

THE EFFECT OF A FAMILY LIFE EDUCATION PROGRAM  
ON NON-DIRECTED INFORMATION BEHAVIOR OF FIRST-TIME PARENTS

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**Dedication**

To my family

## Abstract

**Objective:** This dissertation investigated the effect of a family life education program on the subsequent information behaviors of first-time parents. Information behavior can occur both intentionally and incidentally, and through routine and non-routine sources. This study aimed to examine the hypothesis that participation in the educational intervention would increase the information behavior of participants, as indicated by reporting the use of a wider variety of information resource types. The study also examined the potential moderating effects on information behavior by education, income, parenting stress, child temperament and characteristics, and social support networks.

**Method:** The sample for this experimental intervention study included 132 cohabiting or married couples who were expecting their firstborn children at the time of enrollment. Participants were randomly assigned to either the control or intervention group. Data for these analyses were collected around the children's first birthdays. Dependent variables were calculated from participants' self-reported use of different information resource types over the previous year. ANOVA was utilized to examine between-groups differences in total information sources, routine information sources and non-routine information sources. Potential moderating variables were measured utilizing the Parenting Stress Inventory, the Infant Characteristics Questionnaire, and the Social Support Network Inventory. Hierarchical regression served to identify potential moderation of the effect of the intervention on the dependent variables.

**Results:** Participation in the educational intervention was found to increase total information behavior and non-routine information for both mothers and fathers, and to increase routine information behavior for fathers. Moderating effects of income, parenting stress, infant temperament and social support were not identified, but level of education was found to moderate the effect of the intervention on routine information source use by fathers.

**Conclusions:** Results indicate that the educational interventions can increase the variety of resource types used by participants seeking parenting- or pregnancy-related information. Additionally, findings suggests that fathers in particular may be motivated to seek out additional information sources, perhaps from the normalizing experience of talking with others about being a parent and adjusting to children.

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## **Chapter 1: The Proposal**

### *A. Specific Aims*

The purpose of the proposed study is to determine whether participation in a parent education program can promote non-directed information behavior, i.e., the use of additional information resources beyond those provided in the program curriculum. Researchers investigating information behavior seek to identify and describe how individuals find and acquire information, particularly when confronted by changes, concerns or questions. Information acquisition can be routine, i.e., a result of an individual's normal activities or interactions, or non-routine, i.e., a result of intentional seeking of specific information (Griffin, Dunwoody, Neuwirth, 1999). In the proposed study, participants in the educational program were engaged in non-routine information behavior, as they transitioned to parenthood for the first time and sought the information provided from a non-routine source. Life transitions such as this produce an information gap between previous experience and future responsibilities. Educational programs attempt to fill this type of gap through structured curricula and assessment of learning from those curricula. The proposed research is unique in investigating a potential secondary effect of parent education programs, that is, whether participants are more likely independently to access a broader variety of routine and non-routine informational resources than non-participants.

The Parenting Together Project, the source of data for this study, was an educational program for expectant parents. One-hundred-sixty-five expectant couples

were recruited for the project, and randomly assigned to intervention and control groups. Participants in the intervention group attended eight educational sessions; four delivered prenatally and four delivered during the second through fifth months after birth. The availability of a control group of non-participants, all of whom were initially willing to participate in the complete educational program, provides opportunity for determining whether the educational program itself influenced independent information seeking by the participants.

Research on information behavior primarily focuses on methods of information seeking, barriers to and simplifications of the process of information seeking, or the evaluation and application of information once identified. While these studies help to explain methods for improving efficiency of information transfer, they do not address the potential for family life education to stimulate and promote independent information seeking behavior by program participants. Evaluation studies of family life education programs primarily focus on either the quality of delivery of the material or on the long-term impact of the specific material presented on targeted behaviors or relationships. These family life education studies have not addressed whether the educational activity increases the use of additional informational resources by participants.

The rationale for the study is that information acquisition by individuals occurs both purposefully and incidentally in adult education experiences (Williamson, 2005), that individuals engage in information seeking to reduce uncertainty (Stefanone, Hurley & Yang, 2013), and that individuals are exposed to meaningful information through routine and non-routine sources (Griffin, Neuwirth, Dunwoody, & Giese, 2004). In the

case of the current study, participants purposefully sought out the non-routine information resources of the educational program because it directly related to their experiences of pregnancy. The experience of attending a parent education program, in itself, could motivate parents to access additional non-routine information sources, or take advantage of routine resources they already had. Studies have found that the act of participation in a parent education program promotes information seeking through participation in additional education programs (Spoth & Redmond, 1995; Spoth, Redmond & Shin, 2000). Further, the project curriculum included a session where the facilitators identified resources available outside of the curriculum and elicited resource ideas from the participants themselves. As a result, parents in the program were exposed, incidentally, to additional non-routine information.

On the other hand, since all volunteers for the Parenting Together Project were presumably interested in additional information about parenting, the control group, who were randomly assigned not to get the intervention, might conceivably be motivated to seek out additional information because a) they were already planning to do so, or b) their disappointment in not receiving the intervention might motivate them to seek out more information. However, there is enough research on the effects of educational interventions on participants' information behavior to justify the following hypothesis:

- 1. Participants in the parent education program will engage more routine and non-routine information resource types than non-participants.*

If participation in the parent education program is associated with identification and use of additional information resources, then it would be useful to practitioners to

know if the effect is consistent across participants. Higher levels of income and education have been associated with more sophisticated information seeking skills, which exposes the seeker to a broader variety of resources (Rothbaum, Martland & Janssen, 2007). Studies on participation in relationship education programs have found relationships between participation, income and education, as well as age and ethnicity (Sullivan & Bradbury, 1997; Stanley, Amato, Johnson & Markman, 2006). If participation in the educational program is associated with routine and non-routine information behavior, the effect of the intervention may be greater for participants whose education and experience previously prepared them to recognize and utilize both routine and non-routine information. Conversely, individuals with lower educational achievement and lower income may benefit from the educational intervention and report greater information behavior as a result. While existing research indicates that greater income and higher education are associated with more robust information behaviors, it does not indicate how they might moderate the effect of an educational intervention on subsequent information behavior. Therefore, I propose the following non-directional hypothesis:

2. *Education and income will moderate the effect of the educational program on parents' use of routine and non-routine information sources.*

Uncertainty reduction theory suggests that individuals seek information to address their feelings of uncertainty, and that the threshold of information sufficiency varies between individuals (Berger & Calabrese, 1975). Deutsch, Ruble, Fleming, Brooks-Gunn and Stangor (1988) found that pregnant women

sought significantly more information about the transition to motherhood than did a comparison sample of women who were planning on becoming pregnant. The increased complexity of expectations regarding parenting leads expectant parents to spend more time thinking and seeking information about parenting (Pancer, Pratt, Hunsberger & Gallant, 2000). Expectant and new parents have an immediate impetus for seeking information regarding their children, and may seek information that supports and informs their pursuit of those roles, thus filling a “gap” in their information needs (Wilson, 1999).

Researchers in health care have found that individuals are more likely to seek out information when they are directly impacted by a medical diagnosis (George, 2005; Davison et al., 2002; Garvin et al., 2003; Hoskins & Haber, 2000). Parents also have been found more likely to seek out parenting skills information when they think that improving their knowledge can overcome susceptibility in their children for problematic behaviors (Redmond, Spoth, Shin & Hill, 2004, Spoth & Redmond, 1995). This suggests that expectant parents may be driven to seek information. If feelings of parental stress are associated with uncertainty about the child or the parent’s role, it would promote greater information seeking behavior. Similarly, parents who perceive their children to have more challenging temperaments may be more motivated to seek information addressing that challenging behavior, as they are directly impacted by that behavior. Alternatively, parents might find these situations to be obstacles to seeking information, as their attention is captured elsewhere. While existing research

suggests that difficult child temperament and greater parenting stress might promote information behavior to address parents' concerns, it does not provide guidance on how they might moderate the effect of an educational intervention on subsequent information behavior. Therefore, I propose the following non-directional hypothesis.

3. *Infant temperament and parenting stress will moderate the effect of the educational program on parents' use of routine and non-routine information sources*

As noted previously, individuals seek out additional information sources in order to fill a "gap" in their knowledge or understanding, as might occur during the first transition to parenthood (Wilson, 1999). There is evidence that such information seeking may be influenced by individuals' social support networks. Walker (1996) suggests that social support "can be broadly defined as the provision of assistance to others to maintain well-being or promote adaptations to stressful life conditions" (p. 7), such as the period of transition to parenthood experienced by parents in the proposed study. Moroney (1987) and Weiss (1987) suggest that parents' social support networks be included in program design, given their influence on participation and effect. Studies of program participation have found that social support correlates with both program selection (Crockenburg, 1986) and participation (Unger & Wandersman, 1988). Powell (1984) found that individuals with smaller social support networks may place more value on those routine or informal sources of information than they do on

non-routine or formal sources. Similarly, Birkel and Reppucci (1983) found that women with denser social networks and more kin contact attended parent groups less frequently than those with less dense networks and less contact with kin. This suggests that participants with more social support may be more likely to use routine information sources, and those with less social support may be more likely to seek non-routine information sources. Although existing literature indicates that closer, denser social networks are associated with greater routine information behavior and less non-routine information behavior, it does not provide guidance on how social support might moderate the effect of an educational intervention on subsequent information behavior. Therefore, the fourth hypothesis is also non-directional:

4. *Social support will moderate the effect of the educational intervention on parents' use of routine and non-routine information sources.*

## *B. Background and Significance*

### *Overview of Family Life Education*

Family life education can be described as “prevention science” (Coie et al, 1993, p. 1013). It often serves to provide families with research-based education in order to prevent dysfunctional interpersonal relationships. Family life education is a specific intervention at a place and time that is relevant to the family, such as Jane Addams’ work at Hull House which provided educational opportunities to immigrant families in the middle of their community (Youcha, 1995), or the aforementioned Parenting Together Project. This type of in situ education is based on the needs of families, both felt and developmental (Avery & Lee, 1964, Hennon & Arcus, 1993). In practice, the goal of the family life educator is “to strengthen and enrich individual and family well-being” by providing information (Thomas & Arcus, 1992, p. 4).

Hughes (1994) proposes a four-tier framework for family life education. At its foundation is the concept of content, which includes theory, research, context and practice. The instructional process tier of the framework is the point where research-based concepts are prepared for presentation. The next step is the implementation process, which is followed, finally, by evaluation. Hughes notes the need not only to evaluate quality of delivery and meeting of objectives, but also to measure the impact of the educational intervention on the participants. According to this framework, quality family life education requires that programs be research based, even if they are not fully research proven.

Thus the family life educator, ultimately, strives to impart trustworthy information to participants in an educational program. Given the time delimited nature of many psycho-educational programs used by family life educators, additional information will be available to participants outside of the content of the curriculum itself. Educational programs often draw their content from specific curricula that do not include an intentional focus on encouraging participants to identify, share and access resources. As a result, evaluations of these programs analyze the process of delivery or outcomes specifically related to course content, but do not identify additional information seeking by participants.

The concept of promoting information seeking behavior through psychological services has been around since the 1960s. Krumboltz and Thoreson (1964) found that reinforcement behaviors from counselors promoted information seeking behaviors, and that group and individual settings were not dissimilar in their effectiveness. Samaan & Parker (1973) studied the effect of behavioral reinforcement counseling on information seeking behavior, finding significant correlations between verbal inquiries from the participants and eventual information seeking outside of the psycho-educational program. The present study continues the investigation of the relationship between psycho-educational programs and the promotion of information seeking behavior.

Common topics of recent studies of family life education include promotion of changes in parenting style and behavior, such as improving father involvement with children (Levant & Doyle, 1983; McBride, 1990; Hawkins, Lovejoy, Holmes, Blanchard & Fawcett, 2008; Fagan, 2008), evaluation of the efficacy of the program (Sandifer,

2008; Anderson, Kohler & Letiecq, 2004; Pehrson & Robinson, 1990, de Graff, Speetjens, Smit, de Wolff & Tavecchio, 2008), or factors affecting participation in family life programs (Ballard & Morris, 2005). Studies of parent education programs have also analyzed long term child outcomes through encouraging parents to think of themselves as teachers (Pfannenstiel & Seltzer, 1989) or by reducing the negative effects of marital conflict (Faircloth & Cummings, 2007).

Marital conflict is another common topic in current research on family life education. Recent studies have investigated the efficacy of relationship-focused educational interventions, as well as the duration of impact from the curricula (Butler & Wamper, 1999; Halford, Sanders, & Behrens, 2001; Stanley, et al, 2003). The literature also includes evaluations of relationship education programs for teens (Gardner & Boellard, 2007; Gardner, Giese, & Parrott, 2004), and of premarital prevention programs (Stanley, et al., 2001; Carroll & Doherty, 2003). These studies were designed to evaluate the effectiveness of the information in specific curricula as designed. Similar studies have focused on the implementation of educational theory and delivery (Christopher, Dunnagan, Duncan & Paul, 2001; Gorman & Balter, 1997; Halford, Moor, Wilson, Farrugia & Dyer, 2004). In every case, these research studies evaluate a specific content set and do not address the use of additional resources from outside an established curriculum or theory.

#### *Overview of Information Behavior Research*

The topic of information behavior describes the way individuals recognize and acquire new information, and includes unintentional information exposure and intentional

information seeking. Information seeking is a process wherein individuals attempt to expand their knowledge or understanding about a topic or issue. The behavior occurs “when an issue is relevant to problems an individual faces” (Davis, 2012, p. 670), such as needing to learn more about digital safety issues as children increase Internet use. A basic understanding information seeking behavior involves the following basic assumptions: “(a) individuals are active information seekers and initiate source selection, (b) information source use is goal directed, (c) individuals select different sources to fulfill felt needs, and (d) multiple sources satisfy individual informational needs and any one source must compete with others for this need satisfaction” (DeLorme, Huh & Reid, 2011, p. 769).

The understanding of information seeking behavior has benefited from research in a number of disciplines, such as business management, computer science, healthcare and medicine, library science, psychology and religious studies (Afifi & Weiner, 2002). It also has been highlighted in recent literature on interpersonal communication. Baldwin and Hunt (2002), for example, propose a three dimensional model of interpersonal communication that includes axes of interpersonal, intergroup, and intercultural communication in a model intended to improve understanding. Knobloch and Solomon (2002) suggest that information seeking serves to reduce uncertainty in close, personal relationships. Afifi, Dillow and Morse (2004) found that seeking information about a potential romantic partner depends on factors such as issue importance, anxiety, and perceived efficacy. Morrison (2002) reviewed the literature on information seeking in employment settings specifically related to those seeking feedback and to new arrivals in

the organization. These articles focus on information seeking behavior in interpersonal interaction, rather than coping with problems or transitions. They do, however, highlight an important concept at the heart of information seeking behavior: the reduction of uncertainty through the acquisition of additional information.

Although much of the existing research on uncertainty reduction and information seeking has focused on interpersonal relationships, a perceived need for filling gaps in knowledge and reducing risk also drives information seeking behavior in the context of health issues. Lambert & Loiselle (2007) suggest that the concept of health information-seeking behavior (HISB) is only partially defined and is not universally used in the health behavior literature. The authors suggest that studies frequently use the term “information-seeking behavior,” and “health” is often assumed because of the topic. They note three contexts in the literature relating to HISB: coping with a health-threatening situation, participation and involvement in decision making, and behavioral change and preventative behavior.

Health information-seeking often arises after the diagnosis of a serious or chronic illness, and research has focused on how individuals use health-related information to cope with those situations (Gage & Panagakis, 2012; Dillard, Shen, Robinson & Farrell, 2010; Davison et al., 2002; Garvin et al., 2003; Hoskins & Haber, 2000). In this context, researchers have worked to identify the type and amount of information sought, how it is obtained, and under what circumstances it is needed (Rees & Bath, 2001; van der Molen, 1999). HISB is seen to provide support for both problem-focused and emotion-focused coping (Shiloh, Sinai, & Keinan (1999). As with interpersonal communication, the

information seeking behavior serves to reduce uncertainty in a situation, specifically those with serious health implications.

Brashers, Goldsmith & Hsieh (2002) reviewed the literature on information seeking and avoidance in health contexts such as social support networks and provider-patient interactions. They note that information that assists with coping “is one form of social support that may be exchanged among members of a support network” (p. 260). Information in these contexts can be both actively sought and actively avoided, depending on levels of uncertainty. That is, information that reduces uncertainty will be acquired, but information that may increase uncertainty, either about the treatment or outcome, will be avoided. Additionally, individuals seem more likely to seek and value informational support from health care professionals and by other individuals who are experiencing or have experienced the relevant condition, rather than from family and friends.

