information**

#### **Interventions**

Population and public health ethics (PPHE) is a young field, distinguished from clinical ethics or bioethics by a focus on the good of the population (Faden & Shebaya, 2010), systems of practice, and social determinants of health (Upshur, 2012). PPHE is also characterized, when compared with bioethics, by a de-emphasis on the ideas of autonomy and non-interference, as well as on the clinician-patient dyadic relationship (Dawson, 2011, Ch 1). The central objective in most PPHE frameworks is the balancing of individual rights and welfare with the well-being of the population. In order to “advance traditional public health goals while maximizing individual liberties and furthering social justice” (Kass, 2001, p. 1776), PPHE is constantly negotiating this balance.

Being both applied and theoretical, PPHE is concerned with a broad range of activities aimed at health promotion for a population, which involve collective activities by a variety of parties (A. Dawson & Verweij, 2008). A variety of frameworks for guiding ethical analysis of population and public health issues and interventions have emerged since the 1990's (Lee, 2012; Petrini, 2010), encompassing a range of philosophical underpinnings, core values, and empirical and non-empirical approaches. Other frameworks take a public policy ethics approach broader than, but including, public health, for example Powers and Faden's (2006) social justice principles for health policy.

Extending the assertion that ethics is an important part of population health, it may be argued that, inasmuch as population health intervention research focuses on interventions aimed at population health equity, it is essential that ethical considerations be integrated therein. Information interventions, however, may pose some special challenges in this regard. Information is non-tangible, tends to be far "upstream" (or, in the case of surveillance, sometimes downstream) of hard health outcomes, and may be ignored by members of the targeted population (although not always without consequences). As a result, information interventions could be overlooked when considering ethical issues such as distribution of burden of illness or equity in access to health and health services, especially when broaching ethical constructs that are more challenging to quantify, such as stigma and justice.

A small body of literature identifies ethical issues (e.g., promoting misinformation and increasing stigma (Guttman, 1997b)) related to push efforts that are often characterized as non-invasive and therefore of low ethical risk or concern (Guttman & Salmon, 2004). The Nuffield Council's "intervention ladder" public health ethics framework (Nuffield Council on Bioethics, 2007), intended to communicate the array of options for government public health interventions

from least to most intrusive, places “provide information” on the bottom rung of the ladder, below other interventions to encourage, guide, incentivize, disincentivize, restrict and eliminate choices. Indeed, the only action/intervention framed as constituting a lesser degree of intrusion than providing information is to “do nothing or simply monitor the situation” (Nuffield Council on Bioethics, 2007, p. 42). Setting aside critiques regarding whether doing nothing is always the default that requires the least amount of justification, and broader critiques of such escalating, risk-based models of intervention (Coggon, 2012, pp. 80–81), one might nonetheless note that pushing and pulling information are framed as the lowest, least intrusive, and most easily ethically justified stages of response to a public health issue.

Not all public health ethicists view information interventions as ethically neutral, however. Some have identified potential privacy concerns regarding the collection and use of personally-identifiable data, particularly when dealing with potentially stigmatizing information, arguing that surveillance should be subject to certain constraints (Kass, 2001). Fairchild and Johns (2013) identify a variety of related concerns, including research use of surveillance data, lack of notification to individuals regarding their diagnostic results, disclosure of infected individuals’ identities, and data sharing between health and other entities (e.g., law enforcement, education). Much of this conversation has been rooted in HIV/AIDS surveillance and stigma, and ethically questionable practices (such as name identification of HIV positive individuals) that have taken place using HIV surveillance data (Bayer & Fairchild, 2000; Fairchild & Bayer, 2004; Fairchild & Johns, 2013). Bayer and Fairchild (2000) highlight the contrasting approaches that have been taken regarding management of registries for highly-stigmatized (e.g., HIV, tuberculosis) and less-stigmatized (e.g., cancer, birth defects) conditions, underscoring the intersection between personal privacy and social justice.

Informational “nudges” in population and public health also are used to influence health behaviour. Nudges, often characterized as a form of libertarian paternalism (Sunstein & Thaler, 2003), aim to encourage one choice without limiting an array of other choice options (Ménard, 2010). Examples of nudges include switching from opt-in to opt-out for activities such as organ donation, and positioning healthy food choices at eye level in a market. Nudges hold public health appeal, as they encourage healthy behaviours without mandating the healthy choice as the only choice. Concerns have been raised regarding the extent to which acting against a nudge is a straightforward choice. Eyal (2014) identifies several examples of nudge-related shaming, including shaming experienced by smokers who must retreat to secluded designated areas to smoke; nudges that could cause conflict with personal or community values, such as with religious values in opposition to organ donation; and nudges that lead to a poor outcome and resultant guilt, such as a parent allowing a medical student to treat their child, in a case in which errors are made by the medical student.

Information-pushing nudges are also possible, and would include such interventions as providing information on the risks of undesirable behaviours (e.g., smoking) or raising awareness regarding the ease and utility of desired behaviours (e.g., exactly why and where to obtain a vaccination) using a variety of communication methods including social marketing. Such informational nudges should be subject to the same stigma-related concerns as structural or policy nudges, including the risks of exacerbating existing stigma among the non-compliant and of causing ethical conflict and shame among those who do comply.

The line between the libertarian paternalism of the soft nudge and more coercive forms of intervention remain unclear. Conly (2013), for example, argues in favour of public health “coercive paternalism” for the better health of the population, rather than “soft” incentives and

disincentives such as nudges, asserting that if there is sufficient evidence to influence choice, there is sufficient evidence to reduce it altogether. The balance between individual autonomy and paternalistic coercion to safeguard the health of the population is a matter of much discussion (Bayer, 2007; Gostin et al., 2002), and related discourse does not always incorporate a population equity perspective. Paternalistic approaches, be they libertarian or coercive, may increase stigma and confer penalty on those already disenfranchised and disadvantaged in society, who likely have the least amount of autonomy to exercise choice, rather than acting to ameliorate underlying inequities in the social determinants of health (Buchanan, 2008). Adopting a social justice framework shifts the focus towards underlying structural causes of ill health.

## **5.2 Context, Rationale, and Objectives for the Current Analysis**

The details of the study context have been presented in Chapter 1 of this dissertation (Section 1.4.3.1, pp. 27-29). To summarize, the study was conducted in Greater Vancouver, British Columbia, the third largest metropolitan area in Canada with a population of 2.3 million people (Statistics Canada, 2012). While young childbearing is relatively uncommon in the province (Statistics Canada, 2013a), there is dramatic regional and cultural variation in childbearing age within the Greater Vancouver metropolitan area. Within the central city of Vancouver alone, neighbourhood rates of teen fertility range from 1.3 to 9.8 per 1,000 young women age 15-19 (BC Stats, 2011). Nearly 7% of births in the province as a whole are to fathers under the age of 25 (British Columbia Vital Statistics Agency, 2011); no city or neighbourhood level data on father age is available.

Within Greater Vancouver, PHIs aimed at supporting the health and welfare of young parents and their children are planned, administered, and implemented by a variety of parties. Prominent community level organizations in this domain include non-profit Neighbourhood

Houses (ANHBC, 2015), a variety of religious and secular community and family support non-profit organizations, regional Health Authorities that administer hospital and health services in the province (British Columbia Ministry of Health, n.d.), and secondary-school based Young Parent Programs (YPPs), which offer high school completion for student parents, with alternative schooling options and integrated daycare.

Although recent years have brought advancements in both the science of population health intervention research and population and public health ethics, little attention has focused specifically on the social and ethical implications of population health information interventions. The objectives of the analysis described in the current chapter are: 1) to propose a definition of the concept of the population health information intervention (PHII), 2) to use this concept to examine the functioning of PHII within this study of young parents in Greater Vancouver, and 3) to draw on an emergent framework pertaining to population and public health ethics in order to surface potential ethical considerations pertaining to PHII.

### **5.3 Methods**

This study used constructivist grounded theory (Charmaz, 2007) to explore and theorize population health information interventions at work in the lives of young parents. By conducting inductive, qualitative analysis of ethnographic data, through constant comparison I analyze various types of PHII in the lives of young mothers and fathers, and theorize attributes germane to the functioning and ethics of information interventions.

#### **5.3.1 Data Collection**

Data was collected from October 2013 to December 2014 via ethnographic observation at YPPs and other community organizations, and in-depth individual interviews with expectant and parenting youth ages 15-24. Observations were primarily conducted at two YPPs in Greater

Vancouver. By arrangement with the teachers, I joined the classes in their daily activities, observing or participating as appropriate. I also accompanied the YPPs on field trips during the observation periods. Interview participants were initially purposively sampled from the YPP observation sites, and purposively and theoretically sampled through return visits to YPPs as well as via other community organizations that served young parents. Interviews took place at the YPPs, at other community organizations, and at participants' homes. Initial interviews were approximately 90 minutes long, with follow-up interviews typically lasting 45-60 minutes. Interviews were audio recorded with participant consent<sup>18</sup>.

### **5.3.2 Analytic Approach**

In recent years, bioethicists have debated the merits of incorporating empirical research into ethical thinking in health (Molewijk & Frith, 2009). Medical ethicists have advanced the idea that empiricism should be included in ethical research and analysis, arguing that empirical and normative approaches are fundamentally complementary (De Vries & Gordijn, 2009) and their integration can lead to a richer and more productive ethics (Hoffmaster & Hooker, 2009). Some PPHE theorists, particularly those who take a population health or social justice approach (Knight, 2014; Powers & Faden, 2006), similarly advocate incorporating empirical data into ethical analyses of health issues, programs, and policies, often in iterative fashion (Knight, 2015).

Powers and Faden (2006) trace their interest in public health ethics and social justice to the challenges of developing of HIV testing policies in the 1980's. At that time, such work necessarily relied on ethical reasoning regarding issues of stigma, population harm, and decisions

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<sup>18</sup> One participant declined consent for audio recording; notes were taken during this interview instead.

regarding universal versus targeted approaches to HIV testing. Knight and colleagues (Knight et al., 2014; Knight, 2014, n.d.) revisited the issue of HIV testing ethics decades later, at which time there was a record of ethical reasoning, individual experiences, and empirical population outcomes related to various HIV testing approaches. Although ethical reasoning may be extended to “new” population health issues prior to the emergence of empirical evidence on the outcomes of various actions or policies, integrating empirical research with PPHE can, as in bioethics (Ives & Draper, 2009), provide the contextual understanding of the “on the ground” effects of ethical positions that allow for development of robust normative ethics oriented toward policy or practice. Drawing on the perspective that empirical data should be incorporated into population health ethical analysis when possible, I conducted in this study a naturalistic investigation and normative ethical exploration of population health information interventions targeting and affecting a stigmatized population—young parents.

Transcribed field notes and interview recordings<sup>19</sup> were analyzed inductively in accordance with constructivist grounded theory principles (Charmaz, 2007). Initial open coding identified PHIs (push, pull, and bidirectional) in action (observed) and description (interviews and observations). Subsequent constant comparative coding, conducted iteratively with ongoing data collection, led to groupings of codes identifying attributes of PHIs (e.g., who implemented them) and young parents’ experiences with them (e.g., awareness of surveillance, trust in education). Analytic and reflexive memo-writing led further into ethical analysis of the observed and described PHIs, including the themes that informed the resulting theoretical propositions.

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<sup>19</sup> Fieldnotes were hand written and transcribed by the researcher. Interviews were recorded by the researcher, transcribed by a research assistant, and checked for accuracy by a second research assistant and the researcher separately. Study participants were also provided with the opportunity to member-check their interview transcripts. One participant declined consent for audio recording; notes were taken during this interview instead.

## **5.4 Findings**

Over 15 months of data collection, I conducted 50 days of observation at two YPPs, and 60 interviews with 39 young parents (37 mothers, 2 fathers) aged 16-23 years. Full presentation of the population demographics can be found in Chapter 3 (Section 3.3.1, pp. 98-102). In addition to young parents, during observations I had the opportunity to speak with and observe a variety of service providers, including secondary school teachers, youth workers, outreach and support workers from non-profit organizations, public health nurses, nursing students, Aboriginal support workers, and community volunteers. The following sections contain a detailed description of push, pull, and bidirectional PHIs that were observed and discussed during my fieldwork and interviews. Then, I provide a description of constructs related to the functioning and ethics of population health information interventions that emerged through this study of young parents.

### **5.4.1 Push Information Interventions**

Interventions were conducted by teachers, visitors from non-profit organizations, daycare providers, youth workers, and nurses of various type, including public health nurses, school nurses, nursing students. Push interventions focused primarily on maternal-child health, and included public health nurse visits to homes and YPP classrooms, lessons from childcare providers, health education by teachers, and guest presentations from a variety of non-profit youth and outreach workers. Key aspects related to how well push interventions were accepted by young parents related to the ways the interventions were implemented, including the positionality and perceived authenticity of the information provider, level of personalization (tailoring) of the intervention, extent and nature of competing information compared with the education intervention, and timing in the lives of young parents and their children.

Both the acceptability and perceived effectiveness of push PHIs were strongly related to the provider's individual style, social location, and organization, as well as the content and timing of the interventions. Information providers who were not themselves parents were sometimes dismissed by young parents, particularly those young mothers who had substantial child caregiving experience. Seventeen year old young mother Sarah A expressed frustration at being instructed in basic parenting skills, often by non-parents, and at the expense of time to complete her academic work.

I've been sitting through this for the past four years and it's—like, this is boring to me and there's nothing new and I'd rather be doing my school work, which I cannot because I have to listen to these nurses and waste a day listening to [mockingly] “How do you take care of yourself after you have a baby?” Well, I dunno, my kids are two and three years older. “How do you breastfeed?” and I don't want to listen to this. I don't want to listen to baby's gums getting brushed. My babies eat food, they brush their teeth, you know? It's, you know, what to check for in your newborn's poop. I don't have newborns in the house, you know? I know all these things. I don't want to hear it. You know, I'd rather do my school work.