The second context of HISB is participation in the decision making process. Seeking additional health information has been associated with increased participation and involvement in medical decision making. This includes patients wanting to understand the decision being made, wanting their views to be heard, and making final decisions on treatment (Beaver et al., 1996; Hack, Degner, Watson, & Sinha, 2006; Hashimoto & Fukahara, 2004). Studies have typically indicated that patients who prefer a more collaborative decision making process are more active in seeking out additional information (Davison et al, 2002; Hack, Degner & Dyck, 1994). However, patients seeking information may also be attempting to prepare themselves for future treatments,

rather than becoming involved in the decision making process (Czaja, Manfredi, & Price, 2003; Hashimoto & Fukuhara, 2004).

Lambert & Losille's (2007) third context involves behavior change or preventative behavior. HISB often serves as a first step in an individual changing behaviors or undertaking preventative behaviors (Budden, Pierce, Hayes, & Buettner, 2003; Fahrenwald & Walker, 2003; Shi, Nakamura & Takano, 2004). HISB has been identified as a significant factor in predicting the extent to which individuals decide to engage in healthy lifestyles (Burbank, Reibe, Padula & Nigg, 2002; Fahrenwald & Walker, 2003; Yu & Wu, 2005). HISB related to behaviors provides the individual with an understanding of alternatives, as well as a foundation from which to self-analyze one's own beliefs, values and judgments in light of additional information.

Evaluations of medically related information seeking behavior are often focused on specific diagnoses or conditions. Bussing, Gary, Mills & Garavan (2007) analyzed cultural differences in the information seeking behavior of parents whose children had been diagnosed with attention-deficit/hyperactivity disorder (ADHD). In a sample of 1,615 parents whose children had ADHD, the authors found that most parents considered themselves knowledgeable on the topic. However, evaluation of that knowledge indicated that African American parents were ten times less likely to have ever heard of ADHD and less than one-half as likely to indicate that they knew a lot about it, in comparison to Caucasian parents. African American parents were also more likely to attribute the condition to excessive sugar consumption, which is a notion not supported by scientific inquiry. The authors also note that levels of information seeking varied with parents'

level of concern about the child's condition, with parents whose child had been professionally diagnosed being more informed and knowledgeable. African American parents were also found to be less likely to know about and partake in school-based programming for ADHD. The authors suggest that demographic factors of parents and children may serve to inhibit information seeking, even after diagnosis.

George (2005) conducted qualitative interviews with first-time mothers. In interviews with 21 subjects, George found that they often felt pushed into information-seeking because of incomplete and conflicting advice, and their own frustration with their understanding of what was to come. The author notes that all of the women in the study felt unprepared for what to expect post-partum and that they "needed answers to questions" (George, 2005, p. 254). Many of the participants complained of too much information being delivered too quickly, and their inability to process it. As a result, they found themselves seeking information to answer questions that did not get answered prior to the delivery of the child. The author suggests that the similarity in the experiences of these new mothers indicates that nurses and practitioners need to find less overwhelming and more consistent ways of delivering information to expectant mothers.

Dillard, Shen, Robinson and Farrell (2010) investigated the information seeking behavior of parents whose newborn had received a positive screening result for cystic fibrosis. Half of the participants reported actively seeking information about their child's potential disease, most commonly from the Internet, pediatricians and family physicians. Of the sample, 31 percent reported passively receiving information from physicians, pediatricians or other sources. The authors found that parents with greater levels of

education were more likely to collaborate on questions for physicians, and that these collaborative questions resulted in parents acquiring more detailed and involved information about their children. They did not find a significant relationship between pre-clinic and in-clinic information seeking, although pre-clinic information seeking may be associated with the research skills that are part of higher education.

The topic of information seeking behavior is also of interest to scholars in the field of library and information science. Dervin and Dewdney (1986) connect the concept of information seeking with the concept of Sense-Making. They note that individuals enter libraries seeking information to create a new “Sense” of their situation. When librarians ask patrons “closed questions” regarding their inquiry, they offer specific alternatives that may provide a solution but to the wrong question. Many open questions fail similarly, as they guide the search for an answer based upon the librarian’s understanding of the need rather than on the patron’s intention. For example, a patron might ask “Do you have anything which gives details about large corporations?” A librarian might respond with an open question like “What corporations are you interested in?” This type of question guides the interaction, but does not help the librarian understand the patron’s information need. Dervin and Dewdney suggest that librarians can be most helpful to patrons by asking neutral questions, a subset of open questions that are designed to elicit a better understanding of the gap between a patron’s current understanding and the ultimate goal. Gross & Latham (2007) suggest that similar benefit can be found through increasing “information literacy” of students by increasing their knowledge of the resources in the library and how they work, which enables them to ask

better questions of librarians. The authors note that participants in their study who were most likely to need additional assistance are unlikely to see themselves as needing that assistance.

Research on information seeking behavior in library science often focuses on improving the library experience. Makani and WooShue (2006), for example, analyzed students' use of digital resources to help inform development of tools for the transition from physical to digital references. Wakimoto, Walker & Dabbour (2006) investigated the accuracy of an electronic referencing system and the perceptions of librarians and users regarding the validity of presented results. In these studies, the intent is to improve the resources available, rather than to identify participants' motivations for using them.

Research describing the Internet as a source for information also includes studies on facilitating information seeking. Byrnes, Kulick & Schwartz (2004) report on an educational intervention intended to increase the use of online health care information by professionals. Working with providers in medically underserved areas, the project provided clinicians with a computer and dial-up Internet access. The authors found that providing the resources necessary and additional training to the clinic professionals was associated with an increase frequency in conducting MEDLINE and Internet searches for work related information. Because of the increased casual use of the Internet, D'Alessandro and Dosa (1999) call for increased consideration to how medical personnel can serve clients through digital communications. They note that the Internet provides the opportunity for physicians and nurses to communicate more readily with parents, and to centralize information through digital electronic records. The authors also note that

development of online resources faces particular challenges in the health arena, as it must balance usability with privacy.

Disincentives to online information seeking have also been explored. Rains (2007) found that patients who did not trust their physicians were more likely to disregard online information as equally worthless. Similarly, trust in online resources to provide accurate information was found to be a predictor of online use and of perceptions of the utility of the information found. Individuals who distrusted information-oriented media, such as newspapers and magazines, reported being more likely to turn to the Internet first when seeking information. The author suggests that trust in the quality and accuracy of online information is essential to motivating people to go online.

Research on motivations for enrollment in parenting skills programs suggests that factors similar to those motivating health information seeking behavior also affect family life education programs. Spoth & Redmond (1995) proposed a model of parent inclination to enroll in parenting skills programs. Education, income family size, and child behavior problems were found not to act directly on the inclination to enroll but on intermediate perceptions of program benefits and of barriers to participation. Having more children and less income, for example, were both found to increase the perception of barriers to participation. Higher level of education was negatively related, in the model, to the perception of program benefits in spite of significant, positive correlations between the two factors. The authors suggest that, after controlling for other variables, individuals with higher levels of education may feel inclined to solve their own problems rather than seeking formal assistance. The only factor found to directly affect the

inclination to enroll in a parenting skills program was previous parenting program use, which also was related to higher perceptions of program benefit and lower report of barriers to participation. Subsequent research did not support the direct effect of past parenting program use (Spoth, Redmond & Shin, 2000).

In a study of formal and informal support seeking, Redmond, Spoth and Trudeau (2002) found that mothers were more likely to report seeking both types of support. The data also indicate that parents with higher levels of education are more likely to seek out formal support programs, and to seek out informal support from family, friends and members of the community. Higher levels of income were associated with lower levels of formal support seeking, which the authors suggest may be due to formal parenting support programs often targeting at-risk populations based on lower income levels or other community factors. Inconsistent with the findings of Spoth and Redmond (1995), the results of this study suggest that having more children is associated with a greater likelihood of seeking formal parenting support, possibly because “parents with more children may be more likely to face child-related problems” (Redmond, Spoth & Trudeau, 2002, p. 165).

Research based on Spoth and Redmond’s (1995) model has also found that parents’ perceptions of a child’s susceptibility to poor behavior can serve as a motivation for enrolling in a parenting skills course. Adults’ perceptions of their own parental efficacy have been negatively associated with perceptions of a child’s susceptibility to substance abuse (Redmond et al., 2004). These perceptions of a child’s susceptibility were associated with more positive appraisals of parenting program benefits. This

research also found mothers to be more likely to perceive themselves as efficacious parents, to perceive their child as susceptible, and to perceive benefits in the parenting skills program. The authors posit that fathers may be less likely to anticipate a problem and subsequently less likely to enroll in a parenting skills program designed to address that problem.

*Significance of the proposed research*

The background to the current study was the researcher's experience with coursework taken at the University of Minnesota during the pursuit of an Early Childhood Family Education (ECFE) parent educator's license. Through several graduate level courses, the concept of "information seeking behavior" was used to describe motivation for attending ECFE programming, that is, parents attend classes because they are seeking information about being good parents. Discussion of information seeking, however, did not range beyond the motivation to attend additional ECFE programs. As ECFE programs are not the sole source of parenting information, the question of whether participation in family life education can serve to promote independent information seeking behavior in parents outside of the educational experience remained unanswered.

The proposed study can add important knowledge about couples' information seeking behavior during the transition to parenthood. The study can also fill a gap in the parent education literature by demonstrating whether increased information seeking behavior is a byproduct of parenting classes for, at least, this population. This information also would be useful to program developers and family life educators as they continue to

develop and implement educational programming, particularly for new and expectant parents.

### *Conceptual Framework*

The theoretical foundation of the current study is human ecology theory, which holds that individuals and families exist within systems. More specifically, the theory is “concerned with interaction and interdependence of humans (as individuals, groups and societies) with the environment” (Bulboz & Sontag, 1993, p. 421). Typically, a family ecosystem model is illustrated by a series of concentric rings, with each ring being affected by the activity in the surrounding ring.

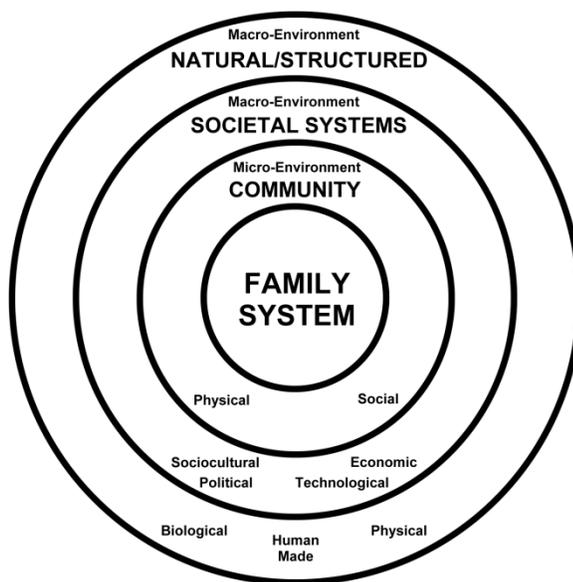


Figure 1: Standard family ecosystem model (Deacon & Firebaugh, 1981)

This perspective, however, obscures the interactions within the micro-environment of the family’s community. At any given point in time, a family may be interacting with several subsystems in the community, but not with others. Expectant parents, for example, will often be utilizing health care resources, but only a portion of

those parents will also be participants in the WIC program. In the current study, participants were interacting not only with health care providers and clinics, but also with researchers and educators. More importantly, they were interacting with other parents who were experiencing similar experiences and concerns.

Through these interactions with other parents, participants were exposed to concerns or issues previously unconsidered, and to information and resources they had not explicitly sought. Williamson's (2005) ecological model of information seeking and use serves to identify each participant couple's interactions with information resource in the micro-environment of their communities. Williamson (1998) suggests that information may be acquired through "incidental information acquisition," that is, through observation of one's surroundings, and may identify a need previously not recognized. Williamson's (1998) research into the ecological model suggests that "while respondents purposefully sought information in response to perceived needs, they also monitored their world, at least to some extent, and acquired information which they were not always aware that they needed" (p. 35).

Case (2002) and Wilson (2000) utilize the concept of "information behavior" to describe all human behavior regarding information sources and information use. This includes both active information seeking and "unintentional information gaining" (De Rouck & Leys, 2011, p. 55) that occurs through an individual's interactions with different systems. Griffin, Dunwoody and Neuwirth (1999) identify two channels of information behavior through which individuals acquire new information, based on how the information is acquired. Routine information acquisition occurs through normal activities

of an individual's day-to-day life, such as watching television or talking with friends. Non-routine information seeking occurs when individuals actively and intentionally seek out additional sources of information with which they do not normally interact, such as searching the Internet, calling a doctor, or purchasing topic-related books. For example, participation in the Parenting Together Project is a non-routine information channel in the context of the current study.

Interpersonal communication research, as described earlier, highlights the concept of information seeking as a tool for reducing uncertainty in interpersonal interactions. Uncertainty reduction theory (URT, Berger & Calabrese, 1975) was proposed to explain how people address the lack of information in initial interactions, and provides a framework for understanding how personal information serves to reduce relationship uncertainty. This social information seeking can be succinctly defined as the procurement of information about other people (Ramirez, Walther, Burgoon & Sunnafrank, 2002). Early research focused on how individuals solicit information or self-disclose in order to reduce interpersonal uncertainty (Kellerman & Berger, 1984). More recently, researchers have applied this framework to the use of social networking sites (Stefanone et al. 2013; Antheunis, Valkenburg, & Peter, 2010) and how computer-mediated communication provides an avenue for gleaning information about others. Uncertainty reduction can occur through both routine behavior, such as following comments in a Facebook newsfeed, or non-routine, such as engaging in a targeted search for information about the individual with whom the uncertainty exists.

URT is related to the concepts of risk reduction and information sufficiency, Griffin et al (1999) proposed the model of risk information seeking and processing (RISP) to describe the relationship between perceived hazards and information seeking behaviors. In their model, individual characteristics influence the amount of hazard associated with a perceived risk, and also influence the individual's "sufficiency threshold" at which enough information has been acquired to cope with the risk. Griffin, Neuwirth, Dunwoody, and Giese (2004) suggest that an information sufficiency variable might serve as a predictor of information seeking behaviors. This "sufficiency principle," as stated by Eagly and Chaiken (1993), "asserts that people will exert whatever effort is required to attain a 'sufficient degree of confidence that they have accomplished their processing goals' (p. 330). Although the concept of information sufficiency was introduced in the context of risk reduction, later review of the literature will demonstrate that the concept is also relevant to medical care and family transitions.

A similar framework for understanding motivations for information seeking is Dervin's concept of "Sense-Making" (Dervin & Dewdney, 1986; Tildine, 2005). Sense-making is well suited to explaining the "need" mentioned by Williamson (1998). While frequently used in the field of Library Information Sciences, the Sense-Making framework provides guidance for the effort of family life educators to encourage information seeking of participants. The Sense-Making model consists of four components (Wilson, 1999). A "situation" is an event that identifies the context in which the need for information arises. An "outcome" rests at the end of the Sense-Making process, and is separated from the situation by a "gap," which represents the difference

between the experienced situation and the desired outcome. Finally, a “bridge” serves as a means for closing the gap and resolving the situation. In the context of the current study, the situation was the first-time pregnancy of the participating couples. The unspoken outcome for each couple at the start of the Parenting Together Project was a successful transition to parenthood, including adapting to and meeting the needs of the soon-to-be born child. For these couples, one bridge between their situation and desired outcome was the provided parent education program.

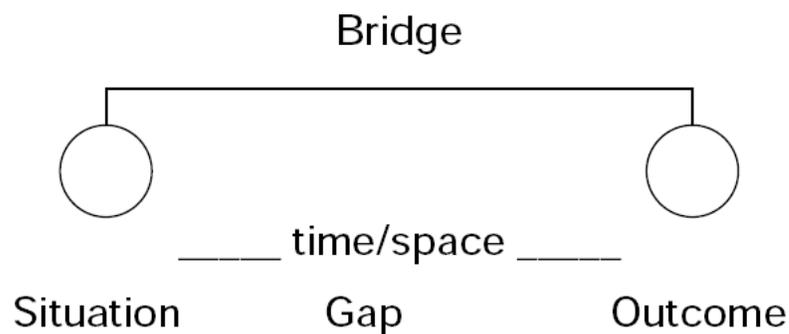


Figure 2: Dervin’s Sense-Making framework modified (Wilson, 1999, p.252)

Thus, the program provided by the Parenting Together Project provided participants with an outlet for purposeful, non-routine information seeking, as the structure of the curricula was explained to them before they committed to participate. The program also provided for incidental information acquisition through the unstructured sharing of resources, as well as through the intentional section of the curriculum that directly elicited community resource and information suggestions from the participants. For the purpose of this study, participants are expected to obtain information from program curricula directly related to their “gap” in information, i.e., their transition to

parenthood. It is also expected that interaction with other parent participants provides opportunity for additional and incidental information acquisition, which assists participants in identifying gaps in their information they may not previously have recognized. This is the foundation of the first hypothesis: that parents who participate in a parent education program will access a greater variety of additional information resources.

As noted earlier, patients engage in health seeking behavior often because of their own diagnosis (Davison et al, 2002; Garvin et al., 2003; Hoskins & Haber, 2000) or because of the diagnosis of a loved one or child (Dillard et al., 2010; Gage & Panagakis, 2012; De Rouck & Leys, 2011). Additionally, first time mothers may feel pushed into seeking information because of incomplete or conflicting advice received from physicians, family and friends (George, 2005). It is expected that, within the sample, the expectant mothers will be more likely than the fathers to seek out additional information. “Information literacy” (Gross & Latham, 2007) and education level (Redmond, Spoth & Trudeau, 2002) affect individuals’ ability and willingness to seek out information. This suggests that demographic variables that are associated with previous information seeking behavior, such as education and income level, are significantly related to reports of information seeking behavior. The demographic variables at the foundation of the second hypothesis are preexisting factors from before participation in the Parenting Together Project, but can be expected to influence the participants’ engagement in information seeking behavior. Thus, certain characteristics are expected to be more significantly related to subsequent information seeking behavior. This is the foundation

of the second hypothesis which proposes that women and individuals with higher levels of education and income will access a greater variety of resources.

If information seeking behavior is intended to fill a “gap” in an individual’s understanding, then those parents who perceive a greater need will have more motivation to seek out additional information (Dervin & Dewdney, 1986; Tildine, 2005). As the research on health information seeking behavior has shown, individuals seek out information when they perceive that there is a problem (Bussing, Gary, Mills, & Garvan, 2007). Parents’ perceptions of a child’s bad behavior have also been found to increase the likelihood that a parent will seek support (Spoth & Redmond, 1995). Therefore, it is expected that parents who feel more stressed by the experience and those who describe their children as “difficult” will seek out information that helps to either reduce their level of stress or to fill in the gap between their expectation of their child’s behavior and their experience. This is the foundation of the third hypothesis, which proposes that individual parents’ perceptions of their parenting experience will access a greater variety of information resources, particularly if the parent has a strong caregiver identity, if the parent views caregiving as stressful, or if the parent perceives a child’s temperament as problematic.

#### *D. Research Design and Methods*

##### *Sample*

Participants for the original study were recruited through a health maintenance organization’s obstetrical clinics. At the time of their enrollment in the study, all

participants were over age 18, married or cohabiting, in the second trimester of their pregnancies and expecting their first child (for both partners). Couples were informed that this was an educational research project that utilized a curriculum designed to increase father involvement and mother-father cooperation during the transition to parenthood. Recruitment efforts identified 165 eligible couples who were randomly assigned to the control or experimental group. The experimental group was randomly oversampled due to an expectation that the participant dropout rate would be higher in the experimental group. Initially, there were 95 couples in the experimental group and 70 couples in the control group. Nineteen percent of subject couples either did not complete all three stages of data collection (24 couples) or did not receive a complete delivery of the intervention curriculum (9 couples). As a result, the research sample for the current study will include 65 couples in the experimental group and 67 in the control group. Analysis of data from the first assessment indicated no significant differences between the couples that remained in the study and those that withdrew. (Doherty, Erikson & LaRossa, 2006) This was true demographically, as well as for research variables such as father attitudes and marital adjustment.

The 282 expectant parents included in this study are described in Table 1. Participants in their 20s and 30s make up 93.6 percent of the sample. Almost 86 percent of participants were Caucasian. The remainder included African Americans (3.9 percent), Hispanics (3.5 percent), Asian Americans (2.8 percent) and Native Americans (.7 percent). Seventy-five percent of the sample had earned undergraduate, graduate or professional

degrees. Over 70 percent were employed in white collar jobs, such as managerial or professional specialties, technical, sales or administrative support.

Table 1.1

*Sample Demographics at Initial Assessment*

	<i>Mothers</i>		<i>Fathers</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
<i>Age</i>				
<20	1	.7	0	0
20-29	65	46.1	47	33.3
30-39	71	50.4	81	57.4
40-49	4	2.8	13	9.2
<i>Ethnicity</i>				
African American	2	1.4	9	6.4
Caucasian	125	88.7	117	83.0
Hispanic	5	3.5	5	3.5
Native American	0	0	2	1.4
Asian American	4	2.8	4	2.8
Other	5	3.5	4	2.8
<i>Education</i>				
High school	6	4.3	12	8.5
Some college	24	17.0	28	19.9
College degree	76	53.9	60	42.6
Graduate or professional degree	35	24.8	41	29.1
<i>Occupation</i>				
Managerial or professional specialty	65	46.1	66	46.8
Technical, sales or admin. support	36	25.5	33	23.4
Service occupation	10	7.1	7	5.0
Precision production, craft or repair	0	0	3	2.1
Operator, fabricator or laborer	0	0	6	4.3
Farming, forestry or fishing	1	.7	1	.7
Homemaker	5	3.5	0	0
Other	24	17	25	17.7

The high percentage of degree completion and white collar employment are reflected in the employment and income information for the participants. Over 81 percent of the couples in this study had household incomes of \$50,000 or more. Almost 28 percent reported incomes in excess of \$100,000. Additionally, over 67 percent of expectant mothers and 87 percent of expectant fathers in the sample reported working 40 hours or more per week. Thus, the sample for this study can be described as predominately white, college educated, gainfully employed and financially stable.

#### *Educational Intervention*

The curriculum evaluated by the original research project included eight educational sessions utilizing a curriculum developed by the research team. The first session was delivered individually in the couples' homes by the parent educators, with three additional classes taking place before the children were born. Four classes were held after delivery, approximately once a month. The classroom experience included mini-lectures on pertinent topics, group discussions, videotapes, skill demonstrations, role play and introduction to new-parent role models. Fidelity to the curriculum was evaluated by in-class observers who monitored, recorded, and summarized each workshop experience, and by checklists completed by the educators themselves.

The first session of the series was delivered individually in each couple's home. This session described the program, and focused on factors influencing expectations about parenting. Couples developed vision statements for their family, outlining their hopes for the future. The second session served to help couples recognize unrealistic expectations and their sources, and to begin working on safe and helpful couple

communication. The second session was the first time each group met collectively. The third session provided couples with further development of their communication skills, and started a discussion about the different caregiving skills of different individuals. The fourth session, the last to be held before childbirth, provided parents with information about infant communication, and couples were encouraged to recognize their own parenting competencies, as well as those of their partner. This session also included a focus on the couples' intentional plans to nurture their couple relationships and to share parenting responsibilities.

Approximately one month after the birth of their children, parents met again in groups – along with their infant children. The fifth session served to build connection between the participants as a supportive group of parents and led the parents to discuss the challenges of matching their co-parenting plan with real-life experiences. The sixth session provided an opportunity for parents to acknowledge the challenges of being parents, and also to provide support for one another. It also stressed the importance of family rituals and intentional living, building upon the family vision statements created in the first session. The seventh session focused on identifying concerns of the parents regarding their own relationship, co-parenting, and work-family issues, as well as the impact of families of origin on how people parent. This session also included a segment that intentionally solicited information from the participants regarding other information resources available, including community groups and online services. The final session of the series provided participants with information regarding other sources of social support, including other classes and their families. This session also provided

participants an opportunity to reflect on and discuss their relationships with their now six-month-old children, as well as reminding parents about their focus on their families' futures.

### *Measures*

Participants in the original research project completed a variety of scales and measures at three points in their pregnancies. The first was completed shortly after enrollment in the research project. A second was conducted at approximately 6 months after birth of their child, with the final survey conducted near the child's one-year birthday. Demographic data for the proposed study were collected at the first survey period and matched with data from the third survey, linking them with the measures to be used in the proposed study.

*Information behavior* will be measured by self-report of participants' use of routine and non-routine information resources. At the time of the third assessment, participants were asked to identify the different types of information resources utilized outside of the parent education program. This data identifies the types of resources utilized, but does not identify the total number of times a given resource type was used. That is, the data identify if participants report using books, but do not note the number of books read. Table 2 identifies the types of resource options presented to participants and classifies them as routine or non-routine.

Focusing on routine and non-routine information sources enables the analysis to differentiate between information acquisition that happens during participants' daily lives and information which they intentionally seek out. This will allow investigation into

whether workshop participation increased participant use of their routine resources and increased their seeking, identification and use of non-routine resources. The two summative variables represent the total resource types participants reported using, i.e., up to three routine resource types and six non-routine resource types.

Table 1.2

*Routine and Non-Routine Information Sources Identified by Participants*

Summative Variable	Included Resource Types
1. Routine	Television programs or video tapes Talking with Family or friends Church or faith community
2. Non-Routine	Additional pre- or post-birth classes Books Magazines Newsletters or Brochures Internet Resources Health-care workers (physician, midwife, nurse practitioner)

Focusing on routine and non-routine information sources enables the analysis to differentiate between information acquisition that happens during participants' daily lives and information which they intentionally seek out. This will allow investigation into whether workshop participation increased participant use of their routine resources and increased their seeking, identification and use of non-routine resources. The two

summative variables represent the total resource types participants reported using, i.e., up to three routine resource types and six non-routine resource types.

Additionally, a summative variable, consisting of the total of the nine resource types, will serve to indicate the overall breadth of the types of resources reportedly used by each participant. That is, a higher summative value indicates the use of a broader array of resources by the participant. This calculated variable will serve as the primary indicator of information seeking behavior by the participants in the sample. Information domain sub-scores will also be analyzed for exploratory purposes.

Additional survey variables were collected at the third assessment. These variables focus on the experiences of the new parents, rather than on demographic or other variables that pre-dated the pregnancy of the participant couples. These variables are described below.

*Parenting Stress* will be measured by the Parenting Stress Index (PSI; Abidin, 1997), which is based on the theory that levels of parental stress are a function of salient characteristics of both parent and child, and of situations that are directly related to the parental role. This scale consists of 120 items focused on identifying the potential for parental behavior problems and adjustment difficulties in the family system. The instrument asks participants to rate, on a five point Likert scale, their level of agreement with statements such as “My child is so active it exhausts me.” As the PSI is designed for use with pre-school children, a number of questions were not included the data collection due to their focus on a developmental state not yet attained by the infants of the participants. This left 87 items in the assessment questionnaire. Thus PSI scores for this

sample can range from 87 to 433. Cronbach alpha reliabilities were .9375 for mothers and .9442 for fathers.

Infant temperament will be measured by the Infant Characteristics Questionnaire (ICQ; Bates, Freeland & Lounsbury, 1979) is a 24 item measure containing four sub scales of infant characteristics. Parents' responses to these questions indicate their opinions of how fussy or difficult their infant is, how well the child adjusts to change, whether the child appears "dull," and how unpredictable the child is. Each item is a seven point Likert scale, with scores of one representing an optimal temperament, and of seven representing a difficult temperament. ICQ scale scores can range from 24 to 168. Cronbach alpha reliabilities were .82 for mothers and .81 for fathers.

Social support will be measured by the Social Support Network Inventory (SSNI; Flaherty, Gaviria & Pathak, 1983), an instrument designed to assess discussion support, practical help, emotional support and reassurance of self-worth." The questions were edited slightly to focus on support related to being a parent. Respondents were asked to rate their spouse, mother, father, boss (if employed) and one additional significant person, typically a friend or relative. Each item is a seven-point Likert scales, with scores of one representing the support by another and scores of seven representing the most support. Chronbach alpha reliabilities for the overall scale were .82 for mothers and .90 for fathers.

Demographic information was provided by participants self-report at the time of the first assessment. Age of participants was calculated based on the birth date of the participant at the time of enrollment in the project. Participants were asked to identify

their level of education from a list: grade school, high school, some college, a college degree or a graduate/professional degree. These answers were coded from one to six, with higher scores representing higher levels of formal education. Participants also identified their level of combined couple income by selecting from nine options in a list. The options started with “\$0 to \$9,999” and ended with “\$100,000 or more.” As with the educational variables, these answers were coded from one to nine, with higher values representing greater couple income.

### *Analyses*

There is dependency in the sample data, as participants in the *Parenting Together Project* were recruited as couples, not as individuals. In consideration of this issue, each of the following analyses will be conducted separately for mothers and fathers.

*Hypothesis 1: Participants in the parent education program will engage more routine and non-routine information resources than non-participants.*

Analysis of Variance (ANOVA) will be used to determine if significant between-groups differences in reports of information seeking behavior exist in this sample. The randomized assignment to the control or experimental group will serve as the factor identifying the groups for ANOVA. Analyses will be conducted separately with mothers and fathers, and on routine and non-routine information behavior separately.

*Hypothesis 2: Education and income will moderate the effect of the educational program on parents' use of routine and non-routine information sources.*

Hierarchical regression will be used to model the moderating effects of education and income on the relationship between program participation and routine and non-routine information behavior. This approach is appropriate for analyses where the moderator is a continuous variable and the independent variable is dichotomous (Baron & Kenny, 1986). Analyses will be conducted for each of the two dependent variables (routine and non-routine information behavior), and separately for each potential moderator. Regression on the effect of income will begin with participant's income and research group assignment in the first block, and will add an interaction variable (income x group assignment) in the second block. A significant interaction would indicate that income moderated the effect of the intervention on the dependent variable. Regression on the effect of education will begin with participant's level of education and research group assignment in the first block, and will add the interaction variable (education x group assignment) in the second block. A significant interaction would indicate that education level moderated the effect of the intervention on the dependent variable. Slopes of the regression lines will be examined to determine the direction of any significant interaction.

*Hypothesis 3: Infant temperament and parenting stress will moderate the effect of the educational program on parents' use of routine and non-routine information sources*

Hierarchical regression will be used to model the moderating effects of infant temperament and parental stress on the relationship between program participation and routine and non-routine information behavior. Analyses will be conducted for each of the two dependent variables (routine and non-routine information behavior), and separately for each potential moderator. Regression on the effect of infant temperament will begin with the participants ICQ score and research group assignment in the first block, and will add an interaction variable (ICQ x group assignment) in the second block. A significant interaction would indicate that ICQ scores moderated the effect of the intervention on the dependent variable. Regression on the effect of parenting stress will begin with the participants PSI score and research group assignment in the first block, and will add an interaction variable (PSI x group assignment) in the second block. A significant interaction would indicate that PSI scores moderated the effect of the intervention on the dependent variable. Slopes of the regression lines will be examined to determine the direction of any significant interaction.

*Hypothesis 4: Social support will moderate the effect of the educational intervention on parents' use of routine and non-routine information sources.*

Hierarchical regression will be used to model the moderating effects of participants' social support networks on the relationship between program participation and routine and non-routine information behavior. This approach is appropriate for analyses where the moderator is a continuous variable and the independent variable is dichotomous (Baron & Kenny, 1986). Analyses will be conducted for each of the two

dependent variables (routine and non-routine information behavior). Dependent variables for the analysis will include participants' summative SSNI scores, as well as the subscale scores for discussion support, practical help, emotional support and reassurance of self-worth. The initial analysis will include the summative SSNI score and research group assignment in the first block, and will add an interaction variable (SSNI x group assignment) in the second block. Regression analysis will be repeated for each of the subscale scores and their interaction variables. A significant interaction would indicate that the SSNI score, either summative or subscale, moderated the effect of the intervention on the dependent variable. A final regression equation will be tested including SSNI variables and interactions for which significant coefficient values have been identified previously. Results of this exploratory analysis will indicate which of the SSNI variables most significantly contributed to the moderation of the effect of the educational intervention on the dependent variables. Slopes of the regression lines will be examined to determine the direction of any significant interactions.

### *Limitations*

Data for the proposed study come from a non-random sample. Many of the participants were recruited through prenatal clinics in cooperation with a single health care provider in a single metropolitan area. The project sample is approximately 88 percent white, which is comparable to the 89 percent of Minnesotans who were white in 2000 but is not representative of the United States as a whole. Only 16.8 percent of the participants had incomes less than \$50,000 per year, and 28 percent had incomes of

\$100,000 or more. While 49 percent of participants had at least a college degree, only 6.3 percent had only a high school diploma or equivalent. These demographics suggest that the project sample was primarily urban/suburban, well educated, and had fairly stable income levels. Thus, generalizability of the findings of the proposed study is limited.

Data collected for the proposed project were collected through self-report questionnaires. This presents several potential limitations to analysis of the data. There is no way to know if participants actually accessed the information resources they reported. Self-report of parenting experience in the proposed study may be affected by experiences that were recent at the time of the third data collection. Responses to items on the Parenting Stress Index or Infant Characteristics Questionnaire might reflect recent negative experiences with the children, rather than a long-term experience of stress or problematic temperament. For example, a series of ear infections might result in temporarily increased stress or the perception that a child is fussy, which might bias participants' responses to questions.