While the student nurses I observed presenting to Sarah A and her peers attempted to be respectful and inclusive of the experiential knowledge of the young parents, the dynamic was awkward, sometimes pitting the student nurses' “book learning” against the lived experience of young parents, and this was complicated by the student nurses' lack of awareness of the full scope of the young parents' custody and parenting arrangements.

Personal parenting experience and formal credentials were insufficient to render the person delivering an intervention authentic. One example of this came when a volunteer from a mother support non-profit came to recruit young mothers from one of the YPPs. Arriving at lunchtime, the volunteer came bearing a homemade dessert on a ceramic platter she had also made herself. She introduced herself as a former health professional with a doctorate who had given up her career because she had felt it was important to stay home with her children. Although this visitor had personal parenting experience to blend with health expertise, and her program may have been well equipped to provide informational and social support to young mothers, her lack of awareness of the young parents' social realities hindered her perceived credibility among the YPP students, who did not engage with her. In contrast, culturally-specific information from an "insider" source (e.g., parenting support for an Indigenous mother from an Aboriginal family services organization) was frequently well-regarded by young parents and considered both respectful and helpful.

The subjects of information interventions provided an indication of the priorities of those implementing the interventions. Push interventions ranging from wall posters to public health nurse visits concentrated heavily on certain maternal-child health topics. These included infant feeding and sleep, maternal and family diet and nutrition, healthy relationships and dating safety for young women, and the most strongly pushed information of all, contraceptive use. Misinformation was also evident within some push PHIs, usually related to contraception and fertility, particularly within interventions carried out by information providers without formal medical credentials, such as representatives from non-profit support agencies and student nurses. Young parents reported feeling saturated with contraceptive information, which often contained inconsistencies or inaccuracies, and which persisted regardless of their need for such

information, often emphasizing contraceptive options that were not the most popular or highly-effective (e.g., a focus on “the pill” rather than IUDs) and rarely focusing on plans for future pregnancies. There was also a subset of information interventions designed to teach information practices themselves. These included hospital, public health nurse, and YPP teacher encouragement to track and record infant bodily functions, sometimes with concrete incentives such as academic credit and the promise of future memorabilia—effectively a push intervention creating data for potential future pull.

There were a variety of structural differences among the push PHII implementation. In addition to varying in levels of active and passive push, some interventions were completely voluntary, some were compulsory, and some were incentivized or potentially coerced. Similarly, some were targeted to a young parent (or young mother) population, some were individually tailored, and others were whole-population interventions that included young parents. Among the push interventions perceived the most positively by young parents was the passive, voluntary, whole-population but individually tailored nurse helpline, often referred to by its phone number: 811.<sup>20</sup>

The nurse line is highly publicized to new parents within the Greater Vancouver region, and indeed every interview participant in this study mentioned 811 as part of their health information world. Not only was 811 well known among this young parent population, it was almost universally well liked. The nurse line is a general population information intervention, rather than one targeted at “high risk” groups or young parents specifically. While this arguably

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<sup>20</sup> Note that there is somewhat of a pull component to 811, as the operators ask for a caller’s provincial personal health number, but callers are permitted to opt out of providing this information. This study did not explore whether young parents who called 811 opted out of this surveillance, or what their feelings about it were.

decreased the ability to provide targeted information, it also increased the credibility of the service among the study population, as young parents could expect the same type of answers to their health questions that anyone else would receive, regardless of their age, ethnicity, and parenting status—all factors that stigmatized young parents in face-to-face encounters. Additionally, the passive push model made it nearly impossible for the 811 service to be perceived as invasive, as young parents had to actively call seeking an answer to a self-identified question or concern.

There was no consensus regarding the line between young parent support services and education interventions. What was essentially the same program might be perceived at one site or by some people as a service provided to support young parents (e.g., food donations) and in another situation as an education intervention (e.g., nutrition education and promotion of healthy eating choices). How a program was classified sometimes carried implications for young parents; for example if the YPP daycare was considered part of the parental education program of the YPP, rather than a supportive service that enabled young parents to attend school, conundrums arose if a young parent did not want or need to use the daycare (e.g., if she did not currently have custody of her children or if a family member could provide in-home childcare).

#### **5.4.2 Pull Information Interventions**

Interventions that pulled health information from young parents in this study included electronic medical records and databases, teacher and youth worker interactions, and social worker monitoring of young people, particularly those youth who were in government care rather than living with their families of origin. Surveillance by health and social welfare professionals was the norm in the lives of young parents in this study, although it sometimes contradicted the objectives of push-style PHIs. The perceived intrusiveness of surveillance depended on the

young parent's awareness of being monitored, as well as the timing and approach of the surveillance. While young parents were generally happy to comply with surveillance they saw as meeting their needs (e.g., health authority vaccination records), they had a variety of responses, including subterfuge, to surveillance they found unhelpful or insulting.

Youth Agreements<sup>21</sup> (YAs) required that young parents submit to a certain level of surveillance. One issue that arose repeatedly in conversations with young mothers was the “no spouse in the house” rules for YA and other subsidized housing. These policies contradicted the public health communication interventions that encourage involved fatherhood, and often effectively left young parents in positions where they felt compelled to lie to their workers about overnight visits or de facto cohabitation. Living in foster care also carried a high degree of surveillance for young parents. A young couple interviewed for the study had been one of the first young families in the province to live together in foster care. While there are “maternity foster homes” that accept young mothers and their babies, it is currently very rare to also allow a minor father to reside in the same home. Because this situation is new and unusual, norms around surveillance of behaviour in the house were unclear. The 17 year old young mother in this family described the level and degree of surveillance they lived with in foster care.

Nobody really knew what to do. Like, we had to have baby monitors in our room all the time. The door open. We're not allowed under the same blankets.

Like, there's so many restrictions, but it was worth it.

Although she felt that it was “worth it” to be able to all live together, this young mother also felt

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<sup>21</sup> See note 16, in Chapter 4, Section 4.3.1, p.152, for a description of Youth Agreements, which are legal agreements between 16-18 year old minors and the Ministry of Child and Family Development that often provide independent living support for youth who cannot reside with their families.

that the surveillance was an invasion of her privacy that impeded her family from bonding in their own space. Both of these examples focus on surveillance of young parents' social/sexual lives. Similar to the focus on contraception within push interventions, there was a substantial focus among individual and small-group level pull interventions (e.g., between a youth worker and a young mother, or within a given parent education group) on trying to keep young mothers in particular from being in situations where it would be easy to have sex or become pregnant again.

Beyond monitoring the sexuality of young mothers, the other major way young parents perceived surveillance intruding into their lives was through child protection services. While young mothers were understanding of the social workers' need to do their jobs, and one even described reporting a neighbour to child protection authorities, they also told stories of frustration and insult when social workers would call or visit to check up on their own children's welfare. In many cases, the way surveillance was carried out seemed as important to young parents as the fact of the surveillance itself. Seventeen year old young mother Ella, for example, described angrily confronting social workers who showed up at her home.

I understood why MCFD<sup>22</sup> was involved, I just never understood why they went to the extent of trying to remove my child without even coming into my house and seeing how I was. I was like, "Show up whenever you want." I was like, "I have nothing to hide." Like, you guys can go through my cupboards. I think once I like, did a swab test just for them just cause they thought I was on

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<sup>22</sup> MCFD here stands for the Ministry of Child and Family Development, the government body responsible for child protective services in British Columbia.

oxycodone or something.

Another element of the implementation of pull interventions that was sometimes objectionable to young parents was the timing of surveillance, or surveillance intensification. Multiple young mothers with substantial histories of personal trauma expressed frustration that there seemed to be surveillance of their own parenting mistakes, but insufficient support to have prevented the abuse they suffered, or to help them recover from it now. Eighteen year old young mother Linda, for example, was very angry in her intake interview, as her children had recently been removed from her custody. Although she had interacted with social and health services over the course of several years, including through foster care situations, and sought help after experiencing a variety of assaults, Linda felt that the government had never seemed to care enough to monitor her situation before she had children.

### **5.4.3 Bidirectional Information Interventions**

Bidirectional information interventions combine information push and pull into one program. Within the scope of this study, all the bidirectional interventions observed and discussed placed the emphasis on information push, with information pull framed as a secondary objective. However, this was not always the way these priorities were experienced by young parents. While implementation remained key to young parents' experiences with bidirectional interventions, as well as to their likely effectiveness and accuracy, the prominence and (in)visibility of the surveillance element also affected their impact.

The Nurse-Family Partnership (NFP) provides a rich case example to study bidirectional information interventions, as it was a new intervention introduced during the study timeframe. The NFP targeted some but not all of this study's participants, which ensured a diversity of perspectives. The NFP is described by the provincial government as "a maternal and child health

program that provides first-time moms with valuable knowledge and support” (“BC Healthy Connections Project,” 2012, para. 3), a description that emphasizes the information push aspect. However, the program also involves the nurse visitor conducting surveillance on a number of measures, including domestic violence, parenting skills such as baby feeding, maternal health, and future family planning, in order to identify family areas of need and to collect data for research. By way of context, at the time of the study, the province of British Columbia was in the process of shifting from a whole-population postpartum public health nurse visitor program to the more targeted approach of the NFP, which provided intensive information interventions in the form of home visits from mid-pregnancy through two years postpartum for first-time low-income mothers under the age of 25. The NFP was being rolled out as a randomized controlled trial study, meaning that not every eligible young mother in the area received this care.

Young mothers in the current study who were involved with the NFP had mixed reviews of the experience. For example, Jane, a 16 year old expectant mother, enjoyed the visits, in part because she was interested in science and the idea of participating in a study, and in part because she had a lot of trust in nurses in general. She described the PHN taking samples of hair and saliva and seemed eager to learn more about herself and her baby after it was born. Twenty year old young mother Mary, on the other hand, was vocally dismissive of the NFP program, which she had recently quit.

According to Mary, the NFP started off with casual meetings and free groceries, but after her child was born, became more invasive. She felt that the meetings were too frequent, and that by attempting to teach her things (such as the importance of eating fruits and vegetables) that she thought were “obvious,” the nurse was treating her like she was “stupid.” Although Mary did not particularly appreciate the information push element of the NFP, it was the surveillance aspect of

the postpartum support that caused her to withdraw from the program, as she felt the nurse was causing her needless stress and fear by micromanaging issues such as baby weight gain, and by focusing on topics over which they disagreed, such as baby sleep practices.

I felt like she was putting too much pressure on me to be the perfect mom. And that's not what any young mom needs. Even, like, an old mom who's a young mom, if that makes sense. A new mom, no new mom needs that kind of pressure, and I think that it was—it was too much pressure and it was geared at women—for women who didn't know *anything*. Like, stupid, stupid people. And I don't think that treating people like they're stupid is going to help them improve.

The contrast between Jane and Mary's perceptions of the NFP is striking. Jane found the nurse supportive and the study interesting. Mary found the nurse condescending and the study stressful, failing to either offer her respect or improve her well-being. Mary's objections were to both the information push and pull elements of the NFP, while Jane (at an earlier stage in her parenting life, and a younger chronological age) seemed somewhat unaware of either.

## **5.5 Discussion**

Population health information interventions are a subset of health interventions that use information in an attempt to improve health and health equity. Included in this group of PHIs are those that push, or communicate, information to populations; those that pull, or monitor, information from the public; and those that use push and pull together in one intervention. While both health education campaigns and public health surveillance have traditionally been perceived as minimally invasive and therefore not requiring a great deal of ethical deliberation, the findings from the current study indicate this area may be under-empiricised and under-theorized.

It is reasonable to assume that informing the public might sometimes result in effectively constraining choices within a real-life context (Guttman, 1997b), and that such constraints would likely be inequitably distributed among the population. Further, it is likely that all surveillance is not truly the equivalent of doing nothing, in terms of effect on and intrusiveness into the lives of the public (Fairchild & Bayer, 2004). The unintended effects of both push and pull oriented population health information interventions are rarely studied, and may ripple far beyond health to affect constructions of culture and identity (e.g., Coronas & Hardy, 2009; Rentner, Dixon, & Lengel, 2012). Deeper investigation into the empirical ethics of PHIs is required to answer such questions.

The push, pull, and bidirectional population health information interventions in this study affected young parents in a variety of ways. When engaging in constant comparison and theory-building around the descriptions of the PHIs, the themes of intervention *non-neutrality*, *implementation*, *visibility*, *effectiveness*, and *intersection with justice*, emerged as dominant constructs related to the ways PHIs functioned, with strong relationships to population health ethics. Based on these themes, I suggest the following statements as an initial framework for their consideration and assessment. As a theoretical framework, the purpose of these propositions is to describe issues germane to PHI research and practice. The purpose of such qualitatively-developed theoretical propositions regarding social practices is “to provide explanations of information about an aspect of reality” (Chatman, 1996, p. 198) by developing core concept into a conceptual framework.

Proposition 1: Use of population and public health information is neither entirely non-invasive nor ethically neutral, both in terms of implementation/practice and conceptualization/policy.

Proposition 2: Who conducts an information intervention matters, both in terms of trust by the target population, and in terms of accuracy and effectiveness of the interventions.

Proposition 3: Awareness of the intervention by the target population matters: if population members are aware they are being targeted or surveilled, it can change their behaviour; if they are unaware, ethical questions related to respect and dignity, as well as personal security arise.

Proposition 4: Information pushed may sometimes, but not always, influence recipient knowledge, skills, and ultimate behaviours; likewise information pulled from targets may or may not accurately and completely portray the population.