The proposed study also is limited by the measures of information seeking behavior utilized. At the time of the data collection, there were no standardized scales for measuring information seeking behavior. To collect the data, a custom questionnaire was prepared. There is no national pool of data for comparing what was collected with previously collected data. Additionally, the questions themselves were designed to identify specific types of resources used; other resources utilized by participants might have gone unreported as they were not specifically identified. Finally, reflective reporting after a year of parenthood may miss resources forgotten, or ignored at the end of a long

questionnaire. An ongoing resource diary kept during that year might have provided more thorough information on the number of different information resources used by participants.

*E. Human Subjects Research*

Data to be used for this project were collected between 2000 and 2003 as part of a federally funded research project at the University of Minnesota. “An Intervention for the Transition to Fatherhood” was funded by a grant from the United States Department of Health and Human Services, Maternal and Child Health Bureau (Grant number R40 MC 00141-02). Data collection for the previously funded project was completed with approval from the Institutional Review Board at the University of Minnesota. As the data collection is complete and no additional information will be collected from participants, the current proposal will be submitted for expedited approval.

[This study was approved by the University of Minnesota Institutional Review Board on November 25, 2013, study number 1311E45843.]

## **Chapter 2: The Research Study**

Family life educators work to provide information and resources that improve the lives of and promote successful outcomes for the families they serve. At the same time, there are limits on how much information educators can convey. When parents have concerns outside the educator's expertise, or that are unique to their own situations, relevant information must be found elsewhere. One possible benefit of participation in a family life education workshop would be the promotion of information behaviors that expand the range of resources participants use to get answers to their questions. If educators can serve not only to provide specific information to participants, but also to promote additional information seeking by participants, then they serve individuals and families in both direct and indirect ways.

The current study has two primary objectives: 1) to determine whether participation in a family life education program increases parents' use of a broader variety of information sources, and 2) to examine potential predictors of which parents are more likely to seek additional information,

### **Background**

Family life education reasonably can be described as "prevention science" (Coie et al., 1993). Such programs often provide families with research-based education with the intent of preventing dysfunctional personal relationships. Programs and services are delivered in a place and at a time that is relevant to the family, such as Jane Addams' work to provide educational opportunities to immigrant families in the midst of their communities (Youcha, 1995). This type of in situ education is based on the felt and

developmental needs of the participants (Avery & Lee, 1964; Hennon & Arcus, 1996). In practice, the goal of the family life educator is to “strengthen and enrich individual and family well-being” by providing new and relevant information (Thomas & Arcus, 1992). Hughes (1994) proposed a framework for family life education which required that quality programs be research based, even if not fully research proven. As a result, participation in such programs exposes individuals to new and tested ideas and information.

Information acquisition by individuals in adult education occurs both purposefully and incidentally (Williamson, 2005). Participation in a family life education program is a form of information behavior, specifically information seeking behavior, and often is a result of an effort to reduce personal uncertainty about an issue or topic (Stefanone, Hurley, & Yang, 2013). Davis (2012) suggests that individuals engage in information behavior “when an issue is relevant to problems” that individual faces (p. 670). Literature on information behavior assumes that individuals are active seekers of information, that there is a goal behind the behavior, and that individuals select different sources to meet their perceived needs (DeLorme, Huh & Reid, 2011). These different sources of information can be placed into two primary categories – routine and non-routine.

Routine information behavior occurs when individuals are exposed to new information through their normal activities or interactions (Griffin, Dunwoody, & Neuwirth, 1999). Routine behaviors include talking with friends and family, reading the newspaper or watching TV. These are activities which are part of the individual’s regular

routine. On the other hand, information sources like family life education programs are categorized as non-routine information sources. Acquisition of information through non-routine sources requires the intentional and directed action of the individual to make a connection or access the information (Griffin, Neuwirth, Dunwoody, & Giese, 2004). In addition to educational workshops, non-routine resources include physicians, therapists, and topically relevant books and magazines. An individual typically will not have incidental interaction with a non-routine information source.

Early investigations of promoting information behavior through psychological services were conducted in the 1960s. Results of these studies suggest that reinforcement from counselors promotes information seeking (Krumboltz & Thoresen, 1964), and that inquiries from participants in the group setting were significantly correlated with eventual information seeking outside of the group (Samaan & Parker, 1973). These studies suggest that participation in a family life education program can promote additional information behavior outside of the group setting.

Our understanding of information seeking behavior has benefited from research in a number of disciplines, such as business management, computer science, healthcare and medicine, library science, psychology and religious studies (Afifi, Dillow, & Morse, 2004). Often, the research has focused on a specific process of information acquisition, such as the utilization of library resources (Dervin & Dewdney, 1968; Gross & Latham, 2007). Rather than identifying the motivation of the individual, these studies often focus on improving the library experience (Makani & WooShue, 2006), evaluating the

accuracy and ease of use of library systems (Wakimoto, Walker, & Dabbourt, 2006), or understanding the use of online resources for research and professional purposes (Byrnes, Kulick, & Schwartz, 2004). Other studies have investigated information seeking in interpersonal communication (Baldwin & Hunt, 2002), in reducing uncertainty in personal or romantic relationships (Knobloch & Solomon, 2002; Afifi, et al., 2004), or in adjusting to new workplace relationship following a change in employment (Morrison, 2002). Uncertainty reduction theory suggests that individuals in these situations seek information to address their concerns about the situation and reduce their perceived levels of uncertainty (Berger & Calabrese, 1975).

Research on how health-information seeking addresses uncertainty is more immediately relevant to the current study. Health-information seeking often arises after the diagnosis of a serious or chronic illness, and research has focused on how individuals use health-related information to cope with those situations (Gage & Panagakis, 2012; Dillard, Shen, Robinson & Farrell, 2010; Davison et al., 2002; Garvin et al., 2003; Hoskins & Haber, 2000). Individuals often engage in information behavior to reduce uncertainty (Stefanone et al., 2013), and they are more likely to engage in non-routine information behaviors when the medical issue directly affects them or a loved one (Davison et al., 2002; Garvin et al., 2003; Hoskins & Haber, 2000).

For individuals transitioning to parenthood, the pregnancy serves as a medical issue that affects them directly, and pregnancy has been associated with increased information behavior. Deutsch, Ruble, Fleming, Brooks-Gunn and Stangor (1988) found

that pregnant women sought significantly more information about the transition to motherhood than did a comparison sample of women who were planning on becoming pregnant. The increased complexity of expectations regarding parenting leads expectant parents to spend more time thinking and seeking information about parenting (Pancer, Pratt, Hunsberger & Gallant, 2000). Expectant and new parents have an immediate impetus for seeking information regarding their children, and may seek information that supports and informs their pursuit of those roles, thus filling a “gap” in their information needs (Wilson, 1999).

Post-pregnancy, parents continue to seek information regarding their children. Redmond, Spoth, & Trudeau (2002) found that mothers were more likely than fathers to report seeking both routine and non-routine information, that parents with higher levels of education were more likely to seek out both routine and non-routine information, and that parents with more children were more likely to seek formal parenting support, possibly because “parents with more children may be more likely to face child-related problems” (p. 165). A different study found that, when adults perceive themselves to be highly effective parents, they also perceive their children as less susceptible to negative outcomes (Redmond, Spoth, Shin, & Hill, 2004). This suggests that events experienced while raising an infant may also promote information behavior by new parents, particularly when the events increase uncertainty about a child’s behavior or outcomes.

### **Study Rationale and Hypotheses**

Information acquisition by individuals occurs both purposefully and incidentally in adult education experiences (Williamson, 2005), and individuals are exposed to meaningful information through routine and non-routine sources (Griffin et al., 1999). In the case of the current study, participants purposefully sought out the non-routine information resources of the educational program, as it directly related to their experience of pregnancy and their preparation for parenthood. Studies have found that the act of participation in a parent education program promotes further non-routine information seeking through participation in additional educational programs (Spoth & Redmond, 1995; Spoth, Redmond, & Shin, 2000).

The experimental design of the current study allows an examination of the effect of the educational intervention on subsequent participant information behavior. Prior to randomized group assignment, all of the participants in the current study indicated an interest in acquiring additional information. Participants assigned to the intervention group were exposed to a curriculum that intentionally encouraged participants to identify and share additional information resources. As a result, parents in the programs were exposed to a variety of information resource types, both purposefully, through their enrollment in the research project, and incidentally, through conversations with other parents in the class sessions.

At the same time, participants in the control group also had expressed an interest in gathering more information about the transition to parenthood. But, they did not

participate in the specific educational program offered. This might serve as motivation to seek out additional information sources of varying types, since they were already inclined to seek information, and they might have wanted to fill in the opportunity gap created by assignment to the control group. Although previous research suggests that educational program participation can promote additional educational program participation, it does not answer the question of whether program participation increases the variety of types of information resources utilized. This study will address this question by testing the following hypothesis.

*Hypothesis 1: Participants in the parent education program will engage more routine and non-routine information resource types than non-participants.*

If participation in the educational program motivated parents to seek information from a greater variety of sources, it will be useful for practitioners to know if the effect is consistent across participants. Higher levels of income and education have been associated with more sophisticated information seeking skills, which exposes the seeker to a broader variety of resources (Rothbaum, Martland, & Janssen, 2008). Other studies suggest that income and education, as well as age and ethnicity, can affect participation in relationship education programs (Sullivan & Bradbury, 1997; Stanley, Amato, Johnson, & Markman, 2006). If participation in the educational program leads to more routine and non-routine information resource use, the effect of the intervention may be greater for participants whose prior education and experience prepared them both to recognize and to

utilize those information sources. On the other hand, the educational program might also provide a stimulus for parents with lower educational achievement and lower income to include more variety in their information behavior. Thus, while existing research indicates that greater income and higher education are associated with more robust information behaviors, it does not indicate how those variables might moderate the effect of an educational intervention on subsequent information behavior. This study will address this question by testing the following non-directional hypothesis.

*Hypothesis 2: Education and income will moderate the effect of the educational program on parents' use of routine and non-routine information sources.*

As previously noted, individuals can be motivated to seek new information by their own feelings of uncertainty and information insufficiency (Berger & Calabrese, 1975), and particularly with regard to medical issues that affect their immediate families (Davison et al., 2002; Garvin et al., 2003; Hoskins & Haber, 2000). The experience of pregnancy appears similarly to promote information behavior by expectant mothers (George, 2005). The experience of parenting itself exposes individuals to new experiences and new challenges, which might similarly encourage the seeking and use of additional information sources. Existing research suggests that participants who report higher levels of parental stress may be motivated to find ways to reduce that stress, and participants who perceive their children to be temperamentally challenging may seek additional information to address their concerns or uncertainty. However, previous

research does not provide guidance on how the experience of parental stress or challenging infant temperament might moderate the effect of the educational program on subsequent information behavior by participants, in other words, whether the program has greater influence on information seeking among parents with different stress levels and with infants of differing temperaments. To address this gap in the literature, this study will test the following non-directional hypothesis:

*Hypothesis 3: Infant temperament and parenting stress will moderate the effect of the educational program on parents' use of routine and non-routine information sources.*

Studies of program participation have found that social support correlates with both program selection (Crockenburg, 1986) and participation (Unger & Wandersman, 1988). Powell (1984) found that individuals with smaller social support networks may place more value on those routine or informal sources of information than they do on non-routine or formal sources. Similarly, Birkel and Reppucci (1983) found that women with denser social networks and more kin contact attended parent groups less frequently than those with less dense networks and less contact with kin. This suggests that participants with more social support may be more likely to use routine information sources, and those with less social support may be more likely to seek non-routine information sources. However, as with the other moderators in this study, previous research does not provide guidance on how social support might moderate the effect of an

educational intervention on subsequent information behavior. This study will test the following non-directional hypothesis:

*Hypothesis 4: Social support will moderate the effect of the educational intervention on parents' use of routine and non-routine information sources.*

## **Methods**

### **Data**

Data for this experimental study were collected as part of a research project designed to improve father involvement and mother-father cooperation during the transition to parenthood. Project staff recruited couples through obstetrical clinics that were members of a local Health Maintenance Organization. Couples were identified for participation based on four criteria: both partners aged 18 years or older, partners were married or cohabiting, pregnancies were in the second trimester, and the child would be the first child for both partners (Doherty, Ericson, & LaRossa, 2006). Recruitment efforts utilized direct contact through nursing staff, letters to the prospective participants, and local media interviews. Potential participants were told that they would be participating in an educational research project that would be testing a family life education curriculum designed to increase parental cooperation during the transition to parenthood. Participants gave informed consent prior to any participation and agreed to be assigned randomly to either the control or intervention group.

The project utilized an experimental design, and 165 recruited and eligible couples were randomly assigned to either the control or intervention group. The intervention group was randomly oversampled, due to an expectation that the participation drop-out rate would be higher for those participating in the intervention. The initial sample contained 95 couples in the intervention group and 70 couples in the control group. In addition to the educational experience of the intervention group, all

couples participated in three at-home assessments - at the time of recruitment, a second at six months post-delivery, and a third near the child's one-year birthday. Nineteen percent of subject couples either did not complete all three stages of data collection (24 couples) or did not receive complete delivery of the intervention curriculum (9 couples). A previous analysis of first assessment data indicated "no significant differences on baseline characteristics between the intervention group and the control group, indicating that the randomization procedure was successful" (Doherty et al., 2006, p. 441). Additional analyses of demographic and other data from the initial assessment indicated "no significant differences between couples who remained in the study and those who dropped out" (Doherty et al., 2006, p. 439). Furthermore, the control and intervention groups remained equivalent on variables from the first assessment after the exclusion of the nine couples (two class groups) who did not receive the complete intervention. As the randomization procedure was successful and the exclusion of the nine couples did not affect the statistical equivalence of the control and intervention groups, the current study will analyze a sample with 65 couples in the intervention group and 67 couples in the control group.

Data were collected through in-home assessments of the participant couples. Graduate students visited each couple and administered each assessment to both parents at the same time. Upon completion, the students reviewed the participant responses as part of the effort to reduce missing data. The resulting data table contains few cases with missing data, which were excluded from the analyses.

Because data were collected from the father and mother for the same child, the scores were not independent (Kenny, Kashy, & Cook, 2006). Therefore, analyses were conducted separately for mothers and fathers.

### **Sample**

The 264 expectant parents included in this study are described in Table 2.1. Participants in their 20s and 30s make up 93.6 percent of the sample. Almost 86 percent of participants were Caucasian. The remainder included African Americans (3.9 percent), Hispanics (3.5 percent), Asian Americans (2.8 percent) and Native Americans (.7 percent). Seventy-five percent of the sample had earned undergraduate, graduate or professional degrees. Over 70 percent were employed in white collar jobs, such as managerial or professional specialties, technical, sales or administrative support.

The high percentage of degree completion and white collar employment are reflected in the employment and income information for the participants. Over 81 percent of the couples in this study had household incomes of \$50,000 or more. Almost 28 percent reported incomes in excess of \$100,000. Additionally, over 67 percent of expectant mothers and 87 percent of expectant fathers in the sample reported working 40 hours or more per week. Thus, the sample for this study can be described as predominately white, college educated, employed and earning more than the median income in the state (U.S. Census Bureau, 2000).

Table 2.1

*Sample Demographics at Initial Assessment*

<i>n</i>	<u>Mothers</u>		<u>Fathers</u>	
	<i>Control</i>	<i>Intervention</i>	<i>Control</i>	<i>Intervention</i>
<i>n</i>	67	65	67	65
<i>Age</i>				
<20	3	1	0	0
20-29	34	22	26	18
30-39	29	39	44	41
40-49	1	3	7	6
<i>Ethnicity</i>				
African American	0	2	7	2
Caucasian	58	59	54	55
Hispanic	4	1	1	4
Native American	0	0	2	0
Asian American	4	0	2	2
Other	1	3	0	2
<i>Education</i>				
High school	5	1	7	4
Some college	13	11	18	8
College degree	37	34	24	33
Graduate or professional degree	12	19	18	20
<i>Occupation</i>				
Managerial or professional specialty	27	35	29	35
Technical, sales, admin. support	17	17	14	17
Service occupation	4	4	6	1
Precision production, craft or repair	0	0	2	1
Operator, fabricator or laborer	0	0	4	2
Farming, forestry or fishing	0	0	1	0
Homemaker	4	1	0	0
Other	15	8	11	9

## **Outcome Measures**

**Information Behavior.** Participants self-reported their information behaviors during the third assessment of the research project, around the time of their children's one-year birthdays. Participants were asked to identify which of nine information source types they had utilized in addition to the parent education program provided by the research project (See Appendix A). Responses were clustered into two information source variables, routine and non-routine. For the current study, the routine category includes television programs or video tapes, talking with family and friends, or connecting with others through a church or faith community. The non-routine category includes other pre- or post-birth classes, seeking pregnancy- or parenting-related print materials (books, magazines, newsletters or brochures), speaking with health-care professionals (physician, midwife, nurse practitioner), or seeking out information resources on the Internet (web sites, chat rooms, forums, etc.). Routine and non-routine outcome variables were calculated based on the number of items in each category as identified by the participant. Routine information source scores can range from zero to three, while non-routine information source scores can range from zero to four.

**Infant temperament.** Participants self-reported their perspectives on their infants' characteristics and temperament through the Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979). ICQ data were collected during the second and third assessments, and the current study will utilize the latter data collected around the time of the child's first birthday. The ICQ is a 24 item measure containing four sub

scales of infant characteristics. Parents' responses to these questions indicate their opinions of how fussy or difficult their infant is, how well the child adjusts to change, whether the child appears "dull," and how unpredictable the child is. Each item is a seven point Likert scale, with scores of one representing an optimal temperament, and of seven representing a difficult temperament. ICQ scale scores can range from 24 to 168, with higher scores indicating more challenging infant characteristics. Cronbach alpha reliabilities were .82 for mothers and .81 for fathers.

**Parenting Stress.** Parents self-reported their experience of stress through the Parenting Stress Index (PSI; Abidin, 1997), which is based on the theory that levels of parental stress are a function of salient characteristics of both parent and child, and of situations that are directly related to the parental role. PSI data were collected during the second and third assessments, and the current study will utilize the latter data collected around the time of the child's first birthday. This scale consists of 120 items focused on identifying the potential for parental behavior problems and adjustment difficulties in the family system. The instrument asks participants to rate, on a five point Likert scale, their level of agreement with statements such as "My child is so active it exhausts me." As the PSI is designed for use with pre-school children, 33 questions were not included in the data collection due to their focus on a developmental state not yet attained by the infants of the participants. This left 87 items in the assessment questionnaire, and eleven were reverse coded so that higher values consistently represent greater parenting stress. Thus PSI scores for this sample can range from 87 to 433, with higher scores indicating greater

levels of parenting stress. Cronbach alpha reliabilities were .94 for mothers and .94 for fathers.

**Social support.** Participants described their experience with receiving support from others through the Social Support Network Inventory (SSNI; Flaherty, Gaviria, & Pathak, 1983), SSNI data were collected during the second and third assessments, and the current study will utilize the latter data collected around the time of the child's first birthday. This instrument is designed to assess discussion support, practical help, emotional support and reassurance of self-worth. The questions were edited slightly to focus on support related to being a parent. Respondents were asked to rate their spouse, mother, father, boss (if employed) and one additional significant person, typically a friend or relative. Each item is a seven-point Likert scale, with scores of one representing the least support by another and scores of seven representing the most support. Cronbach alpha reliabilities for the overall scale were .82 for mothers and .90 for fathers.

### **Analysis**

ANOVA was utilized to examine differences between the intervention and control groups in the information seeking outcome variables.

Hierarchical regression was used to test the moderator study hypotheses. Following Baron and Kenny (1986), hierarchical regression is an appropriate analysis when the moderator is a continuous variable and the independent variable is dichotomous. An interaction term was calculated for each independent variable and research group assignment. The regression began with group assignment and an

independent variable in the first step, and then included the calculated interaction variable in the second step. This allows for the identification of statistically significant relationships between the independent and dependent variables, and the identification of statistically significant moderation effects. All analyses were conducted separately for mothers and fathers, due to non-independent parent data.

## Results

### **Educational Program Effect on Information Behavior**

Results for mothers showed that the intervention group had significantly more total information behavior than the control group ( $F(1,129) = 3.91, p = .05$ ). Although in the same direction, differences between the subcategories of routine information behavior ( $F(1,129) = 2.51, p = .12$ ) and non-routine information behavior ( $F(1,129) = 3.26, p = .07$ ) were not significant. For fathers, the intervention group had more total information behavior than the control group ( $F(1,128) = 6.66, p = .01$ ), more routine information behavior ( $F(1,128) = 3.97, p = .04$ ), and more non-routine information behavior ( $F(1,128) = 5.43, p = .02$ ). Moderate effect sizes were found for mothers' total information behavior (*Cohen's d* = .37), and for father's total information behavior (*Cohen's d* = .37), routine information behavior (*Cohen's d* = .34) and non-routine information behavior (*Cohen's d* = .41). These results support the first hypothesis regarding the effect of the educational program on information behavior.

Table 2.2

*Between Groups Differences in Information Behavior*

	Mean	SD	<i>F</i>	<i>Cohen's d</i>
Mothers Total Information Behavior			3.91*	.37
Control	5.91	2.15		
Intervention	6.54	1.42		
Mothers Routine Information Behavior			2.51	.28
Control	1.53	.81		
Intervention	1.74	.69		
Mothers Non-Routine Information Behavior			3.26	.32
Control	4.38	1.57		
Intervention	4.80	1.05		
Father's Total Information Behavior			6.66*	.37
Control	4.80	2.43		
Intervention	5.75	1.72		
Father's Routine Information Behavior			3.97*	.34
Control	1.40	.90		
Intervention	1.69	.77		
Father's Non-Routine Information Behavior			5.43*	.41
Control	3.40	1.86		
Intervention	4.06	1.33		

\*  $p < .05$ **Moderating Effects of Education and Income**

For fathers, there was one significant interaction between group assignment and education. For fathers' routine information behavior, introduction of the interaction term produced a significant change in  $R^2$  ( $F(1,126) = 4.85, p = .03$ ), with a significant coefficient for the interaction term ( $B = -.36, p = .03$ ). The negative relationship between the interaction and routine behavior indicates that the effect of the intervention was

stronger for fathers with less education. No significant interaction between group assignment and education were identified for fathers' total information behavior or non-routine information behavior (Table 2.4). Similarly, no significant interactions were identified between couple income and group assignment (Table 2.6). For mothers, there were no significant interactions for the demographic factors and group assignment (see Tables 2.3 and 2.5). These results partially support the second hypothesis, specifically, the effect of the intervention on father's routine information behavior was moderated by his level of education.

### **Moderating Effects of Parent Stress or Infant Characteristics**

Neither the Parental Stress Inventory nor the Infant Characteristics Questionnaire was found to have significant interactions for either mothers or fathers. Results for mothers are summarized in Table 2.7, while results for fathers are summarized in Table 2.8. These results do not support the third hypothesis.

### **Moderating Effects of Social Support Networks**

There were no significant interactions involving between the social support scales for either mothers or fathers. Results for mothers are summarized in Tables 2.11, 2.12 and 2.13, while results for fathers are summarized in Tables 2.14, 2.15 and 2.16. These results do not support the fourth hypothesis.

Table 2.3

*Predicting Mothers' Information Behavior with Group Assignment and Education*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.07	5.11**
Group Assignment	.50	.32		
Education	.51*	.20		
Step 2			.02	3.40
Group Assignment	3.497*	1.65		
Education	.83**	.27		
Group Assignment x Education	-.75	.41		
<b>Routine Information Behavior</b>				
Step 1			.03	1.89
Group Assignment	.18	.133		
Education	.10	.09		
Step 2			.01	1.26
Group Assignment	.96	.70		
Education	.18	.11		
Group Assignment x Education	-.19	.17		
<b>Non-Routine Information Behavior</b>				
Step 1			.08	5.50**
Group Assignment	.32	.23		
Education	.41**	.15		
Step 2			.03	3.51
Group Assignment	2.53*	1.50		
Education	.65**	.20		
Group Assignment x Education	-.56	.30		

\* p &lt; .05 \*\* p &lt; .01

Table 2.4

*Predicting Fathers' Information Behavior with Group Assignment and Education*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.06	4.14*
Group Assignment	.88*	.37		
Education	.26	.21		
Step 2			.01	1.89
Group Assignment	3.13	1.69		
Education	.50	.27		
Group Assignment x Education	-.57	.42		
<b>Routine Information Behavior</b>				
Step 1			.03	2.05
Group Assignment	.28	.15		
Education	.03	.08		
Step 2			.04	4.85*
Group Assignment	1.71*	.66		
Education	.19	.11		
Group Assignment x Education	-.36*	.17		
<b>Non-Routine Information Behavior</b>				
Step 1			.06	3.79*
Group Assignment	.59*	.29		
Education	.23	.16		
Step 2			.00	.43
Group Assignment	1.42	1.30		
Education	.32	.21		
Group Assignment x Education	-.21	.32		

\* p &lt; .05 \*\* p &lt; .01

Table 2.5

*Predicting Mothers' Information Behavior with Group Assignment and Couple Income*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.03	1.83
Group Assignment	.63	.33		
Income	-.01	.10		
Step 2			.00	.02
Group Assignment	.43	1.44		
Income	-.02	.12		
Group Assignment x Income	.03	.19		
<b>Routine Information Behavior</b>				
Step 1	.25	.14	.03	2.08
Group Assignment	-.05	.04		
Income				
Step 2			.00	.19
Group Assignment	.51	.59		
Income	-.04	.05		
Group Assignment x Income	-.04	.08		
<b>Non-Routine Information Behavior</b>				
Step 1			.03	1.68
Group Assignment	.37	.25		
Income	.04	.07		
Step 2			.00	.19
Group Assignment	-.08	1.06		
Income	.02	.09		
Group Assignment x Income	.06	.14		

\* p &lt; .05 \*\* p &lt; .01

Table 2.6

*Predicting Fathers' Information Behavior with Group Assignment and Couple Income*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.08	5.785**
Group Assignment	.84*	.37		
Income	.22*	.11		
Step 2			.00	.138
Group Assignment	1.42	1.62		
Income	.25	.13		
Group Assignment x Income	-.08	.22		
<b>Routine Information Behavior</b>				
Step 1			.05	3.23*
Group Assignment	.28	.15		
Income	.05	.04		
Step 2			.01	1.13
Group Assignment	.94	.64		
Income	.09	.05		
Group Assignment x Income	-.09	.09		
<b>Non-Routine Information Behavior</b>				
Step 1			.07	4.85**
Group Assignment	.56	.29		
Income	.16*	.08		
Step 2			.00	.00
Group Assignment	.48	1.25		
Income	.16	.10		
Group Assignment x Income	.01	.17		

\* p &lt; .05 \*\* p &lt; .01

Table 2.7

*Predicting Mothers' Information Behavior with Group Assignment and Parental Stress Inventory (PSI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.04	2.50
Group Assignment	.63	.32		
PSI	-.01	.01		
Step 2			.00	.07
Group Assignment	.14	1.96		
PSI	-.01	.01		
Group Assignment x PSI	.00	.01		
<b>Routine Information Behavior</b>				
Step 1			.02	1.41
Group Assignment	.22	.13		
PSI	.00	.00		
Step 2			.00	.03
Group Assignment	.35	.81		
PSI	-.00	.00		
Group Assignment x PSI	.00	.00		
<b>Non-Routine Information Behavior</b>				
Step 1			.04	2.30
Group Assignment	.42	.24		
PSI	-.01	.00		
Step 2			.00	.19
Group Assignment	-.81	1.44		
PSI	-.01	.01		
Group Assignment x PSI	.00	.01		

\* p < .05 \*\* p < .01

Table 2.8

*Predicting Fathers' Information Behavior with Group Assignment and Parenting Stress Index (PSI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.06	3.68*
Group Assignment	.99**	.37		
PSI	.00	.01		
Step 2			.00	.12
Group Assignment	1.68	2.07		
PSI	.00	.01		
Group Assignment x PSI	.00	.01		
<b>Routine Information Behavior</b>				
Step 1			.06	3.82*
Group Assignment	.30*	.15		
PSI	.00	.00		
Step 2			.00	.01
Group Assignment	.37	.81		
PSI	-.00	.00		
Group Assignment x PSI	.00	.01		
<b>Non-Routine Information Behavior</b>				
Step 1			.04	2.91
Group Assignment	.69*	.29		
PSI	.00	.00		
Step 2			.00	.16
Group Assignment	1.31	1.59		
PSI	.00	.01		
Group Assignment x PSI	.00	.01		

\* p < .05 \*\* p < .01

Table 2.9

*Predicting Mothers' Information Behavior with Group Assignment and Infant Characteristics (ICQ)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.04	2.25
Group Assignment	.66*	.33		
ICQ	.01	.01		
Step 2			.00	.47
Group Assignment	1.89	1.82		
ICQ	.02	.02		
Group Assignment x ICQ	-.02	.03		
<b>Routine Information Behavior</b>				
Step 1			.02	1.38
Group Assignment	.22	.13		
ICQ	.00	.01		
Step 2			.00	.01
Group Assignment	.28	.75		
ICQ	.00	.01		
Group Assignment x ICQ	.00	.01		
<b>Non-Routine Information Behavior</b>				
Step 1			.03	2.03
Group Assignment	.43	.24		
ICQ	.01	.01		
Step 2			.01	.80
Group Assignment	1.61	1.33		
ICQ	.02	.01		
Group Assignment x ICQ	-.02	.02		

\* p < .05 \*\* p < .01

Table 2.10

*Predicting Fathers' Information Behavior with Group Assignment and Infant Characteristics (ICQ)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Total Information Behavior</b>				
Step 1			.07	4.82*
Group Assignment	.92*	.37		
ICQ	-.02	.01		
Step 2			.02	2.04
Group Assignment	-1.95	2.04		
ICQ	-.04*	.02		
Group Assignment x ICQ	.01	.03		
<b>Routine Information Behavior</b>				
Step 1			.05	3.08*
Group Assignment	.30*	.15		
ICQ	-.01	.01		
Step 2			.00	.15
Group Assignment	-.01	.82		
ICQ	-.01	.01		
Group Assignment x ICQ	.00	.01		
<b>Non-Routine Information Behavior</b>				
Step 1			.06	3.71*
Group Assignment	.62*	.28		
ICQ	-.02	.01		
Step 2			.02	2.70
Group Assignment	-1.93	1.58		
ICQ	-.03*	.01		
Group Assignment x ICQ	.04	.02		

\* p < .05 \*\* p < .01

Table 2.11

*Predicting Mothers' Total Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
<b>Mothers' SSNI Total</b>				
Step 1			.04	2.713
Group Assignment	.70*	.32		
SSNI Total	.01	.01		
Step 2			.01	.89
Group Assignment	2.24	1.66		
SSNI Total	.02	.01		
Group Assignment x SSNI Total	-.02	.02		
<b>Mothers' SSNI - Discussion</b>				
Step 1			.03	2.25
Group Assignment	.65*	.32		
SSNI - Discussion	.02	.03		
Step 2			.01	.72
Group Assignment	1.85	1.46		
SSNI - Discussion	.05	.01		
Group Assignment x Discussion	-.05	.06		
<b>Mothers' SSNI - Practical</b>				
Step 1			.04	2.79
Group Assignment	.72*	.32		
SSNI - Practical	.04	.03		
Step 2			.00	.29
Group Assignment	1.51	1.50		
SSNI - Practical	.06	.05		
Group Assignment x Practical	-.04	.07		
<b>Mothers' SSNI - Emotional</b>				
Step 1			.05	2.99
Group Assignment	.72*	.32		
SSNI - Emotional	.04	.03		
Step 2			.00	.57
Group Assignment	1.76	1.42		
SSNI - Emotional	.07	.04		
Group Assignment x Emotional	-.05	.06		
<b>Mothers' SSNI - Reassurance</b>				
Step 1			.04	2.33
Group Assignment	.68*	.32		
SSNI - Reassurance	.03	.03		
Step 2			.00	.85
Group Assignment	2.05	1.52		
SSNI - Reassurance	.06	.05		
Group Assignment x Reassurance	-.06	.06		

\* p &lt; .05 \*\* p &lt; .01

Table 2.12

*Predicting Mothers' Routine Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
Mothers' SSNI Total				
Step 1			.02	1.40
Group Assignment	.22	.13		
SSNI Total	.00	.00		
Step 2			.00	.32
Group Assignment	.61	.69		
SSNI Total	.00	.01		
Group Assignment x SSNI Total	.00	.01		
Mothers' SSNI - Discussion				
Step 1			.02	1.26
Group Assignment	.21	.13		
SSNI - Discussion	.00	.01		
Step 2			.00	.40
Group Assignment	.58	.60		
SSNI - Discussion	.01	.02		
Group Assignment x Discussion	-.02	.02		
Mothers' SSNI - Practical				
Step 1			.03	1.70
Group Assignment	.24	1.3		
SSNI - Practical	.01	.01		
Step 2			.00	.00
Group Assignment	.26	.62		
SSNI - Practical	.01	.02		
Group Assignment x Practical	.00	.03		
Mothers' SSNI - Emotional				
Step 1			.03	1.83
Group Assignment	.24	.13		
SSNI - Emotional	.01	.01		
Step 2			.00	.26
Group Assignment	.53	.59		
SSNI - Emotional	.02	.02		
Group Assignment x Emotional	-.01	.03		
Mothers' SSNI - Reassurance				
Step 1			.02	1.26
Group Assignment	.21	.13		
SSNI - Reassurance	.00	.01		
Step 2			.00	.54
Group Assignment	.66	.63		
SSNI - Reassurance	.01	.02		
Group Assignment x Reassurance	-.02	.03		