Proposition 5: Information interventions are shaped by the same systemic inequities that shape society (e.g., targeting of young moms' sexual activity over that of young fathers), which can lead to inequitable distribution of stigma and other burden.

These five propositions develop the constructs *non-neutrality*, *implementation*, *visibility*, *effectiveness*, and *intersection with justice* into a testable framework. The propositions suggest a framework for considering the ethics of PHIIIs, and should be qualitatively and quantitatively tested in future studies in order to strengthen, weaken, and modify the theory. Through such work, a broader framework to guide PHII implementation and assessment may be developed.

The following discussion of these theoretical propositions is informed by Powers and Faden's (2006) social justice framework for public health and health policy. Powers and Faden's (2006) ethical theory articulates six "essential dimensions" (p.16) of human well-being: health, personal security (from violations/violence), reasoning skills, respect (for others, from others, and for oneself), attachment, and self-determination. Feminist ethicist Nussbaum also includes reproductive rights specifically within her concept of necessary capabilities for social justice

(Nussbaum, 1995, 2001). Among these, the constructs of health, security, respect, and self-determination including reproductive rights are particularly germane to the current study. Notably, these theorists of health and policy ethics refuse to draw a firm boundary between the health domain and other social justice issues. This makes it a particularly useful body of theory upon which to draw when considering issues such as young pregnancy and parenting, wherein health, social, and economic concerns are inextricably interconnected. Powers and Faden's dimensions intersect with the theoretical propositions generated in this study in ways that can guide researchers and practitioners of population health information interventions toward more fulsome ethical analysis.

### **5.5.1 Non-Neutrality**

Existing ethical discussions around PPHE range from being fairly dismissive of ethical implications of information interventions (Nuffield Council on Bioethics, 2007) to focused on the multiple privacy and stigma-related issues involved with personally-identifiable surveillance data (Bayer & Fairchild, 2000; Fairchild & Bayer, 2004; Fairchild & Johns, 2013; Kass, 2001) and unintended effects of health communication (Guttman, 1997b; Guttman & Ressler, 2001; Guttman & Salmon, 2004).

Procedures related to information pull and surveillance data use should continue to be ethically debated and tested for effects on population well-being, as poor data handling and lack of privacy may compromise security, respect, and self-determination. The collection of surveillance data is another area for exploration, particularly in the case of bidirectional interventions (such as the NFP and the 811 nurse line) where the public face of an intervention is education, but surveillance is also conducted on participants. Compared with surveillance, relatively less attention has been paid within PPHE to the unintended effects of health

communication interventions (Guttman & Salmon, 2004), although ethical dilemmas related to health communication include concerns over misinformation, potentially-manipulative (albeit beneficent) marketing, and issues of targeting stigmatized groups (Guttman, 1997b). Push-only interventions, while often perceived as ignorable and benign, may increase risk to health by failing to accurately inform, and may manipulate public perceptions and shape experiences in ways that pose threats to the respect and self-determination of target groups. PHIs are not ethically neutral, and the ways in which they act affect the health, personal security, respect, and self-determination of members of the targeted populations in ways that are explicated through the remaining propositions.

### **5.5.2 Implementation, Visibility, and Effectiveness**

Trust in the individual and organization implementing a PHI affects both the outcomes of the intervention and the experiences of members of the targeted population. A lack of trust in the intervention, even an intervention planned with great respect for the target population, can lead to experiences of lessened self-determination and respect, especially if participants experience the intervention as coerced through strong incentives or disincentives. This in turn can affect the accuracy of information pulled from a target population, who may engage in practices of disinformation (boyd & Marwick, 2011; Karlova & Lee, 2011), deception (Chatman, 1996), or information withholding if they do not trust the party implementing the surveillance. This in turn carries implications for use of that data to improve population health.

Trust, for example, was one of the key differences between the experiences of Mary and Jane with the NFP: Mary did not perceive mutual trust and respect between the nurse and herself, while Jane did. Mary did not disclose engaging in disinformation or deception, but did describe confronting the nurse on matters over which they disagreed (e.g., infant sleep practices) and

eventually severing ties with the program due to feeling surveilled by someone with whom she disagreed. It is significant to note that Jane's trust of the NFP intervention may have been bolstered by her social location and personal experiences, as a younger parent, at an earlier stage in her parenting life, and with a close family member who was a nurse. It is possible that a more tailored approach that took into account the different context within which Mary lived could have resulted in greater trust from her as well. However, it may also be the case that an intervention must be carried out by another party, such as a cultural insider, to gain trust with certain members of a target population.

The utility of PHIs, particularly push interventions, being designed and implemented by insiders has some support in past research. Rentner and colleagues' (2012) examination of health communications related to Fetal Alcohol Syndrome (FAS) among American Indians and Alaska Natives, for example, found that while mainstream efforts are frequently "unconstructive and founded on negative representations and perceived cultural and societal norms" (p. 8), many Native Health groups themselves have managed to develop culturally specific communication interventions that resist such negative stereotyping. With a target population that is by definition liminal, such as youth, insider practitioners are more difficult to recruit and maintain; therefore entities such as youth advisory boards may be better able to provide input and influence to shape interventions that would gain the trust of, and promote respect and self-determination among, target populations.

Given the design of the current study, limited data were generated regarding PHI (in)visibility among young parents, or on the effectiveness of PHIs in accurately monitoring or influencing young parent health behaviours. Previous literature indicates that awareness, and the related issue of consent (Guttman, 1997a; Verity & Nicoll, 2002), are ethically important to

consider within PHIs, in order to preserve respect and dignity, as well as personal security. In the current study, young parents, particularly mothers, were highly aware of being formally and informally surveilled and targeted as “high risk” parents. However, beyond withdrawing from some programs deemed excessively invasive, and enrolling in other programs in order to demonstrate willingness to accept information, few specific health behaviour changes could be verified in this study’s exploration of PHIs in the lives of young parents. Despite sensitivity to information being pushed at and pulled from them as a targeted and stigmatized group, young parents in this study were relatively unaware and unconcerned with whole-population PHIs that did not target them specifically.

### **5.5.3 Justice**

Powers and Faden (2006) argue in favour of prioritizing the health and well-being of children over that of adults, including their own mothers, based on the rationale that subsequent life enjoyment is predicated on earlier well-being. Such a value would also implicitly prioritize younger children over older children—for example putting the welfare of the children of teenage parents over their parents’ own well-being. However, Powers and Faden also assert that social justice requires addressing the inequalities between groups, as various oppressions often intersect to concentrate disadvantages that then deteriorate multiple dimensions of health and well-being. This leaves us in a conundrum in cases in which, by prioritizing younger children (e.g., babies) over older children (e.g., teenagers), we create inequities among youth (teenage parents versus teenage non-parents) that reproduce larger societal inequities. This is a key dilemma in working with young parent populations.

Powers and Faden describe the reasons prioritizing children led to a policy of testing mothers for HIV. HIV positive babies and their mothers were both:

poor, subject to social stigma and discrimination, and frequently lacked both strong social support structures and opportunities to lead minimally self-directing lives. Yet, the very list of considerations that suggested to us that a targeted policy might be appropriate also revealed reasons for caution. Our biggest concern was that a targeted program would exacerbate the stigma and disrespect these women disproportionately experienced by reinforcing invidious social views (Powers & Faden, 2006, p. viii).

Similar concerns emerged in this young parent study, when considering targeted, tailored, and whole-population interventions. The relative merits of these contrasting approaches is an active area of ethical debate and uncertainty in population health intervention research (Allebeck, 2008; Frohlich & Potvin, 2008a, 2008b; Semenza, Suk, & Manissero, 2008). In order to improve the health of a population, an intervention might target the entire population, focus on prevention among a group that is at-risk for a poor health outcome due to biological or social factors, and/or concentrate efforts on vulnerable populations in order to decrease inequalities among groups (Frohlich & Potvin, 2008b). While Rose (2008) advocates targeting the general population in order to improve the whole-population health most efficiently, Frohlich and Potvin (2008b) argue that while the average health might improve due to such efforts, Rose's strategy may in some cases increase inequality when the most vulnerable members of a population do not benefit from an increase in overall population health that disproportionately affects more privileged members of society.

The relative high regard with which young parents held 811 was attributable to a combination of passive push model, remote access, consistent access (811 being available every day and all night long), and the experience of receiving reactive information to self-identified

needs rather than either a) subpopulation-targeted proactive information or b) reactive information in response to externally-identified needs. While hotline response is not a model suited for all push health education interventions, aspects of this model—such as the general population approach and reduced stigma experience—may be valuable to consider extending to other models of information intervention, as they may increase feelings of personal security and respect among the target population, furthering the objective of social justice. Future investigation should investigate the health impact of 811-style health advice compared with other types of health education interventions such as face-to-face public health nurse visits.

The trend away from whole-population single visits for postpartum screening and toward the targeted NFP design of intensive visits (which may themselves involve a degree of tailoring) to a “high risk” population raises ethical questions. Decision-makers should consider whether targeting higher-risk demographics make sense, given limited health care resources, and whether not providing universal nurse visits to all new mothers neglects older and non-first-time mothers who may also have postpartum needs. Particularly germane to a consideration of social justice and population health ethics is the question of whether concentrating perinatal support, and particularly home visits, increases stigma and surveillance inequitably upon already-marginalized populations. As the NFP is new to the province, and currently under study, this bidirectional information intervention will soon be ready for an empirical-ethical analysis.

Health, personal security, respect, and self-determination, all key elements of Powers and Faden’s (2006) theory of social justice, were affected by PHIs in this study. The general population approach and reduced stigma experience of the 811 nurse line supported young parents’ sense of personal security, while the perceived accusatory nature of some social worker and foster parent surveillance threatened it. Similar effects were found upon young parents’

sense of respect, with individual interactions potentially holding a great deal of influence over the experience of feeling respected and worthy of respect. While some structural interventions (such as youth agreements) increased young parents' self-determination, inaccurate information and intensive surveillance threatened it.

#### **5.5.4 Absences**

This chapter presents details of only a portion of the PPH information interventions that were observed and described in this study. However, some types of interventions were notably *not* observed or described by young parent participants, and these absences in the data merit consideration. Some types of surveillance were notably missing from the observation and interview data. British Columbia has excellent health care databases, centrally recording all physician encounters and pharmaceuticals dispensed, among other things. Although security of and access to such databases are of key concern in information ethics and policy arenas, such topics never arose in this study. Perhaps they are as invisible to the young parent population, or perhaps they are merely low priority as far as concerns go, so long as one's own privacy is not compromised and one is not denied access to one's own records.

Emerging self-surveillance technologies were also nearly absent in the study data, as well. While eHealth, wearables, and the quantified self are topics of discussion among digital sociologists and health researchers alike, such topics rarely arose in these interviews and observations. Self-tracking, or more often baby-tracking, was often encouraged by teachers and nurses, but this tended to be taught in analogue, pen-and-paper form. Young parents demonstrated proficient use of digital technologies such as smartphones, but did not discuss using self-tracking apps.

### 5.5.5 Future Directions

Recognizing PHIIIs as a subset of population health interventions is compelling at this point in time, during which digital health technologies, self-surveillance, use and reuse of big data for public health and policy purposes, and increasingly sophisticated and multiplatform/multimedia health education campaigns are on the rise. Using information as a tool to promote the health of populations (through communications, surveillance, or both) is complex and may benefit from integration of information and computer science research methods into population health intervention research. Additionally, information ethics, with sometimes drastically different values and perspectives from those held in health, should be brought into consideration when analyzing the ethics of information-based health interventions.

An area for future research is the investigation of whether and when it matters if an intervention is framed as education (a PHII) or simply as a support service. For example, in some YPPs, daycare is considered a mandatory part of the program, while in others it is optional. If YPP daycare is considered part of the information intervention suite of the YPPs, it might be more integrated into the curriculum. However, requiring that students enrol their children in that specific daycare might also imply that the student's family has been judged lesser caregivers. While affluent older parents are encouraged by Canadian federal policies (e.g., the child tax credit, income splitting, parental leave) to stay at home with their infants, contrasting local policies requiring institutional daycare for the infants of young and poor parents might imply that young parents' families are somehow lesser caregivers because they previously produced a young parent.

One area in which information ethics may be able to offer a substantive contribution to further explorations of the ethics of PHIIIs is that of interactions between surveillance and

culture. Surveillance studies outside of health, primarily residing in social sciences disciplines such as sociology and information studies, lean toward a very different perspective on government or quasi-governmental entities acquiring and accumulating information on populations. While public health tends to take the goodness and necessity of population surveillance for granted, questioning perhaps the handling of sensitive data but not the general undertaking of surveillance, information ethicists are frequently concerned with the psychic and democratic effects of a “surveillance society” (Lyon, 1994, 2007) and take into account gendered, sexed, and racialized effects of surveillance upon specific populations. Future work focused specifically on population health surveillance should analyze the ethics of such programs as interventions, not assuming that they are ethically risk-free and invisible to participants.

Within surveillance, another emerging area of interest is that of the quantified baby, particularly the ethical implications of extending self-quantification to one’s children (who are unable to give consent for their data to be shared) and the potential for increased dataveillance using technologies such as baby tracking apps and mobile devices. Following the success of fertility and pregnancy tracking quantification, the quantified baby movement is poised to be a substantial market and cultural influence. In this study, push interventions aimed to teach young parents to track and chart their infants’ bodily functions, and report on these to teachers, public health nurses, and their doctors. It may be that in the future, electronic tracking will replace paper charts for this purpose. Similar to many other types of personal data tracking, the evidence on the effects of such quantified tracking on actual health and social outcomes are relatively unknown, although experts caution against both relying on potentially inaccurate data and the possibility of increasing a culture of fear and anxiety regarding child development (Gaunt, Nacsa, & Penz, 2014; Heussner, 2013; Lagorio-Chafkin, n.d.). For marginalized mothers in

particular, researchers should keep an eye out for potential punitive or coercive implementation of quantified baby technologies. Ideally, future investigations into the effectiveness and ethics of PHIs will combine theorizing and empiricism, in order to gather data on the health and social outcomes associated with different intervention models and specific interventions, and to thoughtfully consider the interpretation of such outcomes in terms of social justice.