\* p < .05 \*\* p < .01

Table 2.13

*Predicting Mothers' Non-Routine Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
Mothers' SSNI Total				
Step 1			.04	2.56
Group Assignment	.48*	.24		
SSNI Total	.01	.01		
Step 2			.01	.94
Group Assignment	1.63	1.22		
SSNI Total	.02	.01		
Group Assignment x SSNI Total	-.01	.01		
Mothers' SSNI - Discussion				
Step 1			.04	2.32
Group Assignment	.44	.23		
SSNI - Discussion	.03	.02		
Step 2			.01	.65
Group Assignment	1.28	1.06		
SSNI - Discussion	.04	.03		
Group Assignment x Discussion	-.04	.01		
Mothers' SSNI - Practical				
Step 1			.04	2.37
Group Assignment	.48*	.24		
SSNI - Practical	.03	.02		
Step 2			.00	.52
Group Assignment	1.25	1.10		
SSNI - Practical	.05	.04		
Group Assignment x Practical	-.03	.05		
Mothers' SSNI - Emotional				
Step 1			.04	2.53
Group Assignment	.48*	.24		
SSNI - Emotional	.03	.02		
Step 2			.00	.55
Group Assignment	1.24	1.04		
SSNI - Emotional	.05	.03		
Group Assignment x Emotional	-.03	.04		
Mothers' SSNI - Reassurance				
Step 1			.03	2.21
Group Assignment	.46	.24		
SSNI - Reassurance	.02	.02		
Step 2			.01	.72
Group Assignment	1.38	1.11		
SSNI - Reassurance	.04	.03		
Group Assignment x Reassurance	-.04	.04		

\* p &lt; .05 \*\* p &lt; .01

Table 2.14

*Predicting Fathers' Total Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
Fathers' SSNI Total				
Step 1			.05	3.60*
Group Assignment	.95*	.37		
SSNI Total	.01	.01		
Step 2			.00	.13
Group Assignment	.27	1.90		
SSNI Total	.00	.01		
Group Assignment x SSNI Total	.01	.02		
Fathers' SSNI - Discussion				
Step 1			.06	3.68*
Group Assignment	.93*	.37		
SSNI - Discussion	.03	.03		
Step 2			.00	.57
Group Assignment	-.19	1.53		
SSNI - Discussion	.01	.04		
Group Assignment x Discussion	.05	.06		
Fathers' SSNI - Practical				
Step 1			.05	3.64*
Group Assignment	.96*	.37		
SSNI - Practical	.03	.03		
Step 2			.00	.343
Group Assignment	.10	1.52		
SSNI - Practical	.01	.05		
Group Assignment x Practical	.04	.07		
Fathers' SSNI - Emotional				
Step 1			.06	3.79*
Group Assignment	.93*	.37		
SSNI - Emotional	.03	.03		
Step 2			.01	1.12
Group Assignment	-.65	1.54		
SSNI - Emotional	.00	.04		
Group Assignment x Emotional	.07	.07		
Fathers' SSNI - Reassurance				
Step 1			.05	3.48*
Group Assignment	.95*	.37		
SSNI - Reassurance	.02	.03		
Step 2			.01	.73
Group Assignment	2.17	1.47		
SSNI - Reassurance	.04	.04		
Group Assignment x Reassurance	-.05	.06		

\* p &lt; .05 \*\* p &lt; .01

Table 2.15

*Predicting Fathers' Routine Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
Fathers' SSNI Total				
Step 1			.04	2.79
Group Assignment	.29	.146		
SSNI Total	.01	.00		
Step 2			.00	.13
Group Assignment	.02	.75		
SSNI Total	.00	.01		
Group Assignment x SSNI Total	.00	.01		
Fathers' SSNI - Discussion				
Step 1			.03	2.21
Group Assignment	.28	.15		
SSNI - Discussion	.01	.01		
Step 2			.00	.51
Group Assignment	-.14	.61		
SSNI - Discussion	.00	.02		
Group Assignment x Discussion	.02	.03		
Fathers' SSNI - Practical				
Step 1			.04	2.64
Group Assignment	.30*	.15		
SSNI - Practical	.02	.01		
Step 2			.00	.08
Group Assignment	.13	.60		
SSNI - Practical	.01	.02		
Group Assignment x Practical	.01	.03		
Fathers' SSNI - Emotional				
Step 1			.05	3.30*
Group Assignment	.28	.14		
SSNI - Emotional	.02	.01		
Step 2			.01	.64
Group Assignment	-.20	.61		
SSNI - Emotional	.01	.02		
Group Assignment x Emotional	.02	.03		
Fathers' SSNI - Reassurance				
Step 1			.03	2.27
Group Assignment	.29*	.15		
SSNI - Reassurance	.01	.01		
Step 2			.00	.03
Group Assignment	.38	.58		
SSNI - Reassurance	.01	.02		
Group Assignment x Reassurance	.00	.02		

\* p &lt; .05 \*\* p &lt; .01

Table 2.16

*Predicting Fathers' Non-Routine Information Behavior with Group Assignment and Social Support Network Inventory (SSNI)*

Models and Predictors	B	SE B	R <sup>2</sup> Change	F Change
Fathers' SSNI Total				
Step 1			.04	2.75
Group Assignment	.67*	.29		
SSNI Total	.00	.01		
Step 2			.00	.08
Group Assignment	.24	1.46		
SSNI Total	.00	.01		
Group Assignment x SSNI Total	.01	.02		
Fathers' SSNI - Discussion				
Step 1			.05	2.99
Group Assignment	.64*	.29		
SSNI - Discussion	.02	.02		
Step 2			.00	.37
Group Assignment	-.05	1.18		
SSNI - Discussion	.01	.03		
Group Assignment x Discussion	.03	.05		
Fathers' SSNI - Practical				
Step 1			.04	2.8
Group Assignment	.67*	.29		
SSNI - Practical	.01	.03		
Step 2			.00	.38
Group Assignment	-.03	1.17		
SSNI - Practical	.00	.04		
Group Assignment x Practical	.03	.05		
Fathers' SSNI - Emotional				
Step 1			.04	2.80
Group Assignment	.65*	.29		
SSNI - Emotional	.01	.03		
Step 2			.01	.93
Group Assignment	-.47	1.19		
SSNI - Emotional	-.01	.03		
Group Assignment x Emotional	.05	.05		
Fathers' SSNI - Reassurance				
Step 1			.04	2.76
Group Assignment	.66*	.29		
SSNI - Reassurance	.01	.02		
Step 2			.01	1.06
Group Assignment	1.78	1.13		
SSNI - Reassurance	.03	.03		
Group Assignment x Reassurance	-.05	.05		

\* p &lt; .05 \*\* p &lt; .01

## Discussion

This experimental study shows evidence for the first time that family life education increases the breadth of information resources used by parents. Analysis of the control and intervention groups identified both statistically significant differences and moderate effect sizes. The effect of the intervention held across education and income (with one exception for fathers), and across the contextual factors of parent stress, infant temperament and social support. Although the control and experimental groups were statistically equivalent and there was no regulation of the control group's information behaviors, participants in the intervention utilized a broader array of information resource types. The findings support the hypothesis that participants in the education program would engage more routine and non-routine information resource types than those in the control group.

An explanation of these findings can begin with the idea that the educational sessions provided opportunities for parents to seek information from other parents, behavior that has previously been connected with eventual non-directed information seeking (Samaan & Parker, 1973). In the educational environment, these interactions expose parents to information resources of which they might otherwise had no knowledge. This is an "incidental" information behavior, as described by Wilson (2005). The mutual sharing of resources may increase parents' awareness of sources of information, which leads to utilization of a broader scope of information types outside of the educational setting.

Such mutual sharing of resources is further enhanced when program facilitators create environments where sharing is encouraged and demonstrated. Facilitators in the current study were trained to encourage participants to share information resources throughout all of the group sessions and, during one specific session, facilitators specifically elicited suggestions from participants about other sources of information. Facilitators often serve as an expert in the room, but they also serve to promote information behavior and to assist participants in their evaluations of information validity or trustworthiness.

Additionally, the use of a greater variety of information resources may have been motivated, paradoxically, by increased uncertainty generated by interactions with the other parents in the intervention group. If parents were exposed to issues, ideas or concerns from other participants, and if they had not previously considered or addressed those concerns themselves, that exposure could increase their own levels of uncertainty. In seeking additional resources to address these unexpected concerns, participants would be seeking not only to reduce their uncertainty and information insufficiency (Berger & Calabrese, 1975), but also to fill in gaps in their knowledge as they make sense of the new experiences of parenting (Dervin & Dewdney, 1968). Perhaps participants increased information behavior was the product of the intervention serving to increase concern or worry, rather than simply exposing them to new information resource ideas.

Intervention effects appeared to be stronger for fathers. Their scores were significantly higher on both categories of information behavior as well as the total score,

whereas, for mothers, only differences for the total score reached statistical significance. One explanation would be that prospective mothers are more motivated to seek information and thus somewhat less influenced by parenting classes than fathers. Previous research indicates that being pregnant is a motivator of information behavior for women, compared to women who want to have a child but are not yet pregnant (Deutsch et al., 1988), and mothers have continued to assume primary responsibility for childcare during infancy and early childhood (Bianchi & Milkie, 2010). This direct, personal experience might serve as added motivation for mothers to seek information from different sources, when compared to their partners.

For this reason, fathers may have differentially benefited from participation in the educational intervention. The setting provided a supportive environment for expressing concerns and asking questions, which can increase information behavior outside of the group (Samaan & Parker, 1973). Additionally, the couple-focused design of the intervention meant that they were exposed to the same types of information resources as the mothers of their children. This shared experience might provide opportunities to revisit or better remember resource ideas to which the parents were exposed incidentally in the program sessions. Fathers responded to this exposure by increasing both the routine and non-routine information resources they used. In other words, fathers were more likely to talk about being a parent or their children with people they know, and they were more likely to seek out different sources of professional and non-routine information about parenting and their children.

Although the intervention was mostly unaffected by moderators, the results partially support the second hypothesis, that education and income would moderate the effect of the educational program on parents routine and non-routine information sources. Routine information behavior by fathers was moderated by fathers' level of education. The negative relationship between the interaction and routine behavior suggests that fathers with lesser levels of education might be more affected, in terms of information behavior, by participation in a parent education program. Lower levels of education have been found to reduce participation in family life education programs (Sullivan & Bradbury, 1997; Stanley et al., 2006), while higher levels of education have been found to facilitate independent information seeking (Rothbaum, Martland, & Jannsen, 2008). For participant fathers with lower levels of education, the class may have normalized the process of seeking support and information from others, thus encouraging them to continue seeking resources outside of the educational program.

The results do not support either the third hypothesis, that parenting stress or infant characteristics would moderate the intervention effect, or the fourth hypothesis, that parents' social support networks would moderate the intervention effect. The absence of significant moderator effects for parenting stress and infant temperament may be a byproduct of the age of the children. Infants can be expected to be stressful, as parents lose sleep and seek to figure out what cries and whimpers mean. This perspective might change as the children grow and the parents have more time to compare them to what they see in other children. Similarly the absence of significant moderator effects for

the social support variables may be affected by parents' perception of how much support they receive relative to their expectations of how much support they should receive, which was not investigated in this study.

### **Limitations**

While the present study identifies differences in the variety of resource *types* utilized by parents of infant children, the study did not ask for frequencies for how often the different resource types were utilized. Therefore, it is not possible with the current data to identify whether parents who did not receive the intervention might have utilized a greater number of resources but within a smaller variety of types. Future research on the effect of family life education programs would benefit from identifying not only the types of resources utilized, but also how often those types were used.

This study was conducted in the early 2000s, prior to widespread distribution of high-speed internet, or the proliferation of smartphones and cellular data plans. There are additional resources currently available to parents that were not available at the time of the study, and the permeation of data connectivity through society suggests that researchers may want to reconsider the categorization of Internet resources as “non-routine.” In a connected society, accessing information online is more commonplace, and may reflect incidental interaction with information rather than the intentional seeking behavior typically thought of as “non-routine.”

Characteristics of the study sample may limit the applicability of these findings to the broader population. Participants were predominately white and college educated.

Over 80 percent of participants in this study reported household incomes greater than the median income in the state at the time data were collected (U.S. Census Bureau, 2000). Additionally, the intervention was for couples, while most educational programs serve individual parents, which limits generalizability. Further research in this area would benefit from the inclusion of lower-income participants, from increasing the diversity of the research sample, and from the inclusion of individual participants in family life education programs.

### **Implications for Family Life Education**

A single family life education program is inevitably limited in scope, by curriculum, educator experience and time constraints. Yet, these programs can be a part of promoting greater information acquisition by parents. Expanding the types of resources parents will utilize can help to expose them to more and varied information, and the educational environment can serve to normalize both the asking of questions and the seeking of answers. While not a primary goal of most parent or family education programs, this secondary benefit can further support parents as their children grow and new challenges surface.

The effect on non-directed information seeking could be even stronger when the mutual sharing of information resources is integrated intentionally throughout the curriculum or educational program. For example, family life educators could identify research-tested websites, videos and written material, and then share that information with participants through handouts, blogs, or social media. This is a proactive stance on

the part of the educator to direct participants to reputable, reliable information resources. Family life educators also are in a unique position to help equip parents with skills for evaluating routine information sources, e.g., testing what other parents say against their own experiences and intuitions, and against what research indicates. A practical example of this would be the ongoing concerns parents may express about the value and necessity of vaccinations (Daley & Glanz, 2012).

Intentionally providing opportunities for participants to share resources can also create a new complication for the group facilitator. Participants may offer suggestions of questionable merit, or may bring information that contradicts the understanding or expectations of the facilitator. Educators must consider appropriate responses to unvalidated resource suggestions, or to the potential challenge of their position on topics. Where it was once sufficient to be aware of new books or magazines, the greater information available through online sources increases the challenge for preparation. However, the current study indicates that a facilitator's encouragement for parents to ask questions and share resources can have meaningful effects outside of the classroom, introducing new resources and behaviors that can continue to benefit the families involved.

### **Conclusion**

This study's findings are consistent with a recent research study showing that participation in couple relationship education is associated with higher rates of help seeking after the program (Williamson, Trail, Bradbury, & Karney, 2014), and with

previous research indicating that prior use of educational services is predictive of later use of similar services (Doss, Rhoades, Stanley, Markman, & Johnson, 2009). Family life education programs, such as parent education or relationship skills workshops, can serve as a gateway to additional information seeking by participants even after the program is concluded. The experience of seeking information and talking about relevant topics or issues appears to promote similar behavior in the future.

The results of the current study suggest that both fathers and mothers can be motivated to seek information from a broader variety of information resources through participation in a family life education program. Regardless of contextual factors such as prior educational attainment or couple income, program participation was consistently found to affect parents' information behaviors.

Opportunities for future research regarding online information behavior should recognize the transition in what is now routine. Individuals are increasingly likely to think about online resources when they have questions. And information providers continue to leverage the new technologies to reach their targeted audience, through web sites or dedicated apps. Future research can help expand our understanding of how parents use or share online resources, how they evaluate the usefulness and accuracy of those resources, and how the use of these now-routine online resources affects the utilization of more traditional non-routine information sources, such as family life education programs.

## References

- Abidin, R. R. (1997). Parenting Stress Index: A measure of the parent-child system. In C. P. Zalaquett & R. Wood (Eds.), *Evaluating stress: A book of resources* (pp. 277-291). Lanham, MD: Scarecrow Press, Inc: Lanham.
- Afifi, W. A., Dillow, M. R., & Morse, C. (2004). Examining predictors and consequences of information seeking in close relationships. *Personal Relationships, 11*, 429-449.
- Afifi, W. A. & Weiner, J. L. (2006). Seeking information about sexual health: Applying the theory of motivated information management. *Human Communication Research, 32*, 35-57.
- Anderson, E. A., Kohler, J. K. & Letiecq, B. L. (2004). Low-income fathers and “responsible fatherhood” programs: A qualitative investigation of participants’ experiences. *Family Relations, 51*, 148-155.
- Antheunis, M. L., Valkenburg, P. M. & Peter, J. (2010). Getting acquainted through social network sites: Testing a model of online uncertainty reduction and social attraction. *Computers in Human Behavior, 26*(1), 100-109.
- Avery, C. E., & Lee, M. R. (1964) Family life education: Its philosophy and purpose. *The Family Life Coordinator, 13*(2) 27-37.
- Bates, J. E., Freeland, C. A., & Lounsbury, M. L. (1979). Measurement of infant difficulty. *Child Development, 50*, 794-803.
- Baldwin, J. R., & Hunt, S. K. (2002). Information-seeking behavior in intercultural and intergroup communication. *Human Communication Research, 28*(2), 272-286.
- Ballard, S. M. & Morris, M. L. (2005). Factors influencing midlife and older adults’ attendance in family life education programs. *Family Relations, 54*, 461-472.
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Bates, J. E., Freeland, C. A., & Lounsbury, M. L. (1979). Measurement of infant difficulty. *Child Development, 50*, 794-803.