## **5.6 Conclusion**

Within the array of population health interventions are a set of interventions that push (communicate) and pull (collect) information in order to improve the health of populations. While population health information interventions (PHIIs) such as education and surveillance efforts have sometimes been framed as non-invasive and ethically innocuous, in reality they may be intrusive into people's lives, affecting not only their health but their sense of security, respect, and self-determination.

In this chapter I explored the functioning of push, pull, and bidirectional PHIIs in naturalistic context, using empirical data from an ethnographic study of young parents in Greater Vancouver, British Columbia. Within the data, themes of non-neutrality, implementation, visibility, effectiveness, and justice emerged, leading to a set of propositions to guide further investigations into the ethics of PHIIs. Given that the current era is one of proliferation of information technologies, digital health services, and an explosion of surveillance data, population health researchers, practitioners, and ethicists should give serious consideration to further exploration of the effects and ethics of PHIIs in a variety of settings and populations.

## **Chapter 6: Conclusion**

In this dissertation, my overarching objective was to explore the health-related information experiences of young mothers and fathers. In order to meet this objective, I described and theorized the health-related information practices of young parents, explored the construction of knowledge and ignorance in young parent social information worlds, and examined the effects of population health information interventions on the lives of young parents. Young parents and their own social information practices were centred within this study. However, I aimed to richly contextualize those practices, exploring the discourses in young parent social worlds as well as population and public health information interventions that target and affect young parents.

### **6.1 Summary of Key Empirical Findings**

The core empirical findings within this project built on each other to increase understanding of the context-laden ways that socially-constructed individual level information practices, discourses of knowledge in social worlds, and population health information interventions interact to affect the lives and well-being of young parents and their children. While there may be cultural and regional trends in early-age childbearing, and some issues concern virtually all new parents, this study's findings underscored the importance of maintaining a sense of the diversity among this population's values, learning styles, social support networks, and forms of expertise. This matter of diversity was not merely evident in the heterogeneous demographic profile of the study population; diversity also emerged in the ways that information was tailored and delivered, and it appeared to matter deeply to the way it was perceived by the study participants.

Despite being a socially marginalized population, young parents in a contemporary urban Canadian setting were found to often engage in sophisticated health information practices. Young mothers and fathers proactively and reactively sought information to meet the health information needs of themselves and their families. At times, they also avoided information, often due to fear or overwhelm, or a feeling of lack of control or agency regarding health outcomes. In a world of information abundance, assessment of health information was a major task for young parents. Assessing the goodness of health information within the context of a young parent's life was not merely a cognitive matter of identifying medical accuracy, however. A young parent's affective state at the time affected information seeking, avoidance, receptivity, and ultimately assessment practices, and both stress and lack of agency led to assessment challenges. Young parents assigned value to information on the basis of the cognitive authority they could place on the information source—an attribute that included the outcome of past information interaction as well as the “relatability” and cultural accessibility of the source, in addition to information verifiability. In order to validate information they were unable to assess on their own, young parents engaged in a variety of triangulation strategies that spanned expert and non-expert sources. Such triangulation is an agentic practice that allows young parents to both resist and comply with socio-medical pressures to be engaged in health information work and demonstrate information-intensive practices as part of modern parenting.

Young parent programs, hubs for social, health, and education support for young parents, were central within a multidisciplinary social arena that contained a variety of information worlds. This arena was rife with health information interactions, some of which were led by experts from worlds such as education and public health, some of which occurred among youth and members of their personal communities such as family or religious group, and others that

were diffuse interventions originating in virtual social worlds such as the mass media and online fora. Within this young parent arena, today's "teen mom" was discursively constructed as paradoxically knowledgeable (in matters of sexuality and technology) and ignorant (in matters of parenting and health). These constructions served to reinforce stereotypes about young mothers, and did not always align with individual experience-based areas of expertise. However, young mother social locations shaped the extent to which they were expected to conform, and young mothers who were seen as atypical (e.g., white, middle class, university-bound women) cast less strongly into polarized discursive positions. Related to this increased flexibility of positioning for young mothers who were closer to the dominant image of middle-class mothering, forms of knowledge deemed "ethnic" were generally devalued, and young mothers exhibiting practices that embraced them and rejected practices of western intensive mothering were constructed as particularly information needy. This was evident in the cases of immigrant young mothers, and particularly salient in the situations of many Aboriginal young mothers who were positioned at the crossroads of traditional knowledge (much of which colonialism had attempted to eradicate) and western "scientific" mothering practices.

In an effort to identify and address the real and perceived knowledge gaps of young parents, and particularly of young mothers, multiple population health information interventions (PHIIs) were employed at the sites where I conducted this study. Included in this group of information interventions were those that pushed, or communicated, information to populations, and those that pulled, or monitored, information from the public. The positionality of the person or organization implementing push PHIIs, along with the structure of the programs and their content, appeared to influence the ways in which young parents perceived the interventions. For example, appropriate timing to coincide with an information need or related life stage, and

personalization in ways that did not feel invasive, were key to young parent acceptance of push interventions. Young parents acknowledged the utility of surveillance in some cases, while also feeling stigmatized and overly scrutinized rather than supported. PHIs have often been considered minimally invasive; however, the findings of this study indicated that more complex and nuanced understandings of a range of ethical considerations are merited.

Together, these empirical findings advanced a description and analysis of individual level health information practices, collective information worlds and social arenas, and population and public health information interventions that target and affect young parents. Although young parents' expertise that challenged "teen mom" stereotypes was frequently discounted, limiting their ability to mobilize cultural capital, young parents nonetheless acted agentially in navigating and using health information to meet their goals. Population and public health information interventions targeting young parents could more effectively meet standards of acceptability, accommodation, and accessibility if they were to take into account the information practices and experiences of young parents themselves.

## **6.2 Theoretical Implications**

By investigating, documenting, and theorizing the ways in which young parents interact with health information in the context of their everyday social worlds, I generated theory that can help inform information interventions aimed at supporting young parents, who have been deemed a priority population for public health outreach. In Chapter 2 I found that health behaviour theories frequently decontextualized information, omitted human interactions with information in favour of information on its own being framed as a catalyst for education and decisions to change, and conflated information and knowledge. In this dissertation I aimed to conduct research that was deeply embedded in a rich and specific context and focused

particularly on individual and collective human information practices that make information matter.

This study built on Savolainen's (2008) conceptualization of everyday life information practices to explore the health-related everyday life information practices of young parents. The model of young parent health information practices in Chapter 3 illustrated the prominence of assessment within information practices related to health, parenting, and other topics of contested knowledge in particular. Assessment thus emerged as a major information work (Unruh & Pratt, 2008) task of young parents. This emphasis on assessment also highlighted the significance of context in shaping information practices, as the social and geographic locations of study participants shaped their rubrics for information quality and utility. A key contribution of this study was the articulation, documentation, and theorizing of information triangulation as an agentic practice related to the work of assessment. Information triangulation practices of laypeople and non-researchers, and particularly of young people, have not previously been the focus of scholarly investigation. In this era of increasingly distributed end-user access to a variety of information sources, there is reason to believe that triangulation practices are important and under-recognized.

In Chapter 4 I expanded on previous work unpacking modern discourses of risk (Lupton, 2013), gendered discourses of risk and mothering (Lupton, 2011), and specifically those gendered discourses of risk related to young parents (Barcelos, 2013). By conducting a situational analysis of young parent social arenas, and the discursive constructions of knowledge and expertise therein, this study began unpacking the multiple roles of information as capital-enabling for young parents in young parent-related social worlds. The highly gendered and racialized nature of these discourses, and of the relationships among social worlds, reinforces

much of the extant literature. By highlighting conflicting forms of expertise, and the paradoxical construction of the teen mom as socio-technically knowledgeable yet formally and scientifically ignorant, I aimed to create space for a more nuanced understanding of the information and education needs of young parents. These findings contribute to an ongoing discussion of the relationship between agnatology (Proctor, 2008), the study of the cultural production of ignorance, and the theory of information poverty (Chatman, 1996), which includes social practices of disinformation and assessment of situational relevance of information that are largely associated with class.

In Chapter 5 I advanced a definition of and justification for population health information interventions as an area of study and ethical consideration within population health intervention research. Focusing on the experiences of young parents with population health information interventions (PHIIs), I explored information interventions aimed at educating and monitoring young parents and the general public, suggesting that information interventions are not, as previously suggested, ethically innocuous. Rather, population and public health information interventions are deeply intertwined with issues of justice (Powers & Faden, 2006), including health, stigma, and respect. Based on the key emergent concepts from my analysis of young parent experiences with PHIIs, *non-neutrality*, *implementation*, *visibility*, *effectiveness*, and *intersection with justice*, I proposed a theoretical framework, comprising five propositions, to be tested in future analyses relating to the ethics of PHIIs.

Taken as a whole, this dissertation contributed a theoretical approach to a public health and social “problem” (young parenthood) that centred members of a marginalized population, yet developed multi-level inquiry. By integrating knowledge about individual level information practices, the construction of knowledge and expertise in communities and social worlds, and

population health information interventions, we may improve our ability to use information in ways that improve the health and social outcomes of young parents and their children.

### **6.3 Policy and Practice Implications**

This study carries a number of implications for those working to support young parents as well implications that may be transferrable to those seeking more broadly to use information as an intervention for population health. Understanding heterogeneity of young parent populations, including individual variation in childcare experience, diversity among and potential sophistication of information practices, as well as cultural norms and traditional knowledges, may be of use in tailoring information interventions and young parent services. For example, programs might consider the importance of online information being accessible to mobile devices, and of visually-oriented print materials, for younger parent populations. Chapter 3's emergent model of young parent health information practices, and identification of triangulation practices among young parents, may be of use in informing and structuring health information interventions intended to work in concert with young parents' own information practices. Given the discourses identified in Chapter 4, it may be helpful to support young parent service providers in considering to what extent stereotypes of young people and young parents may be limiting acknowledgement of expertise, even while encouraging pursuit of more formal education that may lead to increased cultural capital across social worlds.

The results of Chapter 5 indicate that examination of the ethics of health communication and surveillance interventions is merited. Researchers and practitioners alike might, for example, consider the advantages and disadvantages of health education interventions by non-professionals (e.g., student health care providers) and programming vulnerable to high staff turnover or discontinuation. Inaccurate and inconsistent health information risks promoting

confusion, creating a need for additional information triangulation, and potentially spurring regrettable substitutions of health behaviours erroneously believed to be reducing harms. While targeted information communication interventions likely hold value in educating young parents as a group, and particularly the most inexperienced among the population, whole-population information services were often perceived by young parents in this study as more welcoming and less laden with stigma and surveillance.

The complex relationships many young parents have with social and health surveillance calls for attention from those planning and implementing such information interventions. In this study, particular types of surveillance (e.g., child protective services, social surveillance by adults in the community) were at times perceived as very intrusive into the lives of young mothers and fathers. Yet, even those young parents whose children had been apprehended by social services expressed appreciation for the importance of child protection, often expressing frustration that more support was not provided to them before becoming a parent. Expanding approaches that emphasize cultural sensitivity and employ “relatable” front line workers to interact with young parents might be a way to build on this appreciation for the mission of child protection to improve child safety and young parent skills.

#### **6.4 Reflexivity and Positionality**

Throughout the process of conducting this research, I made efforts to be reflexive in my research practice. One element that surfaced repeatedly in my reflexive journaling for this project was that of my own social location in relation to study participants, and the ways that may have affected participants’ behaviours, narratives, and the data we co-constructed through our researcher-participant relationships. This issue arose primarily with the young mother interviewees, although also on occasion with staff and young fathers.

Many of the young parent participants made efforts early in our relationship to assess whether or not I was also a parent. Others were surprised when my parenting status was revealed by a peer or YPP staff member. While I cannot know for certain how participants may have shaped their stories differently when talking with a non-parent interviewer, I have reason to believe that knowledge that I was also a parent—one who appeared relatively young and had (graduate) student status—may have led to greater openness about certain aspects of participants' lives, at least for female interview participants. This is congruent with the value some young mothers placed on information from other mothers, who were assumed to share a degree of common experience and values, and an ability to relate in ways that non-mothers did not. While listening to and reviewing transcripts of the recorded interviews, I became aware of situations in which I had used my own status as a parent as a bridge to build rapport with interview participants. Although I had no conscious intention to use my status as a parent to portray myself as more relatable and trustworthy, upon reflection I sensed that these were possibly important relationship-defining moments in the interviews.

At other times, both within interviews or during observations, young mothers took the initiative to ask me questions about parenting in general as well as my own parenting experiences, such as when my own child had reached certain developmental milestones, how big he had been at birth, how old he was at the time of the interview, or how old I had been when he was born. While I generally responded to such questions in the way I might to any such questions from other parent acquaintances, there were occasions that caused me to question where the boundaries were. There were certain questions I was not comfortable answering, which served as explicit reminders of the asymmetry in the researcher-study participant relationship—some of the questions I would ask interview participants were questions I was

unwilling to answer when posed by interview participants. Given that study participants were not bound by standards of research ethics and confidentiality, I justified my boundaries despite the lack of reciprocity inherent in them. With staff, such as teachers, youth workers, and public health nurses, it was not my parent or student status that I noted possibly enabling a smoother rapport, but rather my position as a university instructor and researcher.