- Beaver, K., Luker, K. A., Owens, R. G., Leinster, S. J., Degner, L. F., & Sloan, J. A. (1996). Treatment decision making in women newly diagnosed with breast cancer. *Cancer Nursing, 19*(1), 8-19.
- Berger, C. R. & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a development theory of interpersonal communication. *Human Communication Research, 1*(2), 99-112.
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*(3), 705-725.
- Birkel, R., & Reppucci, N. D. (1983). Social networks, information-seeking, and the utilization of services. *American Journal of Community Psychology, 11*, 185-205.
- Brashers, D. E., Goldsmith, D. J., & Hsieh, E. (2002). Information seeking and avoiding in health contexts. *Human Communication Research, 28*(2), 258-271.
- Budden, L., Pierce, P., Hayes, B., & Buettner, P. (2003). Australian women's prediagnostic decision-making styles, relating to treatment choices for early breast cancer treatment. *Research and Theory for Nursing Practice: An International Journal, 17*(2), 117-136.
- Bubolz, M. M. & Sontag, M. S. (1993). Human ecology theory. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Shumm & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 419-448). New York: Plenum Press.
- Burbank, P., Reibe, D., Padula, C., & Nigg, C. (2002). Exercise and older adults: Changing behavior with the transtheoretical model. *National Journal of Orthopaedic Nurses, 21*(4), 51-63.
- Byrnes, J. A., Kulick, T. A., & Schwartz, D. G. (2004). Information-seeking behavior changes in community-based teaching practices. *Journal of the Medical Library Association, 92*(3), 334-340.
- Bussing, R., Gary, F. A., Mills, T. L., & Garvan, C. W. (2007). Cultural variations in parental health beliefs, knowledge and information sources related to attention-deficit/hyperactivity disorder. *Journal of Family Issues, 28*(3), 291-318.
- Butler, M. H., & Wampler, K. S. (1999). A meta-analytic update of research on the Couple Communication Program. *The American Journal of Family Therapy, 27*, 223-227.

- Carroll, J. S. & Doherty, W. J. (2003). Evaluating the effectiveness of premarital prevention programs: A meta-analytic review of outcome research. *Family Relations*, 52, 105-118.
- Case, D. O. (2002). *Looking for information: a survey of research on information seeking, needs and behavior*. San Diego: Academic Press.
- Christopher, S., Dunnagan, T., Duncan, S.F., & Paul, L. (2001) Education for self-support: evaluating outcomes using transformative learning theory. *Family Relations*, 50, 134-142.
- Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., et al. (1993). The science of prevention: A conceptual framework and some directions for a national research program. *American Psychologist*, 48, 1013-1022.
- Crockenberg, S., (1986) Professional support for adolescent mothers: Who gives it, how adolescent mothers evaluate it, what they would prefer. *Infant Mental Health Journal*, 7, 49-58.
- Czaja, R., Manfredi, C., & Price, J. (2003). The determinant and consequences of information-seeking among cancer patients. *Journal of Health Communication*, 8, 529-562.
- D'Alessandro, D. M. & Dosa, N. P. (1999). Empowering children and families with information technology. *Archive of Pediatrics & Adolescent Medicine*, 155, 1131-1136.
- Daley, M. F., & Glanz, J. M. (2012, August 16). Straight talk about vaccination. *Scientific American*, 305, 32-34. Retrieved April 25, 2014, from <http://www.scientificamerican.com/article/straight-talk-about-vaccination/>
- Davis, V. (2012). Interconnected by underprotected? Parents' methods and motivations for information seeking on digital safety issues. *Cyberpsychology, Behavior, and Social Networking*, 15(12), 669-674.
- Davison, B. J., Gleave, M. E., Goldenberg, S. L., Degner, L. Fl., Hoffat, D., & Berkowitz, J. (2002). Assessing information and decision preferences for men with prostate cancer and their partners. *Cancer Nursing*, 25(1), 42-29.
- de Graaf, I., Speetjens, P., Smit, F., de Wolff, M., & Tavecchio, L. (2008). Effectiveness of the Triple P positive parenting program on parenting: A meta-analysis. *Family Relations*, 57, 553-566.

- De Rouck, S. & Leys, M. (2011). Information behavior of parents of children admitted to a neonatal intensive care unit: Constructing a conceptual framework. *Health, 15*(1), 54-77
- Deacon, R. E. & Firebaugh, F. M. (1981). *Family resource management: Principles and applications*. Boston, Allyn and Bacon, Inc.
- DeLorme, D. E., Huh, J., & Reid, L. N. (2011). Source selection in prescription drug information seeking and influencing factors: Applying the comprehensive model of information seeking in an American context. *Journal of Health Communication: International Perspectives, 16*(7), 766-787.
- Dervin, B. & Dewdney, P. (1986). Neutral questioning: A new approach to the reference interview. *Research Quarterly, 25*(4), 506-513.
- Deutsch, F. M., Ruble, D. N., Fleming, A., Brooks-Gunn, J. & Stangor, C.S. (1988). Information seeking and maternal self-definition during the transition to parenthood. *Journal of Personality and Social Psychology, 55*, 420-431.
- Dillard, J. P., Shen, L., Robinson, J. & Farrell, P. (2010). Parental information seeking following a positive newborn screening for cystic fibrosis. *Journal of Health Communication: International Perspectives, 15*(8), 880-894.
- Dobransky, K. & Hargittai, E. (2012). Inquiring minds acquiring wellness: Uses of online and offline sources for health information. *Health Communication, 27*(4), 331-343.
- Doherty, W. J., Erickson, M. F., & LaRossa, R. (2006). An intervention to increase father involvement and skills during the transition to parenthood. *Journal of Family Psychology, 20*, 438-447.
- Doss, B. D., Rhoades, G. K., Stanley, S. M., Markman, H. J., & Johnson, C. A. (2009). Differential use of premarital education in first and second marriages. *Journal of Family Psychology, 23*(2), 268-273.
- Eagly, A. H. & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace.
- Fagan, J. (2008). Randomized study of a prebirth coparenting intervention with adolescent and young fathers. *Family Relations, 57*, 309-323.

- Fahrenwald, N. L., & Walker, S. (2003). Application of the transtheoretical model of behavior change to the physical activity of WIC mothers. *Public Health Nursing, 20*(4), 307-317.
- Faircloth, W. B., & Cummings, E. M. (2007). Evaluating a parent education program for preventing the negative effects of marital conflict. *Journal of Applied Developmental Psychology, 29*, 141-156.
- Flaherty, J. A., Gaviria, F. M. & Pathak, D. S. (1983). The measurement of social support: The social support network inventory. *Comprehensive Psychiatry, 24*(6), 521-529.
- Gage, E. A. & Panagakis, C. (2012). The devil you know: Parents seeking information online for paediatric cancer. *Sociology of Health & Illness, 34*(3), 444-458.
- Gardner, S. P. & Boellaard, R. (2007). Does youth relationship education continue to work after a high school class? A longitudinal study. *Family Relations, 56*, 490-500.
- Gardner, S. P., Giese, K. & Parrott, S. M. (2004). Evaluation of the Connections: Relationships and Marriage curriculum. *Family Relations, 53*, 521-527.
- Garvin, B. J., Moser, D. K., Riegel, B., McKinley, S., Doering, L., & Kyungh, A. (2003). Effects of gender and preference for information and control on anxiety early after myocardial infarction. *Nursing Research, 52*(6), 386-392.
- George, L. (2005). Lack of preparedness: Experiences of first-time mothers. *The American Journal of Maternal Child Nursing, 30*(4), 251-255
- Gorman, J.C., & Balter, L. (1997). Culturally sensitive parent education: A critical review of quantitative research. *Review of Educational Research, 67*, 339-369.
- Griffin, R. J., Dunwoody, S. & Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. *Environmental Research, 80*, S230-245.
- Griffin, R. J., Neuwirth, K., Dunwoody, S., & Giese, J. (2004). Information sufficiency and risk communication. *Media Psychology, 6*, 23-61.
- Gross, M. & Latham, D. (2007). Attaining information literacy: An investigation of the relationship between skill level, self-estimates of skill, and library anxiety. *Library & Information Science Research, 29*(3), 332-353.

- Hack, T. F., Degner, L. F., & Dyck, D. G. (1994). Relationship between preferences for decisional and illness information among women with breast cancer. *Social Sciences & Medicine*, 39(2), 270-289.
- Hack, T. F., Degner, L., Watson, P. & Sinha, L. (2006). Do patients benefit from participating in medical decision making? Longitudinal follow-up of women with breast cancer. *Psycho-Oncology*, 15(1), 9-19.
- Halford, W. K., Moor, E., Wilson, K. L., Farrugia, C., & Dyer, C. (2004). Benefits of flexible delivery relationship education: An evaluation of the Couple CARE program. *Family Relations*, 53, 469-476.
- Halford, W. K., Sanders, M. R., & Behrens, B. C. (2001). Can skills training prevent relationship problems in at-risk couples? Four-year effects of a behavioral relationship education program. *Journal of Family Psychology*, 15(4), 750-768.
- Hashimoto, H. & Fukuhara, S. (2004). The influence of locus of control on preferences for information and decision making. *Patient Education and Counseling*, 55(2), 236-240.
- Hawkins, A. J., Lovejoy, K. R., Holmes, E. K., Blanchard, V. L., & Fawcett, E. (2008). Increasing fathers' involvement with child care with a couple-focused intervention during the transition to parenthood. *Family Relations*, 57, 49-59.
- Hennon, C. B., & Arcus, M. (1993). Life-span family life education. In T.H. Bruaker (Ed.), *Current issues in the family: Vol. 1. Family relations: Challenge for the future*. Newbury Park, CA: Sage.
- Hoskins, C. N., & Haber, J. (2000). Adjusting to breast cancer. *American Journal of Nursing*, 100(4), 26-32.
- Hughes, R., (1994). A framework for developing family life education programs. *Family Relations*, 43, 74-80.
- Kellerman, K. & Berger, C. R. (1984). Affect and social information acquisition: Sit back, relax and tell me about yourself. In R. Bostrom (ed.), *Communication yearbook 8*. Newbury Park, CA: Sage (pp. 412-445).
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford Press.

- Knobloch, L. K. & Solomon, D. H. (2002). Information seeking beyond initial interaction: Negotiating relational uncertainty within close relationships. *Human Communication Research, 28*(2), 243-257.
- Krumboltz, J. D. & Thoresen, C. E. (1964). The effect of behavioral counseling in group and individual settings on information-seeking behavior. *Journal of Counseling Psychology, 11*(4), 1964.
- Lambert, S. D. & Loiselle, C. G. (2007). Health information seeking behavior. *Qualitative Health Research, 17*, 1006-1019
- Levant, R. F., & Doyle, G. F. (1983). An evaluation of a parent education program for fathers of school-aged children. *Family Relations, 32*, 39-37.
- Makani, J. & WooShue, K. (2006). Information seeking behaviors of business students and the development of academic digital libraries. *Evidence Based Library and Information Practice, 1*(4), 30- 45
- McBride, B. A. (1990). The effects of a parent education/play group program on father involvement in child rearing. *Family Relations, 39*, 250-256.
- Moroney, R. M. (1987). Social support systems: Families and social policy. In S. Kagan, D. Powell, B. Weissbourd, & E. Zigler (Eds.), *America's family support programs: The origins and development of a movement* (pp. 21-37). New Haven, CT: Yale University
- Morrison, E. W. (2002). Information seeking within organizations. *Human Communication Research, 28*(2), 243-257.
- Pancer, S. M., Pratt, M., Hunsberger, B., & Gallant, M. (2000). Thinking ahead: Complexity of expectations and the transition to parenthood. *Journal of Personality, 68*(2), 253-280.
- Pehrson, K. L., & Robinson, C. C. (1990). Parent education: Does it make a difference? *Child Study Journal, 20*, 221-236.
- Pfannenstiel, J. C. & Seltzer, D. A. (1989). New parents as teachers: Evaluation of an early parent education program. *Early Childhood Research Quarterly, 4*, 1-18.
- Powell, D. (1984). Social network and demographic predictors of length of participation in a parent education program. *Journal of Community Psychology, 12*, 13-20.

- Rains, S. A. (2007). Perceptions of traditional information sources and use of the World Wide Web to seek information: Findings from the Health Information National Trends survey. *Journal of Health Communication, 12*, 667-680
- Ramirez, A., Watlther, J. B., Burgoon, J.K. & Sunnafrank, M. (2002). Information seeking strategies, uncertainty, and computer-mediated communication: Toward a conceptual model. *Human Communication Research, 28*(2), 213-228.
- Redmond, C., Spoth, R., Shin, C., & Hill, G. J. (2004). Engaging rural parents in family-focused programs to prevent youth substance abuse. *The Journal of Primary Prevention, 24*(3), 223-242.
- Redmond, C., Spoth, R. & Trudeau, L. (2002). Family- and community-level predictors of parent support seeking. *Journal of Community Psychology, 30*(2), 153-171.
- Rees, C. E., & Bath, P. A. (2001) Information-seeking behaviors of women with breast cancer. *Oncology Nursing Forum, 28*(5), 899-907.
- Rothbaum, F., Martland, N., & Janssen, J. B. (2007). Parents' reliance on the web to find information about children and families: Socio-economic differences in use, skills and satisfaction.
- Samaan, M. K. & Parker, C. A. (1973). Effects of behavioral (reinforcement) and advice-giving counseling on information seeking behavior. *Journal of Counseling Psychology, 20*(3), 193-201.
- Sandifer, J. L., (2008). Evaluating the efficacy of a parenting program for incarcerated mothers. *The Prison Journal, 88*, 423-445.
- Shi, H. J., Nakamura, K., & Takano, T. (2004). Health values and health information-seeking in relation to positive change of health practice among middle-aged urban men. *Preventative Medicine, 39*, 1164-1171.
- Shiloh, S., Sinai, R. B., & Keinan, G. (1999). Effects of controllability, predictability, and information-seeking style on interest in predictive genetic testing. *Personality and Social Psychology Bulletin, (25)*10, 1187-1195.
- Spoth, R. & Redmond, C. (1995). Parent motivation to enroll in parenting skills programs: A model of family context and health belief predictors. *Journal of Family Psychology, 9* (3), 294-310.

- Spoth, R., Redmond, C., & Shin, C. (2000). Modeling factors influencing enrollment in family-focused preventive intervention research. *Prevention Science, 1* (4), 213-225.
- Stanley, S. M., Amato, P. R., Johnson, C. A. & Markman, H. J. (2006). Premarital education, marital quality and marital stability: Findings from a large, random household survey. *Journal of Family Psychology, 20*, 117-126.
- Stanley, S.M., Markman, H.J., Prado, L.M., Olmos-Gallo, P.A., Tonelli, L., St. Peters, M., Leber, B.D., Bobulinski, M., Cordova, A., & Whitton, S. (2001). Community Based Premarital Prevention: Clergy and Lay Leaders on the Front Lines. *Family Relations, 50*, 67-76.
- Stanley, S. M., Markman, H. J., Saiz, C. C., Schumm, W. R., Bloomstrom, G., & Bailey, A. E. (2003). Building Strong and Ready Families: Interim Report. Washington D. C.: SAIC, Inc.
- Stefanone, M. A., Hurley, C. M., & Yang, Z. J. (2013). Antecedents of online information seeking. *Information, Communication & Society, 16*(1), 61-81.
- Stern, M. J., Cotton, S. R., & Drentea, P. (2012). The separate spheres of online health: Gender, parenting and online health information searching in the information age. *Journal of Family Issues, 33*(10), 1324-1350.
- Sullivan, K.T. & Bradbury, T. N. (1997). Are premarital prevention programs reaching couples at risk for marital dysfunction? *Journal of Consulting and Clinical Psychology, 63*, 24-30.
- Thomas, J., & Arcus, M. (1992). Family life education: An analysis of the concept. *Family Relations, 41*, 3-8.
- Tidline, T.J. (2005) Dervin's sense-making. In K. Fisher, S. Erdelez & L.E.F. McKechnie (Eds.), *Theories of information behavior*. (pp. 113-117). Medford, NJ: Information Today.
- U.S. Census Bureau. (2000). *American FactFinder: Community facts - Minnesota*. Retrieved April 16, 2014, from United States Census Bureau: [http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00\\_SF3/DP3/0400000US27](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00_SF3/DP3/0400000US27)
- Unger, D., & Wandersman, L. (1988). A support program for adolescent mothers: Predictors of participation. In D. Powell (Ed.), *Parent education as early childhood intervention: Emerging directions in theory, research and practice* (pp. 105-130). Norwood, NJ: Ablex.