Other aspects of my identity undoubtedly affected the co-construction of research data as well. Being female undoubtedly affected both my ability to be unobtrusive in the YPP environment and be perceived as non-threatening when entering interviewees' homes, and also likely affected interview participants' comfort disclosing certain information to me. For example, it is likely that young mothers may not have been so explicit about birth stories and gynaecological issues in their interviews if they did not read me as female. However, despite being female I did not present in a very feminine manner, and was very much out of alignment with the cultural fashion norms for women at some interview and observation sites. Additionally, my European heritage and high level of formal education likely influenced participants' trust and distrust of me in complex ways, acting in some situations as a facilitator of rapport and in others as a barrier.

My home neighbourhood lay within the geographic region in which this research took place, and on more than one occasion I encountered study participants (young parents and YPP staff) while going about daily life activities such as taking my child to the library, shopping, or walking down the street. This glimpse of the researcher outside the bounds of the constructed research environment was usually met with friendly amusement on the part of the study's participants, and may have influenced their later interactions with me, likely lending me more "relatability" but possibly also causing the interviews to feel less "anonymous."

## 6.5 Study Strengths and Limitations

This study took an ethnographic approach to data collection, and employed constructivist grounded theory, in conjunction with situational analysis and a normative ethical analysis, to investigate the interactions between early age parents and health information practices. This approach, and the details of its implementation, granted this study both strengths and limitations. This dissertation demonstrated the value of fieldwork, of *being there* with study participants. By cooking, eating, attending lessons, digging gardens, doing art projects, journaling, and even exercising alongside young parents, I had the opportunity to conduct observations deeply embedded in the everyday context of the Young Parent Programs. One concrete example of the way this enriched my understanding of health information practices was that the subversive information seeking (by route of complaining or sharing taboo personal information) I observed on the part of some young mothers. Such practices were not identified in interviews as examples of information seeking; however I was able to observe them functioning as such in practice. By visiting the homes of young mothers, playing with their babies, and sitting beside them on their couches I obtained a much richer understanding of their home lives and environments. While the unpredictability and logistical complications posed by such ethnographic methods of data collection were a challenge, the richness of the data collection they enabled strengthened this study.

Another strength of this study was the multiple opportunities to observe and conduct interviews, including three rounds of observation at Young Parent Programs and follow-up interviews with several participants. Such a study design is rare in studies of information practices, which often collect data at a single point in time. This study was in some cases able to follow interviewees for many months, across multiple interviews and observations, and during a

highly dynamic time in a young parent's life. As context and health information worlds shifted, as health information interventions were cut and new ones implemented, and as individuals grew and changed, their health information practices shifted and evolved. Following up with some study participants from the initial round of fieldwork for over a year also helped build trusted relationships between participants and the researcher, enabled for clarification and deepening of an individual's narrative, and allowed me to check emergent themes against the perceptions and opinions of interview participants. Given the high turnover of many outside experts who visit the Young Parent Programs, the ability to return to the study sites as a familiar visitor may have helped build rapport and trust as well.

The methods used placed certain limitations on this study as well. While I have discussed the representativeness of the interview participant sample in relation to the area's population demographics, the question of representation of young parents is a more complex one that is more challenging to assess. Although I suggest that elements of the theory and conclusions generated by this study are transferrable to other populations and health issues, this study cannot claim generalizability to all young parents.

One practical challenge to data collection and participant retention that could not be anticipated was a provincial labour dispute that resulted in teachers being partially locked out and escalating strike actions, resulting in the loss of school (and thus Young Parent Program) time over a matter of five months (May-September, 2014). Attrition was a challenge to following study participants over time. While this was unsurprising given the marginalized youth population, it was significant in that young parents who were unavailable for follow-up interviews likely differed from those with continued availability. Of the 39 interview participants, only two were fathers, despite efforts to be inclusive of all genders and sexes in the

recruitment process. This was attributable to both the researcher's positionality and the feminized spaces of the Young Parent Programs and other services for young parents. While I made efforts to sustain the diversity, complexity, and context-laden nature of the experiences of young parents during the analysis and writing-up of this study, the nature of the study did to some extent lump together young parents as a population of interest, and it is important to emphasize the heterogeneity of this population.

## **6.6 Directions for Future Research**

The research reported in this dissertation was part of a larger, ongoing project investigating the influences of social context and structure on young people's parenting experiences in British Columbia, Canada. As a result, there is the possibility of continuing to follow participants for the duration of the five-year overarching study. This provides an opportunity to test and further explore findings from this dissertation, as well as continue to explore additional information practices and related topics of interest. Longer term follow up with young parents will permit observation of information practice evolution, including shifts in practices as children grow out of babyhood into early childhood and the school years. Continued contact with the study population may also allow exploration of participants' own perceptions of the discourses identified in Chapter 4, as well as deeper investigation into the impacts of specific population and public health information interventions on the lives and health behaviours of young parents. By combining data used in this dissertation with other data from the larger study, it may be possible to conduct analyses that focus on subpopulations of interest, for example the specific health and information needs of young parents who are recent immigrants, or gay/lesbian/bisexual/queer youth who, while statistically more likely to be involved in young pregnancies than heterosexual peers (Blake et al., 2001; Forrest & Saewyc, 2004; Saewyc, Poon,

Homma, & Skay, 2008), are often rendered invisible within young parent social worlds and discourses.

Beyond the continuing young parent study, this work laid important foundations for work on related issues. Health ELIS research should consider greater alignment with global and local public health priority issues and populations, and further contribute to the theoretical development of health behaviour theory that more fully considers the role of information and information practices. Findings from exploratory health ELIS studies such as this one may be tested, for example by designing controlled trials of information interventions, and by testing more information behaviour elements to potentially improve predictive and descriptive validity of health behaviour models. The health information triangulation practices engaged in by young parents in this study can lead to exploration of information triangulation in other populations and regarding other topics. In health, this should be done with an explicit eye to the ways the movement toward “patient engagement” in conjunction with widespread Internet access and mobile device ownership has both empowered and burdened laypeople with information seeking and assessment work. Additional topics of parental health information need, seeking, and use that interact with population and public health communication and surveillance efforts should be explored using ethnographic as well as complementary methods such as population surveys and experimental design studies.

Within population health intervention research, a focus on information interventions should be explored, particularly as we move into an ever more digital and quantified era. The ethical analysis of such interventions should strive to integrate information ethics and public health ethics, troubling normative assumptions in both fields. Future research that tests the PHII theoretical propositions suggested in this dissertation may expand on or modify them in order to

strengthen the capabilities of population and public health ethics to rigorously consider implementation and implications of information interventions with various target populations.

## **6.7 Conclusion**

People, individually and collectively, construct information practices within daily life. Health is the subject of much information seeking, sharing, and use, and certain life stages, such as pregnancy and early parenting, are information-intensive time periods. Young parents and their children are perceived by society to be at risk for poor health and social outcomes; therefore they are subject to intensive information interventions aimed at improving their welfare. The health-related information practices of young parents interact with such population health information interventions within socially constructed worlds, in ways that influence the lives and experiences of young mothers and fathers. Understanding these interactions and their effects can increase our ability to use information to improve health.

The young parents in this study engaged in a variety of health information practices, as they sought, encountered, avoided, assessed, stored, shared, and used information. Within a social arena that is saturated with information and that promotes ideals of intensive mothering, assessment of health information is a substantial task for young parents, who employ a variety of information triangulation practices in order to verify the goodness and fit of information from expert and lay sources. The young parent social arena is highly gendered, focusing primarily on mothers, who are discursively constructed as paradoxically ignorant (in matters of parenting expertise) and knowledgeable (in matters of information technology). Population health information interventions aimed at educating and surveilling these young parents carry ethical implications that merit closer investigation. Such information interventions play out in social worlds that discursively construct young mothers in particular as knowledge-deficient and

information-needy, sometimes discounting the experiential and cultural expertise of members of this diverse population. Understanding the health information practices, and in particular the assessment of health information value and utility, enacted by young parents can enable service providers and public health policy makers to better align efforts to support young parents and their children.

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## Appendices

### Appendix A Interview Guides

*Note: Every interview guide was preceded by an informed consent process. Participants were provided with a handout with common research vocabulary and a checklist of research participants' rights, after which the informed consent form was gone over orally and provided in writing, and participants' questions about the study were answered. Following this informed consent process, every interview began with a brief reminder of the planned structure of the interview and the voluntary nature of the questions, tailored to the type of interview (intake/follow-up, mother/father).*

#### **Preamble: Review the informed consent and interview structure:**

- This session will be audio recorded and will last about [1.5 hours/1 hour].
- We'll begin our interview with me asking you some questions about your past experiences as a young mother living in your community, before we begin to talk about some of your opinions and hopes regarding your education, finding a job, being a parent, and living in good housing.
- While we're talking, I'll ask you to tell me how you think that your family, peers, the media and other factors have affected your decisions related to these issues. Lots of very important things have happened in BC in the past few years (some good, some bad), including changes to the economy and job market, as well as the re-structuring of health, education and social service systems. I'm going to ask you some questions about your thoughts and opinions regarding these kinds of things. I'd like to you to tell me about your perspectives, as a young mother, on these various issues.
- During the interview, we'll also have a chance to discuss how you think being a young [mother/father] is generally perceived in your community; your experiences with health services, education and housing authorities here; and the way you see these services as affecting your experiences as a young parent.

- During the interview, I may be taking a few notes about the events and experiences you describe to me.
- We'll close the interview with me asking you some survey questions. The information we collect through the survey will be used to describe the characteristics (e.g., age, education, current number of children) of the overall group of study participants.
- As a reminder, this interview is voluntary, and we can skip any questions you are uncomfortable with.
- [Review options for referrals to counseling services.]
- Do you have any questions about how we're going to spend our time today?

## **A.1 Intake Interview Guide: Young Mothers**

### **Part A: Open-Ended Questions**

#### **Opening Discussion**

1. Let's begin by talking about your life as a young mother. Start anywhere you like and include as much or little detail as you want to.

Sample probing questions for mothers:

- How old were you when you realized you were pregnant?
- Were you and your partner using birth control? If yes, what kind?
- How did you and/or your boyfriend/partner come to the decision to keep your child?
- Did you and/or your boyfriend/partner consider any other options, like having an abortion or giving the baby up for adoption?

#### **Attitudes Toward Young Parents**

2. Thank you for sharing that story with me. Now I would like to hear your thoughts about attitudes towards young parents. First, please tell me about the reactions of your friends, siblings, and parents when you told them that you were going to have a baby.
  - How did your partner react when s/he found out that you were going to have a baby?
3. How would you describe the general attitude in your community toward young parents?
  - Among people your age?
  - Among adults in general?
  - Among service providers, such as public health nurses, social workers, teachers?
  - Do you think young parents who are married are perceived differently than those who are single and/or unmarried? If so, why?
  - What about the idea of promiscuity (i.e., young parents who are portrayed as having sex with lots of different people; young mothers who are perceived as “sluts”)? How do you think that affects your community's attitudes towards teenage parents?
4. What kind of messages do you think the media send about young mothers?
  - What about young fathers?
  - What do you think about those messages?
5. How would you describe the kinds of services and information available for young parents living in your community?
  - Where would you advise a young mother to turn for information and/or services related to sexual or reproductive health? What about for young fathers?
  - What makes you recommend these services or people in particular?

#### **Parenting Experiences**

6. Now, I'd like you to think back to when you first realized that you were pregnant (with your first child). What did you think your life as a young parent might be like?

7. What did you imagine it would be like to be the parent of a baby?
  - Of a toddler?
  - Of a teenager?
8. How has being a parent changed your life?
  - School and studying?
  - Where and with whom you live?
  - Relationships with friends, family members?
  - What jobs you might be able to do in the future?
9. When you were going through those changes in your life, where did you look for help?
  - School teachers or counselors?
  - Social workers or youth workers?
  - Parents or guardians?
  - Friends or partner?
10. Tell me about what it is like to be a parent. What special characteristics do you think make for a really good parent?
11. Who or what would you say has helped you the most in terms of:
  - Your parenting skills?
  - Staying in school?
  - Looking for work or other financial support?
  - Seeking housing?
  - Taking care of your health?
12. Who or what do you turn to for advice about:
  - Pregnancy/birth?
  - Being a parent?
  - Staying in school?
  - Work and/or financial support?
  - Housing?
13. Who gives you advice without you asking for it on:
  - Pregnancy/birth?
  - Being a parent?
  - Staying in school?
  - Work and/or financial support?
  - Housing?
14. Who would you never ask for advice on:
  - Pregnancy/birth?
  - Being a parent?
  - Staying in school?

- Work and/or financial support?
- Housing?

15. Are there people who come to you for advice or information? What types of information do you share?

**Maternal-Child Health Information**

16. Before you were pregnant/parenting yourself, what did you think or know about healthy pregnancy and birth? Where did most of this information come from?

- In what ways have your health experiences with pregnancy and birth been the same or different from what you expected?

17. When people are pregnant, they are often exposed to a lot of information about healthy pregnancy and birth. Now that you are/when you were pregnant, where is/was your information about pregnancy and birth coming from?

- What did you think about that information? What types/sources of information are/were helpful, in your opinion?
- Did you ever make any changes or decisions based on any of this information?
- Is there information you wish you had, but don't/didn't?

18. Pregnancy and birth is a time of a lot of change, physically and otherwise. Most people have some health questions or concerns while they are pregnant.

- Have you had any health questions or concerns since being pregnant?
  - If so, how have you dealt with them? If not, why do you think this is?
  - Can you tell me about one health question or concern you had, and what happened with it?

19. Do you have any health questions or concerns today that you haven't found the answer to yet? Can you tell me about one specific question or concern you have now?

- What do you think will happen with those questions? Will you try to find answers in some way? Where/how?