- van der Molen, B. (1999). Relating information needs to the cancer experience: 1 - Information as a key coping strategy. *European Journal of Clinical Nutrition*, 8, 238-244.
- Wakimoto, J. C., Walker, D. S., & Dabbour, K. S. (2006). The myths and realities of SFX in academic libraries. *The Journal of Academic Librarianship*, 32(2), 127-136.
- Walker, S. (1996). *Use and outcome of a parent education newsletter series: Predictors from the social sciences*. University of Wisconsin, Madison.
- Weiss, H.B. (1987). Family support and education in early childhood programs. In S. Kagan, D. Powell, B. Weissbourd, & E. Zigler (Eds.), *America's family support programs: The origins and development of a movement* (pp. 21-37). New Haven, CT: Yale University
- Williamson, H. C., Trail, T. E., Bradbury, T. N., & Karney, B. R. (2014). Does premarital education decrease or increase couples' later help seeking? *Journal of Family Psychology*, 28(1), 112-117.
- Williamson, K. (1998). Discovered by chance: The role of incidental information acquisition in an ecological model of information use. *Library & Information Science Research*, 20(1), 23-40.
- Williamson, K. (2005). Ecological theory of human information behavior. In K. E. Fisher, S. Erdelez & L. E. F. McKechnie (Eds.), *Theories of information behavior* (pp. 128-132). Medford, NJ: Information Today, Inc.
- Wilson, T.D. (1999). Models in information behavior research. *Journal of Documentation*, 55(3), 249-270.
- Wilson, T.D. (2000). Human information behavior. *Informing Science*, 3(2), 49-55.
- Youcha, G. (1995). *Minding the children: Childcare in America from colonial times to the present*. New York: Schirbner.
- Yu, M. Y., & Wu, T. Y (2005). Factors influencing mammography screening of Chinese American women. *Journal of Obstetric, Gynecologic and Neonatal Nursing*, 34(3), 386-394.

## Appendices

Appendix A  
Information Behavior Questions

*Couples do many things to prepare for the arrival of their new child. We are interested in knowing what other resources **you** have used to prepare for your new role as a parent. Please do not answer for your spouse, unless you were involved in the activity together.*

Did you attend any pre- or post-birth classes other than the classes provided by this study?

1.     Yes             No

If your answer to this question is “yes,” please mark the types of class you attended (and who provided those classes) in the following list:

- a.    Prenatal or pregnancy education, given by \_\_\_\_\_
- b.    Infant or Child development, given by \_\_\_\_\_
- c.    General Parenting class, given by \_\_\_\_\_
- d.    Class for Fathers, given by \_\_\_\_\_
- e.    Class for Mothers, given by \_\_\_\_\_
- f.    Couple communication or enrichment class, given by \_\_\_\_\_
- g.    Health and safety class, given by \_\_\_\_\_
- h.    Other classes, (please specify) \_\_\_\_\_

What other resources have you used as you have prepared for being a parent?

- 2.    Television programs or video tapes
- 3.    Talking with family and friends
- 4.    Magazines
- 5.    Internet Resources (web sites, news groups, chat rooms, etc.)
- 6.    Books
- 7.    Health-care workers (physician, midwife, nurse practitioner, etc.)
- 8.    Brochures or newsletters
- 9.    Church or faith community
- 10.  Other: (Please specify) \_\_\_\_\_

## Information Behavior Categorization

### *Routine Information Sources*

2. Television programs or video tapes
3. Talking with family and friends
9. Church or faith community

### *Non-routine Information Sources*

1. Other pre- or post-birth classes
5. Internet Resources
7. Health-care workers

Print Material variable calculated from participants responses to the following:

4. Magazines
6. Books
8. Brochures or newsletters

### *Calculated Variables*

In the event of missing data for item 1, a participant's record for sub-items a-h was reviewed. An affirmative response to any of these eight items was coded as a "yes" answer to the first question.

A print material variable was calculated from individuals' responses to items 4, 6 and 8. An affirmative answer to any of these items was coded as a "yes" answer in a "print materials" variable.

## Appendix B

Infant Characteristics Questionnaire  
(Bates, Freeland, & Lounsbury, 1979)

On the following questions please circle the number that is most typical of your baby.  
“About average” means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

1	2	3	4	5	6	7
very easy			about average			difficult

2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?

1	2	3	4	5	6	7
very easy			about average			difficult

3. How easy or difficult is it for you to predict when your baby will become hungry?

1	2	3	4	5	6	7
very easy			about average			difficult

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

1	2	3	4	5	6	7
very easy			about average			difficult

5. How many times per day, on the average, does your baby get fussy and irritable—for either short or long periods of time?

1	2	3	4	5	6	7
never	1-2 times/day	3-4 times/day	5-6 times/day	7-9 times/day	10-14 times/day	More than 15

6. How much does your baby cry and fuss in general?

1	2	3	4	5	6	7
very little; much less than the average baby			average amount; about as much as the average baby			a lot; much more than the average baby

7. How did your baby respond to his/her first bath?

1	2	3	4	5	6	7
very well; baby loved it		neither liked nor disliked it		terribly; didn't like it		

8. How did your baby respond to his/her first solid food?

1	2	3	4	5	6	7
very favorably; liked it immediately		neither liked nor disliked it		very negatively didn't like it at all		

9. How does your baby typically respond to a new person?

1	2	3	4	5	6	7
almost always responds favorably		responds favorably about half the time		almost always responds negatively at first		

10. How does your baby typically respond to being in a new place?

1	2	3	4	5	6	7
almost always responds favorably		responds favorably about half the time		almost always responds negatively at first		

11. How well does your baby adapt to things (such as in items 7 – 10) eventually?

1	2	3	4	5	6	7
very well, always likes it eventually		ends up liking it about half the time		almost always dislikes it in the end		

12. How easily does your infant get upset?

1	2	3	4	5	6	7
very hard to upset – even by things that upset most babies		about average		very easily upset by things that wouldn't bother most babies		

13. When your baby gets upset, (e.g. before feeding, during diapering, etc.), how vigorously or loudly does he/she cry and fuss?

1	2	3	4	5	6	7
very mild intensity or loudness		moderate intensity or loudness			very loud or intense, really cuts loose	

14. How does your baby react when you are dressing him/her?

1	2	3	4	5	6	7
very well likes it		about average - doesn't mind it			doesn't like it at all	

15. How active is your baby in general?

1	2	3	4	5	6	7
very calm		average			very active and vigorous	

16. How much does your baby smile and make happy sounds?

1	2	3	4	5	6	7
a great deal, much more than most infants		an average amount			very little, much less than most infants	

17. What kind of mood is your baby generally in?

1	2	3	4	5	6	7
very happy and cheerful		neither serious nor cheerful			serious	

18. How much does your baby enjoy playing little games with you?

1	2	3	4	5	6	7
a great deal really loves it		about average			very little, doesn't like it very much	

19. How much does your baby want to be held?

1	2	3	4	5	6	7
wants to be free most of the time		sometimes wants to be held, sometimes not			a great deal - wants to be held almost all the time	

20. How does your baby respond to disruptions and changes in the everyday routine, such as when you go to church or a meeting, on trips, etc.?

1	2	3	4	5	6	7
			about average			
very favorably; doesn't get upset					very unfavorably gets quite upset	

21. How easy is it for you to predict when your baby will need a diaper change?

1	2	3	4	5	6	7
			about average			
very easy					very difficult	

22. How changeable is your baby's mood?

1	2	3	4	5	6	7
			about average			
Changes seldom, and changes slowly when s/he does change					changes often and rapidly	

23. How excited does your baby become when people play with or talk to him/her?

1	2	3	4	5	6	7
			about average			
very excited					not at all	

24. Please rate the overall degree of difficulty your baby would present for the average mother.

1	2	3	4	5	6	7
			ordinary, some problems			
super easy					highly difficult to deal with	

## Appendix C

Parenting Stress Index  
(Abidin, 1997)

The questions on the following pages ask you to mark an answer which best describes your feelings. While you may not find an answer that exactly states your feelings, please mark the answer which comes closest to describing how you feel. Your first reaction to each question should be your answer.

Please mark the degree to which you agree or disagree with the following statements by circling the number that best matches how you feel. If you are not sure, please fill in #3.

(Items marked with [R] were reverse coded before analysis.)

1. When my child wants something, my child usually keeps trying to get it.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. My child is so active that it exhausts me.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. My child will often stay occupied with a toy for more than 10 minutes. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. My child is much more active than I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. My child squirms and kicks a great deal when being dressed or bathed.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. My child can be easily distracted from wanting something. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. My child rarely does things for me that make me feel good.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. Most times I feel that my child likes me and wants to be close to me. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. Sometimes I feel my child doesn't like me and doesn't want to be close to me.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. My child smiles at me much less than I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. Which statement best describes your child?

1. Almost always likes to play with me.
2. Sometimes likes to play with me.
3. Usually doesn't like to play with me.
4. Almost never likes to play with me.

12. My child cries and fusses:

1. Much less than I had expected.
2. Less than I expected.
3. About as much as I expected.
4. Much more than I expected.
5. It seems almost constant.

13. My child seems to cry or fuss more often than most children.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

14. When playing, my child doesn't often giggle or laugh.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

15. My child generally wakes up in a bad mood.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. I feel that my child is very moody and easily upset.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. My child looks a little different than I expected and it bothers me at times.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. My child doesn't seem to smile as much as most children.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. My child does a few things which bother me a great deal.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

20. My child is not able to do as much as I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

21. My child does not like to be cuddled or touched very much.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

22. When my child came home from the hospital, I had doubtful feelings about my ability to handle being a parent.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

23. Being a parent is harder than I thought it would be.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

24. I feel capable and on top of things when I am caring for my child. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

25. Compared to the average child, my child has a great deal of difficulty in getting used to changes in schedules or changes around the house.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

26. My child reacts very strongly when something happens that my child doesn't like.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

27. Leaving my child with a babysitter is usually a problem.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

28. My child gets upset easily over the smallest thing.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

29. My child easily notices and overreacts to loud sounds and bright lights.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

30. My child's sleeping or eating schedule was much harder to establish than I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

31. My child usually avoids a new toy for a while before beginning to play with it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

32. It takes a long time and it is very hard for my child to get used to new things.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

33. My child doesn't seem comfortable when meeting strangers.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

34. When upset, my child is:

1. Easy to calm down.
2. Harder to calm down than I expected.
3. Very difficult to calm down.
4. Nothing I do helps to calm my child.

35. I have found that getting my child to do something or stop doing something is: [R]

1. Much harder than I expected.
2. Somewhat harder than I expected.
3. About as hard as I expected.
4. Somewhat easier than I expected.
5. Much easier than I expected.

36. Think carefully and count the number of things that your child does that bothers you. Please circle the number that includes the number of things you counted.

1. 1-3
2. 4-5
3. 6-7
4. 8-9
5. 10+

37. When my child cries it usually lasts:

1. Less than 2 minutes.
2. 2-5 minutes.
3. 5-10 minutes.
4. 10-15 minutes.
5. More than 15 minutes.

38. There are some things my child does that really bother me a lot.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

39. My child has had more health problems than I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

40. My child turned out to be more of a problem than I had expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

41. My child seems to be much harder to care for than most.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

42. My child makes more demands on me than most children.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

43. I can't make decisions without help.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

44. I have had many more problems raising children than I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

45. I enjoy being a parent. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

46. I feel that I am successful most of the time when I try to get my child to do or not to do something. [R]

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

47. I often have the feeling that I cannot handle things very well.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

48. When I think about myself as a parent I believe:

1. I can handle anything that happens.
2. I can handle most things pretty well.
3. Sometimes I have doubts, but find that I handle most things without any problems.
4. I have some doubts about being able to handle things.
5. I don't think I handle things very well at all.

49. I feel that I am:

1. A very good parent.
2. A better than average parent.
3. An average parent.
4. A person who has some trouble being a parent.
5. Not very good at being a parent.

50. How easy is it for you to understand what your child wants or needs?

1. Very easy.
2. Easy.
3. Somewhat difficult.
4. It is very hard.
5. I usually can't figure out what the problem is.

51. It takes a long time for parents to develop close, warm feelings for their children.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

52. I expected to have closer and warmer feelings for my child than I do and this bothers me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

53. Sometimes my child does things that bother me just to be mean.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

54. When I was young, I never felt comfortable holding or taking care of children.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

55. My child knows I am his or her parent and wants me more than other people. [R]

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

56. Most of my life is spent doing things for my child.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

57. I find myself giving up more of my life to meet my children's needs than I ever expected.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

58. I feel trapped by my responsibilities as a parent.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

59. I often feel that my child's needs control my life.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

60. Since having this child I have been unable to do new and different things.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

61. Since having a child I feel that I am almost never able to do things that I like to do.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

62. When I think about the kind of parent I am, I often feel guilty or bad about myself.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

63. I am unhappy with the last purchase of clothing I made for myself.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

64. When my child misbehaves or fusses too much I feel responsible, as if I didn't do something right.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

65. I often feel guilty about the way I feel towards my child.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

66. There are quite a few things that bother me about my life.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

67. I felt sadder and more depressed than I expected after leaving the hospital with my baby.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

68. I wind up feeling guilty when I get angry at my child and this bothers me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

69. After my child had been home from the hospital for about a month, I noticed that I was feeling more sad and depressed than I had expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

70. Since having my child, my spouse/partner has not given me as much help and support as I expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

71. Having a child has caused more problems than I expected in my relationship with my spouse/partner.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

72. Since having a child my spouse/partner and I don't do as many things together.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

73. Since having my child, my spouse/partner and I don't spend as much time together as a family as I had expected.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

74. Since having my child, I have had less interest in sex.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

75. Having a child seems to have increased the number of problems we have with in-laws and relatives.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

76. Having children has been much more expensive than I had expected.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

77. I feel alone and without friends.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

78. When I go to party I usually expect not to enjoy myself.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

79. I am not as interested in people as I used to be.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

80. I often have the feeling that other people my own age don't particularly like my company.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

81. When I run into a problem taking care of my children I have a lot of people to whom I can talk to get help or advice. [R]

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

82. Since having children I have a lot fewer chances to see my friends and to make new friends.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

83. During the past six months, I have been sicker than usual or have had more aches and pains than I normally do.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

84. Physically, I feel good most of the time. [R]

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

85. Having a child has caused change in the way I sleep.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

86. I don't enjoy things as I used to.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

87. Since I've had my child: [R]

1. I have been sick a great deal,
2. I haven't felt as good,
3. I haven't noticed any change,
4. I have been healthier.

## Appendix D

Social Support Network Inventory  
(Flaherty, Gaviria, & Pathak, 1983)

We are interested in finding out the extent to which significant people in your life are helping you cope with the challenges of parenting and caring for a child. For the individuals listed, please respond to the questions below by circling the appropriate numbers.

How comfortable are you with discussing feelings or thoughts about your experience as a parent with each of the following individuals?

	Very Uncomfortable						Very Comfortable
1. Spouse/Partner	1	2	3	4	5	6	7
2. Mother	1	2	3	4	5	6	7
3. Father	1	2	3	4	5	6	7
4. Boss at work (if employed)	1	2	3	4	5	6	7
5. One other significant person, e.g., friend or relative	1	2	3	4	5	6	7
	(Specify relationship _____)						

To what extent does each of the following individuals provide practical help (e.g., material things, loaning things, practical advice)?

	Very Little						Very Much
6. Spouse/Partner	1	2	3	4	5	6	7
7. Mother	1	2	3	4	5	6	7
8. Father	1	2	3	4	5	6	7
9. Boss at work (if employed)	1	2	3	4	5	6	7
10. Significant person previously identified	1	2	3	4	5	6	7

To what extent do each of the following individuals give you emotional support by listening, talking, consoling or just being with you?

	Very Little						Very Much
11. Spouse/Partner	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
12. Mother	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
13. Father	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
14. Boss at work (if employed)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
15. Significant person previously identified	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>

Most people who become new parents experience occasional anxieties about their competence, ability, or self-worth. To what extent have each of the following individuals reassured you in this area or would do that if you needed it?

	Very Little						Very Much
16. Spouse/Partner	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
17. Mother	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
18. Father	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
19. Boss at work (if employed)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
20. Significant person previously identified	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>