**Economic, Employment, Education and Housing Factors**

20. Where do most of the people that you know work? Your friends, family?

21. If they are not working, how do they get money to support themselves to live?

22. What kind of housing situation are you in currently? Has your housing situation changed since you got pregnant or had your baby?

- Are you living on your own? With others?
- In an apartment or house?
- What was it like for you to find a place to live in your community?
- How do you get where you need to go (e.g., for appointments, for shopping, etc.)?
- How would you describe your current apartment/house?
- What kind of place do you envision living in by this time next year? In 5 years time?

23. Are you currently attending classes anywhere (e.g., high school, college, university) or doing a trade apprenticeship? Tell me about that.
24. Have you thought about continuing your education and training? Please tell me what kinds of training you are thinking about.
- Where is the school/program that you're interested in located?
  - How much does it cost?
  - Do you have access to financial support (e.g., student loans, financial help from family or your partner, savings)?
25. What are the biggest barriers or obstacles to you in terms of:
- Parenting skills?
  - Staying in school?
  - Working and/or financial support?
  - Housing?
  - Being healthy?
26. What do you do about money to live on and raise your child (children) with?
- Do you have enough money to make ends meet?
  - How do you manage to pay your rent, buy food, etc.?
  - What kinds of jobs do you think you are currently able to take on at this point in your life? By this time next year? In the next 5 years? Once your child (children) goes to school?
27. Nowadays, it's hard for anyone to find a good job. What special struggles do young parents such as you face when looking for good work?
28. When you need childcare or babysitting, what do you do?
- How does this relate to your being in school, working or having a social life?
29. In the past few years there have been lots of changes in the ways that health, education and social services are delivered in BC. What changes have you noticed in the resources or programs that you access?
- You may be aware that many programs and services have faced cutbacks in recent years. When you interact with service providers in the health, education and/or social service systems, what kinds of things do you hear them say about "the cutbacks"? As a young parent, how worried are you about these "cutbacks"?
30. During this interview, we've talked about a lot of challenges that you and other young parents are facing. I'd also like to hear about what's good in your life as a young mother. Please tell about some of the best parts of being a parent.

31. What do you think is important for us to know about the experiences of young parents living in your community? Are there further insights you would like to share (e.g., any opinions, feelings)?

## **Part B: Closed-Ended Questions**

### **Preamble**

I would now like to ask you a few questions about your background. The information we collect through the survey will be used to describe the characteristics (e.g., age, education, current number of children) of the overall group of study participants. Please remember that you do not have to answer any questions you don't want to and that you can stop the interview at any time.

### **Socio-demographics**

1. What is your date of birth? Day: \_\_\_\_\_ Month: \_\_\_\_\_ Year: \_\_\_\_\_

2. How would you best describe your ethnicity?

- Aboriginal [Inuit, Métis, First Nation (status), First nation (non-status)]
- Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
- Black (e.g., African, Haitian, Jamaican, Somali)
- Chinese
- Filipino
- Japanese
- Korean
- Latin American
- South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
- South East Asian (e.g., Cambodian, Indonesian, Laotian, Vietnamese)
- White (Caucasian)
- Other Please specify: \_\_\_\_\_

3. Were you born in Canada?

- Yes
- No  
If no, how old were you when you came to Canada? \_\_\_\_\_  
If no, where did you move to Canada from? \_\_\_\_\_
- Other/It's complicated. Explain: \_\_\_\_\_

4. Were your parents born in Canada?

- Yes
- No
- One yes; one no  
If no, approximately how old were they when they came to Canada? \_\_\_\_\_

- If no, where did they move to Canada from? \_\_\_\_\_
- Other/It's complicated. Explain: \_\_\_\_\_

5. What is your gender identification?

- Woman
- Man
- Transgender/Two spirit
- Other Please specify: \_\_\_\_\_

6. How would you describe your sexual orientation?

- Heterosexual/straight
- Lesbian/gay
- Bisexual/pansexual
- Not sure/questioning
- Other Please specify: \_\_\_\_\_

7. What are the first 3 digits of your postal code? \_\_\_\_\_

8. How long have you lived at your current address? \_\_\_\_\_ years; \_\_\_\_\_ months

9. Have you moved in the past year?

- No
- Yes
- If yes, how many times?:** \_\_\_\_\_

**If yes, why did you move?**

- Cost
- To move in with/out from partner
- To a better location (for school, work, etc.)
- To move in with/out from family
- To a nicer/bigger place
- Other: \_\_\_\_\_

10. What is your current education level?

- Currently in high school
- Graduated high school and have regular Dogwood Diploma
- Graduated high school and have Adult Graduation Diploma (or Adult Dogwood Diploma for people 18 years and over)
- Currently in college or university
- Graduated college or university
- Currently in trade school or apprenticeship program

- Graduated trade school or apprenticeship program
- Other Please specify: \_\_\_\_\_

### **Pregnancy History**

11. **In your lifetime**, how many times have you been pregnant? \_\_\_\_\_
12. **In your lifetime**, how many babies have you given birth to? \_\_\_\_\_
13. **In your lifetime**, have you ever had a pregnancy that was not carried to term (an abortion, miscarriage, or stillbirth)?
- No
  - Yes. **If yes**, how many pregnancies have not been carried to term? \_\_\_\_\_
14. **In your lifetime**, have you ever had an unplanned pregnancy?
- No
  - Yes. **If yes**, how many? \_\_\_\_\_
  - Sort of/It's complicated/Not planned but not avoided. If so, how many? \_\_\_\_\_
15. Are you currently pregnant?
- Yes
  - No
  - Not sure

### **Pregnancy Intentions**

16. Are you trying to become pregnant now?
- Yes
  - No
17. Are you planning to become pregnant:
- Within the next year?
  - Within the next 2-5 years?
  - 6 or more years in the future?
  - No, I do not want to become pregnant in the future.
18. Have you ever been advised by a health professional that you should **not** become pregnant?
- No
  - Yes. **If yes**, what were the reasons?
    - Drug use
    - Sex work
    - HIV positive
    - Other Please specify: \_\_\_\_\_

### Current Contraceptive Practices

19. If you are currently sexually active, are you using any of the following (check all that apply)?

- Oral contraceptives (the Pill)
- The patch
- Condoms
- Implant
- The Depo-Provera shot
- NuvaRing (contraceptive ring placed inside the vagina)
- IUD with hormones (e.g., Mirena)
- Copper IUD (no hormones)
- Diaphragm
- The rhythm method or natural fertility awareness (i.e., not having sex when think you are most likely to get pregnant)
- Withdrawal (i.e., male sex partner(s) ‘pulls out’ before ejaculating inside you)
- Other Please specify: \_\_\_\_\_

### Experiences with Reproductive Health Services

20. Where do you usually access Reproductive Health Services (e.g., STI testing, contraception, prenatal care)?

- I have a regular family doctor
- I have a specialist (e.g., an obstetrician; gynecologist)
- I go to a walk-in clinic
- I go to a youth clinic
- I receive most of my medical care from street nurses
- I go to the hospital emergency room
- I don't access these services
- Other Please specify: \_\_\_\_\_

### Experiences with General Medical Care

21. I would now like to ask you about where you usually access medical services (e.g., a checkup or doctor visit) for both yourself and your child(ren)?

**Self**    **Child**

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | I have a regular family doctor                       |
| <input type="checkbox"/> | <input type="checkbox"/> | I go to a walk-in clinic                             |
| <input type="checkbox"/> | <input type="checkbox"/> | I go to a youth clinic                               |
| <input type="checkbox"/> | <input type="checkbox"/> | I receive most of my medical care from street nurses |
| <input type="checkbox"/> | <input type="checkbox"/> | I go to the hospital emergency room                  |

Other Please specify: \_\_\_\_\_

22. Have you **ever** experienced barriers to general medical care (e.g., regular check ups; getting an appointment with a doctor to address a specific health issue)? (check all that apply)

- No
- Yes, the hours of operation for the service are not convenient for me
- Yes, the location of the service are not convenient for me
- Yes, the service providers make me feel unwelcome
- Yes, I don't know of any services like this
- Yes, I am afraid that I will lose custody of my children if I use these services
- Other Please specify: \_\_\_\_\_

23. After the birth of a child, have you ever had a home visit from a:

- Nurse
- Social worker
- Other health care or social service provider, please specify: \_\_\_\_\_

### **Experiences with Accessing Services**

24. As a pregnant/parenting woman have you experienced any of the following barriers or issues? (Read out list)

<b>Ever</b>	<b>In last 6 months</b>	
-------------	-------------------------	--

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Geographic barriers (e.g., travelling long distances, difficulty getting to or from appointments or services) |
| <input type="checkbox"/> | <input type="checkbox"/> | Restrictions on housing with children   |
| <input type="checkbox"/> | <input type="checkbox"/> | Age cut-off for infant services (e.g., subsidized child care)   |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of drug treatment support for moms/pregnant women  |
| <input type="checkbox"/> | <input type="checkbox"/> | Fear accessing services might cause Ministry involvement (e.g., might lose child)                             |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of support for HIV+ moms/pregnant women  |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of financial support for moms/pregnant women   |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of social support from family  |
| <input type="checkbox"/> | <input type="checkbox"/> | Fear of partner violence  |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of services for pregnant/parenting women experiencing partner violence                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of trauma/violence counselling   |
| <input type="checkbox"/> | <input type="checkbox"/> | Fear of police  |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of access to programs for parenting women  |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of non-judgmental education on FASD/ infant narcotic withdrawal  |
| <input type="checkbox"/> | <input type="checkbox"/> | Fear of community stigma as pregnant/ parenting mom   |

- Other Please specify \_\_\_\_\_  
  None

### **Experiences with Child Apprehension**

25. How many children are in your custody now? Please specify: \_\_\_\_\_

26. Have you ever had any children apprehended by Child Welfare Services?

- No  
 Yes  
 **If yes, how many times?** \_\_\_\_  
 **If yes, how many children total?** \_\_\_\_  
 **If yes, did you receive professional/agency support for grief and loss?**  
(Y/N)

### **Perspectives on Existing Programs**

27. Please list all of the programs that you are enrolled in (or have been enrolled in during the past 6 months) that are designed to help support you as a parent (read out list):

[List redacted for participant confidentiality. List included shelters, substance misuse treatment facilities, Aboriginal support programs, mothering and infant development programs, school Young Parent Programs, neighbourhood house programs, community non-profit young parent support programs, parenting education programs, and young parent health care services.]

### **Closing Remarks**

Thank you very much for sharing your story with me today. If you are comfortable doing so, would you be interested in talking to your child's father or another person who is very important in your life and the life of your child (e.g., your romantic partner, your child's step-parent) about our study and inviting that person to contact us for an interview? If yes, why do you suggest this person? How likely do you think it is s/he will get back to us? What would motivate them to participate in our study? Please give them this card and ask them to call our toll-free number.

## **A.2 Intake Interview: Young Fathers**

### **Part A: Open-Ended Questions**

#### **Opening Discussion**

1. Let's begin by talking about your life as a young father (or someone involved in the lives of a young mother and her child). Start anywhere you like and include as much or little detail as you want to.

Sample probing questions for fathers/socially significant others:

- How old were you when you realized your girlfriend/partner was pregnant?
- Were you and your partner using birth control? If yes, what kind?
- How did you and/or your girlfriend/partner come to the decision to keep your child?
- Did you and/or your girlfriend/partner consider any other options, like having an abortion or giving the baby up for adoption?

#### **Attitudes Toward Young Parents**

2. Thank you for sharing that story with me. Now I would like to hear your thoughts about attitudes towards young parents. Tell me about the reactions of your friends, siblings, and parents when you told them that you were going to be a father/step-father.
  - a. How did your partner react when she found out she was expecting a child?
3. How would you describe the general attitude in your community toward young parents?
  - Among people your age?
  - Among adults in general?
  - Among service providers, such as public health nurses, social workers, teachers?
  - Do you think young parents who are married are perceived differently than those who are single and/or unmarried? If so, why?
  - What about the idea of promiscuity (i.e., young parents who are portrayed as having sex with lots of different people; young mothers who are perceived as “sluts”)? How do you think that affects your community's attitudes towards teenage parents?
4. What kind of messages do you think the media send about young mothers?
  - a. What about young fathers?
  - What do you think about those messages?
5. How would you describe the kinds of services and information available for young parents living in your community?
  - Where would you advise a young mother to turn for information and/or services related to sexual or reproductive health? What about for young fathers?
  - What makes you recommend these services or people in particular?

#### **Parenting Experiences**

6. Now, I'd like you to think back to when you first realized that girlfriend/partner was pregnant (with your first child). What did you think your life as a young parent might be like?

7. What did you imagine it would be like to be a parent (or closely involved in the life of a baby)?
  - Of a toddler?
  - Of a teenager?
8. How has being a parent (or closely involved in a young mother's and child's lives) changed your life?
  - School and studying?
  - Where and with whom you live?
  - Relationships with friends, family members?
  - What jobs you might be able to do in the future?
9. When you were going through those changes in your life, where did you look for help?
  - School teachers or counselors?
  - Social workers or youth workers?
  - Parents or guardians?
  - Friends or partner?
10. Tell me about what it is like to be a parent (or closely involved with in the life of a child). What special characteristics do you think make for a really good parent?
11. Who or what would you say has helped you the most in terms of:
  - Your parenting skills?
  - Staying in school?
  - Looking for work or other financial support?
  - Seeking housing?
  - Taking care of your health?
12. Who or what do you turn to for advice about:
  - Pregnancy/birth?
  - Being a parent?
  - Staying in school?
  - Work and/or financial support?
  - Housing?
13. Who gives you advice without you asking for it on:
  - Pregnancy/birth?
  - Being a parent?
  - Staying in school?
  - Work and/or financial support?
  - Housing?
14. Who would you never ask for advice on:
  - Pregnancy/birth?
  - Being a parent?

- Staying in school?
- Work and/or financial support?
- Housing?

15. Are there people who come to you for information? What types of information do you share?

**Parent-Child Health Information**

16. Before you were parenting yourself, what did you think or know about healthy pregnancy and birth? Where did most of this information come from?

- In what ways have your health experiences with pregnancy, birth, and parenting been the same or different from what you expected?

17. When people are pregnant, they are often exposed to a lot of information about healthy pregnancy and birth. Where did or does your information about pregnancy and birth coming from?

- What did you think about that information? What types/sources of information are/were helpful, in your opinion?
- Did you ever pass along any of this information to anyone else?
- Did you ever make any changes or decisions based on any of this information?
- Is there information you wish you had, but don't/didn't?

18. Pregnancy and birth is a time of a lot of change, physically and otherwise. Most people have some health questions or concerns while they or a loved one are pregnant.

- Have you had/did you have any health questions or concerns during your child's gestation?
  - If so, how have you dealt with them? If not, why do you think this is?
  - Can you tell me about one health question or concern you had, and what happened with it?

19. Do you have any health questions or concerns today that you haven't found the answer to yet? Can you tell me about one specific question or concern you have now?

- What do you think will happen with those questions? Will you try to find answers in some way? Where/how?

**Economic, Employment, Education and Housing Factors**

20. Where do most of the people that you know work? Your friends, family?

21. If they are not working, how do they get money to support themselves to live?

22. What kind of housing situation are you in currently? Has your housing situation changed since your partner/ex-partner got pregnant or had your baby?

- Are you living on your own? With others?
- In an apartment or house?
- What was it like for you to find a place to live in your community?

- How do you get where you need to go (e.g., for appointments, for shopping, etc.)?
  - How would you describe your current apartment/house?
  - What kind of place do you envision living in by this time next year? In 5 years time?
23. Are you currently attending classes anywhere (e.g., high school, college, university) or doing a trade apprenticeship? Tell me about that.
24. Have you thought about continuing your education and training? Please tell me what kinds of training you are thinking about.
- Where is the school/program that you're interested in located?
  - How much does it cost?
  - Do you have access to financial support (e.g., student loans, financial help from family or your partner, savings)?
25. What are the biggest barriers or obstacles to you in terms of:
- Parenting skills?
  - Staying in school?
  - Working and/or financial support?
  - Housing?
  - Being healthy?
26. What do you do about money to live on and raise your child/step-child with?
- Do you have enough money to make ends meet?
  - How do you manage to pay your rent, buy food, etc.?
  - What kinds of jobs do you think you are currently able to take on at this point in your life? By this time next year? In the next 5 years? Once your child/step-child goes to school?
27. Nowadays, it's hard for anyone to find a good job. What special struggles do young parents face when looking for good work?
28. When you need childcare or babysitting, what do you do?
- How does this relate to your being in school, working or having a social life?
29. In the past few years there have been lots of changes in the ways that health, education and social services are delivered in BC. What changes have you noticed in the resources or programs that you access?
- You may be aware that many programs and services have faced cutbacks in recent years. When you interact with service providers in the health, education or social service systems, what kinds of things do you hear them say about "the cutbacks"? As a young parent, how worried are you about these "cutbacks"?
30. During this interview, we've talked about a lot of challenges that you and other young parents are facing. I'd also like to hear about what's good in your life as a young father/step-

father/someone who is closely involved in the lives of a young mother and her child. Please tell about some of the best parts of this experience.

31. What do you think is important for us to know about the experiences of young parents living in your community? Are there further insights you would like to share (e.g., any opinions, feelings)?

### **Part B: Closed-Ended Questions**

#### **Preamble**

I would now like to ask you a few questions about your background. The information we collect through the survey will be used to describe the characteristics (e.g., age, education, current number of children) of the overall group of study participants. Please remember that you do not have to answer any questions you don't want to and that you can stop the interview at any time.

#### **Socio-demographics**

1. What is your date of birth? Day: \_\_\_\_\_ Month: \_\_\_\_\_ Year: \_\_\_\_\_

2. How would you best describe your ethnicity?

- Aboriginal [Inuit, Métis, First Nation (status), First nation (non-status)]
- Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
- Black (e.g., African, Haitian, Jamaican, Somali)
- Chinese
- Filipino
- Japanese
- Korean
- Latin American
- South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
- South East Asian (e.g., Cambodian, Indonesian, Laotian, Vietnamese)
- White (Caucasian)
- Other Please specify: \_\_\_\_\_

3. Were you born in Canada?

- Yes
- No  
If no, how old were you when you came to Canada? \_\_\_\_\_  
If no, where did you move to Canada from? \_\_\_\_\_
- Other/It's complicated. Explain: \_\_\_\_\_

4. Were your parents born in Canada?

- Yes
- No

- One yes; one no  
If no, approximately how old were they when they came to Canada? \_\_\_\_\_  
If no, where did they move to Canada from? \_\_\_\_\_
- Other/It's complicated. Explain: \_\_\_\_\_

5. What is your gender identification?

- Woman
- Man
- Transgender/Two spirit
- Other Please specify: \_\_\_\_\_

6. How would you describe your sexual orientation?

- Heterosexual/straight
- Homosexual/gay
- Bisexual/pansexual
- Not sure/questioning
- Other Please specify: \_\_\_\_\_

7. What are the first 3 digits of your postal code? \_\_\_\_\_

8. How long have you lived at your current address? \_\_\_\_\_ years; \_\_\_\_\_ months

9. Have you moved in the past year?

- No
- Yes  
**If yes, how many times?:** \_\_\_\_\_

**If yes, why did you move?**

- Cost
- To move in with/out from partner
- To a better location (for school, work, etc.)
- To move in with/out from family
- To a nicer/bigger place
- Other: \_\_\_\_\_

10. What is your current your education level?

- Currently in high school
- Graduated high school and have regular Dogwood Diploma
- Graduated high school and have Adult Graduation Diploma (or Adult Dogwood Diploma for people 18 years and over)
- Currently in college or university
- Graduated college or university

- Currently in trade school or apprenticeship program
- Graduated trade school or apprenticeship program
- Other Please specify: \_\_\_\_\_

**Pregnancy Involvement History (questions for fathers/co-parents)**

11. **In your lifetime**, how many times have you been involved in a pregnancy? \_\_\_\_\_
12. **In your lifetime**, how many babies have resulted from these pregnancies? \_\_\_\_\_
13. **In your lifetime**, were any of the pregnancies that you have been involved with not carried to term (an abortion, miscarriage, or stillbirth)?
- No
  - Yes. **If yes**, how many pregnancies have not been carried to term? \_\_\_\_\_
14. **In your lifetime**, have you ever been involved in an unplanned pregnancy?
- No
  - Yes. **If yes**, how many? \_\_\_\_\_
  - Sort of/It's complicated/Not planned but not avoided. If so, how many? \_\_\_\_\_
15. Is your partner currently pregnant?
- Yes
  - No
  - Not sure

**Pregnancy/Parenting Intentions**

16. Is your partner trying to become pregnant now?
- Yes
  - No
17. Are you planning to have a(nother) child:
- Within the next year?
  - Within the next 2-5 years?
  - 6 or more years in the future?
  - No, I do not want to have any (more) children in the future.
18. Have you ever been advised by a health professional that you should **not** have a biological child?
- No
  - Yes. **If yes**, what were the reasons?
    - Drug use
    - Sex work

- HIV positive
- Other Please specify: \_\_\_\_\_

### **Current Contraceptive Practices**

19. If you are currently sexually active, are you and your partner using any of the following (check all that apply)?

- Oral contraceptives (the Pill)
- The patch
- Condoms
- Implant
- Norplant
- NuvaRing (contraceptive ring placed inside the vagina)
- IUD with hormones (e.g., Mirena)
- Copper IUD (no hormones)
- Diaphragm
- The rhythm method or natural fertility awareness (i.e., not having sex when you think pregnancy is most likely)
- Withdrawal (i.e., you ‘pull out’ before ejaculating inside your partner)
- Other Please specify: \_\_\_\_\_

### **Experiences with Reproductive Health Services**

20. Where do **you** usually access Reproductive Health Services (e.g., STI testing, contraception)?

- I have a regular family doctor
- I have a specialist
- I go to a walk-in clinic
- I go to a youth clinic
- I receive most of my medical care from street nurses
- I go to the hospital emergency room
- I don't access these services
- Other Please specify: \_\_\_\_\_

21. Where does **your partner** usually access Reproductive Health Services (e.g., STI testing, contraception, prenatal care)?

- A regular family doctor
- A specialist (e.g., an obstetrician; gynecologist)
- A walk-in clinic
- A youth clinic
- Mostly from street nurses
- The hospital emergency room
- My partner doesn't access these services

- Other Please specify: \_\_\_\_\_

### Experiences with General Medical Care

22. I would now like to ask you about where you usually access medical services (e.g., a checkup or doctor visit) for both yourself and your child(ren)?

**Self    Child**

- I have a regular family doctor  
  I go to a walk-in clinic  
  I go to a youth clinic  
  I receive most of my medical care from street nurses  
  I go to the hospital emergency room  
  Other Please specify: \_\_\_\_\_

23. Have you **ever** experienced barriers to general medical care (e.g., regular check ups; getting an appointment with a doctor to address a specific health issue)? (check all that apply)

- No  
 Yes, the hours of operation for the service are not convenient for me  
 Yes, the location of the service are not convenient for me  
 Yes, the service providers make me feel unwelcome  
 Yes, I don't know of any services like this  
 Yes, I am afraid that I will lose custody of my children if I use these services  
 Other Please specify: \_\_\_\_\_

### Experiences with Accessing Services

24. As a parent/step-parent, have you experienced any of the following barriers or issues? (Read out list)

**Ever    In last 6 months**

- Geographic barriers (e.g., travelling long distances, difficulty getting to or from appointments or services)  
  Restrictions on housing with children  
  Age cut-off for infant services (e.g., subsidized child care)  
  Lack of drug treatment support for dads/men involved in a pregnancy  
  Fear accessing services might cause Ministry involvement (e.g., might lose child)  
  Lack of support for HIV+ dads/men involved in a pregnancy  
  Lack of financial support for dads/men involved in a pregnancy  
  Lack of social support from family  
  Fear of partner violence  
  Lack of services for dads/men involved in a pregnancy who are experiencing partner violence

- Lack of trauma/violence counselling
- Fear of police
- Lack of access to programs for parenting men
- Lack of non-judgmental education on FASD/ infant narcotic withdrawal
- Fear of community stigma as man involved in a pregnancy/parenting dad
- Other Please specify \_\_\_\_\_
- None

25. After the birth of a child, have you ever had a home visit from a:

- Nurse
- Social worker
- Other health care or social service provider, please specify: \_\_\_\_\_

### **Experiences with Child Apprehension**

26. How many children are in your custody now? Please specify: \_\_\_\_\_

27. Have you ever had any children apprehended by Child Welfare Services?

- No
- Yes
  - If yes, how many times?** \_\_\_\_
  - If yes, how many children total?** \_\_\_\_
  - If yes, did you receive professional/agency support for grief and loss?**  
(Y/N)

### **Perspectives on Existing Programs**

28. Please list all of the programs that you are enrolled in (or have been enrolled in during the past 6 months) that are designed to help support you as a parent.

[List redacted for participant confidentiality. List included shelters, substance misuse treatment facilities, Aboriginal support programs, mothering and infant development programs, school Young Parent Programs, neighbourhood house programs, community non-profit young parent support programs, parenting education programs, and young parent health care services.]

### **Closing Remarks**

Thank you very much for taking the time to share your story with me today.

## **A.3 Follow-Up Interview Guide 1: Young Mothers**

### **Part A: Open-Ended Questions**

#### **Opening Discussion**

32. Please tell me what has been going on in your life as a parent since we last met.
- What has changed for you since our last interview?
  - Have there been any changes in your relationships with your partner, family, or friends?
  - Has there been anything going on in your community that has had an impact on your life? Can you tell me a bit more about that?
33. Are you co-parenting, or sharing parenting responsibility, with anyone else? If yes, who?
- How would you describe your relationship?
  - How do you divide parenting responsibilities? Who takes care of what for your child(ren)?

#### **Housing**

34. What kind of housing situation are you in currently? Has your housing situation changed since our last interview?
- Are you living on your own? With others?
  - In an apartment or house?
  - What was it like for you to find a place to live in your community?
  - How would you describe your current apartment/house?
35. How do you get where you need to go (e.g., for appointments, for shopping, etc.)?
36. What kind of place do you envision living in by this time next year? In 5 years time?

#### **Education**

37. The last time we met, you told me you were [summarize what they said (e.g., enrolled in school; had completed school; planning on starting a new education or training program)]. Has anything changed with regard to your current education program or education plan since we last met?
- Are you currently attending classes anywhere (e.g., high school, college, university) or doing a trade apprenticeship? Tell me about that.
  - Have you thought about continuing your education and training since our last interview? Please tell me what kinds of training you are thinking about.
  - Where is the school/program that you're interested in located?
  - How much does it cost?
  - Do you have access to financial support (e.g., student loans, financial help from family or your partner, savings)?

#### **Economic Issues and Employment**

38. Since we last met, have there been any changes in the financial situation for you and your child(ren)?
- Do you have enough money to make ends meet?
  - How do you manage to pay your rent, buy food, etc.?
  - What kinds of jobs do you think you are currently able to take on at this point in your life? By this time next year? In the next 5 years? Once your child (children) goes to school?
  - If you're currently receiving some form of financial assistance, what program are you receiving it from (e.g., income assistance/welfare, employment insurance)?

### **Childcare**

39. Have there been any changes in what you do for childcare since our last interview?
40. When you need childcare or babysitting, what do you do?
- How does this relate to your being in school, working or having a social life?
41. Do you receive any kind of subsidy for childcare?

### **Health**

42. Has anything changed in terms of your personal health since we last met?
43. Having time to care for your own health can be a challenge when you are a parent. How do you manage this?
44. What kinds of things do you do to take care of your health (e.g., exercise, personal time, etc.)?
45. What kinds of things would you like to do to take care of your health but are not able to?
- Why is that (e.g., not enough time or money; no childcare, etc.)?
  - What do you need in order to be able to do these things?
46. What about your child(ren)'s health? Have there been any changes to her/his/their health since our last interview? Please tell me about that.

### **Information**

47. What kinds of information technology devices, if any, do you use? (e.g., laptop or desktop computer; tablet; phone)? Do you use different devices for different purposes/activities? (If so, why?)
48. Do you use any social media sites, platforms or apps? Which ones? (E.g., Facebook, Twitter, Instagram, Ask.fm, Tumblr, any blogging sites or wikis, etc.) I'd like to talk specifically about your use of [social media X]: How many accounts do you have? What do you use them for? What do you like/dislike about it? Do you do anything in particular to manage your privacy online?

49. If you are involved with any support programs for young people or parents (in person or online), how did you find out about these programs? (Examples of programs include: YPP, youth/young adult agreements, Employment Insurance, child tax credit, youth employment centres, subsidized housing or childcare, MSP assistance, or Healthy Kids BC, etc.)
- How/where did you apply or enroll in these programs (online or offline on paper or in person)? Did anyone help you with this process?
  - Did you ever look up information online about a program, or apply for a program online? (If not already discussed)

### **General**

50. What are the biggest barriers or obstacles to you in terms of:
- Parenting skills?
  - Staying in school?
  - Working and/or financial support?
  - Housing?
  - Being healthy?
51. What are some of the good things that have taken place for you as a young mother since we last met? Please tell about some of the best parts of being a parent.
52. What do you think is important for us to know about the experiences of young parents living in your community? Are there further insights you would like to share (e.g., any opinions, feelings)?

## **A.4 Follow-Up Interview Guide 2: Young Mothers**

### **Part A: Open-Ended Questions**

#### **Opening Discussion**

53. Please tell me what has been going on in your life as a parent since we last met.
- What has changed for you since our last interview?
  - Have there been any changes in your relationships with your partner, family, or friends?
  - Has there been anything going on in your community that has had an impact on your life? Can you tell me a bit more about that?
54. Are you co-parenting, or sharing parenting responsibility, with anyone else? If yes, who?
- How would you describe your relationship?
  - How do you divide parenting responsibilities? Who takes care of what for your child(ren)?
  - What is it like balancing parenting and other aspects of your life with being in a relationship or dating someone?
  - If you are co-parenting with an 'ex', how do you negotiate their new dating/relationships? How does this affect you and/or your child?

#### **Housing**

55. What kind of housing situation are you in currently? Has your housing situation changed since our last interview?
- Are you living on your own? With others?
  - In an apartment or house?
  - What was it like for you to find a place to live in your community?
  - How would you describe your current apartment/house?
56. How do you get where you need to go (e.g., for appointments, for shopping, etc.)?
57. What kind of place do you envision living in by this time next year? In 5 years time?

#### **Education**

58. The last time we met, you told me you were [summarize what they said (e.g., enrolled in school; had completed school; planning on starting a new education or training program)]. Has anything changed with regard to your current education program or education plan since we last met?
- Are you currently attending classes anywhere (e.g., high school, college, university) or doing a trade apprenticeship? Tell me about that.
  - Have you thought about continuing your education and training since our last interview? Please tell me what kinds of training you are thinking about.
  - Where is the school/program that you're interested in located?
  - How much does it cost?
  - Do you have access to financial support (e.g., student loans, financial help from family or your partner, savings)?

### **Economic Issues and Employment**

59. Since we last met, have there been any changes in the financial situation for you and your child(ren)?
- Do you have enough money to make ends meet?
  - How do you manage to pay your rent, buy food, etc.?
  - What kinds of jobs do you think you are currently able to take on at this point in your life? By this time next year? In the next 5 years? Once your child (children) goes to school?
  - If you're currently receiving some form of financial assistance, what program are you receiving it from (e.g., income assistance/welfare, employment insurance)?

### **Childcare**

60. Have there been any changes in what you do for childcare since our last interview?
61. When you need childcare or babysitting, what do you do?
- How does this relate to your being in school, working or having a social life?
62. Do you receive any kind of subsidy for childcare?

### **Health**

63. Has anything changed in terms of your personal health since we last met?
64. Having time to care for your own health can be a challenge when you are a parent. How do you manage this?
65. What kinds of things do you do to take care of your health (e.g., exercise, personal time, etc.)?
66. What kinds of things would you like to do to take care of your health but are not able to?
- Why is that (e.g., not enough time or money; no childcare, etc.)?
  - What do you need in order to be able to do these things?
67. What about your child(ren)'s health? Have there been any changes to her/his/their health since our last interview? Please tell me about that.

### **Ageing Out**

68. Some government and non-profit programs in BC base require their clients to be a certain age in order to qualify for services. There can be both benefits and drawbacks to this. Are there any programs that you are a part of that have specific age requirements, either for you or for your children?
69. Please tell me about your experiences with these kinds of age-related eligibility requirements.

### **General**

70. What are the biggest barriers or obstacles to you in terms of:

- Parenting skills?
- Staying in school?
- Working and/or financial support?
- Housing?
- Being healthy?
- Relationships?

71. What are some of the good things that have taken place for you as a young mother since we last met? Please tell about some of the best parts of being a parent.

72. What do you think is important for us to know about the experiences of young parents living in your community? Are there further insights you would like to share (e.g.,any opinions, feelings)?

## A.5 Information World Mapping Guide and Handout

### Interview Guide: Information World Mapping Exercise

- We've talked some about specific examples of times you've needed health information, gotten health information you didn't want, served as a health information source for someone else, and used health information in making a decision.
- Another thing that we're trying in this study is that we're asking people if they could draw what we're referring to as their "health information world."
- In other words, to put yourself on this piece of paper, and then draw in the people and places and things in your life that provide *health* information to you or receive *health* information from you.
- Different people draw this in different ways, and there's no right or wrong way to draw your information world.
- Things you might want to include in your information world:
  - sources for information you look to when you have a *health* question
  - sources of *health* information you get whether you were looking for it or not
  - people you share information with, or give information to
  - people, places and things that help you understand or use information
  - ways you store or retrieve information
  - places – physical or virtual – where these information activities take place

You take a few minutes to draw this, and then I'm going to ask you to tell me about what you drew, and whether it is okay with you if I keep your map to use in our study.

### Handout: Health Information World Mapping

In this activity, we are asking people to draw what we're referring to as their "health information world."

In other words, to put yourself on this piece of paper, and then draw in the people and places and things in your life that provide health information to you, receive health information from you, or help you use health information.

Different people draw this in different ways, and there's no right or wrong way to draw your information world.

**Things you might want to include in your information world:**

- How and where you **look for** information when you have a health question
- How and where you **receive** health information you're not necessarily looking for
- People you **share** health information with, or give information to
- People, places and things that **help you understand or use** health information
- **Sources** for health information you want, as well as information you don't want
- Ways or places you **store** or **remember** information for later
- Places – physical or virtual – **where you do things** with information

You can describe what you are doing while you draw, or do it without talking.

After about 10 minutes, I will ask you to tell me about the information world you drew.

## Appendix B **Supplemental Materials for Health-Related Everyday Life Information**

### **Seeking Research: A Scoping Review of the LIS**

#### **B.1 Database Searches**

Database (Vendor): LISTA: Library, Information Science, and Technology Abstracts (EBSCO)

Date searched: 2 August 2014

Search string: DE "INFORMATION-seeking behaviour" AND ( health OR medical OR illness )

Limits: Limited to scholarly (peer reviewed) journals

Results: 216

Database (Vendor): LISA: Library and Information Science Abstracts (ProQuest)

Date searched: 2 August 2014

Search string: SU.EXACT("Information seeking behaviour") AND (SU.EXACT("Occupational health and safety") OR SU.EXACT("Consumer health information") OR SU.EXACT("Mental health") OR SU.EXACT("Health and safety") OR SU.EXACT("Environmental health") OR SU.EXACT("Health") OR SU.EXACT("Child health") OR SU.EXACT("Health care") OR SU.EXACT("Alternative medicine") OR SU.EXACT("Medicine"))

Limits: Limited to peer reviewed

Results: 119

Database (Vendor): Library Literature & Information Science with Full Text (EBSCO)

Date searched: 4 August 2014

Search string: ( (DE "Information-seeking behaviour" OR DE "Information-seeking strategies") )

AND ( health OR medical OR illness )

Limits: Limited to scholarly (peer reviewed) journals

Results: 89

## **B.2 Data Extraction Template Fields**

1. RefWorks database accession number
2. Authors
3. Title
4. Journal title
5. Publication year
6. Primary author country (current affiliation)
7. Research question
8. Study population size (numerical)
9. Population age range (numerical)
10. Population age category (child/adolescent/young adult/adult/senior)
11. Population sex distribution (% female)
12. Population sex category (balanced=within 45/55%; overrepresentation = 56-69%; mostly=70-99%; all)
13. Population geographic location
14. Population health condition
15. Population other description
16. Health issue/disease of interest
17. Data collection method
18. General study methods (qualitative/quantitative/mixed/review)
19. Analysis method
20. Theory/models
21. Incorporation of context

## Appendix C Ordered Situational Map of Young Parent Health Information Worlds

<p><b>Individual Human Elements/Actors</b></p> <p>Young mothers and fathers  Teachers  Youth workers  Daycare staff  Social workers  Public health nurses  Doctors: GPs and specialists  Midwives  Doulas  NGO young parent support workers  (Grand)parents  Older parents and community “grandmas”  Non-parent students  Pre-baby friends  Children</p>	<p><b>Collective Human Elements/Actors</b></p> <p>Young Parent Programs  Secondary schools  Daycares  Clinics (youth, sexual health, perinatal health, walk-in, etc.)  Ministry of Child and Family Development  Neighbourhood Houses and Community Centres  Health Authorities  Health professional orgs (e.g., CMBC, DONA, Doctors BC)  Subsidized housing (BC Housing and others)  Postsecondary education institutions  Mass media (e.g., MTV, news)</p>
<p><b>Nonhuman Actors/Elements</b></p> <p>The Internet  Smartphones  Diaper bag/baby supplies  Youth Agreements and Agreements with Young Adults  School paperwork: IEPs, Report Cards, etc.</p>	<p><b>Implicated/Silent Actors/Actants</b></p> <p>Babies/children  Absent co-parents (usually fathers)  “The taxpayer”</p>
<p><b>Discursive Construction of Individual/Collective Human Actors</b></p> <p>Teen mothers as ignorant, promiscuous, femme  Teen dads as uninvolved  Young mothers as victims of older men  Teen parents as “write offs” (value transfers to their children)  Children of young parents as disadvantaged  Doctors as top medical experts  “Good mothers” as compliant with scientific/medical advice  Mothers as “natural” parents with instincts  Social workers as nosy, nitpicky and overworked  Social workers as helpful allies and counsellors</p>	<p><b>Discursive Construction of Nonhuman Actants</b></p> <p>Traditional cultural practices as unscientific  Formal secondary education completion as necessary for good life/ability to self-support  Medical intervention (e.g., epidurals) as sensible relief  Natural childbirth as noble  Firsthand childcare experience as inadequate for parenting proficiency  Information and Communications  Technology as confusing, dangerous, normless  Information and Communications  Technology as valuable, democratic, educational  Print health information materials as boring, unused</p>

<p><b>Political/Economic Elements</b>  Affordable housing crisis in the region  Provincial teacher strikes and lockout  Local/Provincial services allied with harm reduction models  Provincial education agenda focused on vocational training endeavours  Federal/Provincial government austerity environment  Federal/Provincial privatization emphasis</p>	<p><b>Sociocultural/Symbolic Elements</b>  Madonna/whore dichotomy:  Mothering as noble, pure  Sex as dirty, slutty, losing value/virtue (for girls)/emotionless conquest (for boys)  “Born digital” millenials</p>		
<p><b>Temporal Elements</b>  “Ageing out” of services and support  Time management among work, school, parenting  Young parents’ own adolescent developmental trajectories  School year/academic schedules</p>	<p><b>Spatial Elements</b>  Transportation and public transit  Adequate, safe housing for young families  Mainstreaming versus separated alternative education</p>		
<p><b>Major Issues/Debates</b>  Definition of “at risk” and “vulnerable”  “Involved fatherhood” versus mother-only policies (e.g., “no spouse in the house” rules)  Provincial/regional debate around services to former youth-in-care  Harm reduction and low/no-barrier services vs abstinence models</p>	<p><b>Related Discourses (Historical/Narrative/Visual)</b>  “Welfare queen” discourse  Sexual abstinence as moral/ideal  Unwed mothers (and the need to hide/separate them from other young people)  “Babies having babies”</p>		
<p style="text-align: center;"><b>Other Key Elements</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> “Teen Mom” style “reality” entertainment  Immigrant settlement  Mental health care (and lack thereof)</td> <td style="width: 50%; border: none;"> Poverty  Racialization</td> </tr> </table>		“Teen Mom” style “reality” entertainment Immigrant settlement Mental health care (and lack thereof)	Poverty Racialization
“Teen Mom” style “reality” entertainment Immigrant settlement Mental health care (and lack thereof)	Poverty Racialization		