Assessing the Influences on Rural Women's Reproductive Life Plans: A Cross Sectional Descriptive Study

Lori May Jagoda, MS, RN, PHN [1]

Jeri L Bigbee, PhD, RN, FAAN [2]

[1] Clinical Nurse Director, WellSpace Health, ljagoda@wellspacehealth.org

[2] Adjunct Professor Betty Irene Moore School of Nursing at UC Davis, jlbigbee@ucdavis.edu

Abstract

Purpose: This study explored the influences on rural women's reproductive life planning (RLP). **Methods:** Thirty rural, non-pregnant, English-speaking women, age 18-35 years, living in two Northern California counties participated in a cross-sectional descriptive study based on the Health Promotion Model (HPM). Data were collected in a local beauty salon using an iPad and an anonymous on-line survey, which included basic demographic information, reproductive plans, contraceptive use, pregnancy readiness, and usefulness of the survey. **Findings:** Participants were predominantly single, white, educated, religious, long-term rural residents with health insurance, regular healthcare providers, and a desire to have children in the future. Although most felt they would feel "very happy" or "fairly happy" if they were pregnant now, 64% reported they were not ready or unsure if ready for a pregnancy. Forty-seven percent were currently using contraception and 81% reported a history of using birth control. Reasons for discontinuing contraception included side effects (80%), dislike of the method (58%), and/or forgot to use it (32%). Reasons for never having used contraception included a personal health issue and confidentiality concerns. Eighty percent reported religion played some role in of their

daily lives. The majority provided positive feedback regarding the understandability and usefulness of the survey.

Conclusions: Results support RLP usefulness and acceptability among rural women, consistent with the HPM. Further research is indicated examining the observed discontinuity of sexually active women reporting they do not want to get pregnant, yet are not using contraception; the influence of religious/spiritual beliefs on reproductive planning; and the effectiveness of reproductive life planning in reducing unplanned pregnancies. Nurses, with a focus on person/family-centered health promotion, should serve as leaders in promoting reproductive life planning. Policy implications include instituting culturally-tailored RLP as a reimbursed component of care that is routinely provided by nurses and other health care providers.

Keywords: Reproductive life planning, rural, women, Health Promotion Model

Assessing the Influences on Rural Women's Reproductive Life Plans: A Cross Sectional Descriptive Study

During the twentieth century, a hallmark of family planning included a woman's increased ability to achieve desired birth spacing and family size (Centers for Disease Control and Prevention [CDC], 1999). One of the top ten greatest public health achievements during the twentieth century was the significant improvement in reproductive health (CDC, 1999).

The advent of more effective birth control empowered women with the means to make informed decisions regarding family planning and to prevent unintended pregnancies (CDC, 1999). An unintended pregnancy is defined as a pregnancy that is mistimed, unplanned, or unwanted at the time of conception (CDC, n.d.). About 5% of reproductive aged women in the

United States have an unintended pregnancy each year, with 27% of all pregnancies reported as mistimed and 18% unwanted (Guttmacher Institute, 2016).

To ensure planned pregnancies, it is crucial that effective tools are available that promote reproductive health and life planning. One identified tool is a Reproductive Life Plan (RLP) which starts the conversation between women, their partners, and their health care providers regarding pregnancy intentions in the context of their personal values and life aims.

Many factors can influence women's reproductive health decision-making processes including social norms, cultural, physical, and social environments, and national health policies (Hawks, Madanat, Merrill, Goudy, & Miyagawas, 2002; Orleans, 2000). Because of their unique environment, rural women may experience unique influences in comparison with women in urban settings.

Nurses play an essential role in promoting reproductive health. As such, nurses need to understand the unique influences women experience when making reproductive decisions. The purpose of this study was to explore what these influences may be for rural women through a cross-sectional descriptive study, using a specifically designed survey based on the Health Promotion model (HPM) (Pender, Murdaugh, & Parsons 2011).

Background and Conceptual Framework

The literature related to the origin and concept of reproductive life planning along with women's reproductive health decision-making has identified a variety of potential influences for consideration. Previous research, particularly related to rural women and families, is limited. The theoretical basis of this area of study has also received little attention. The following provides a critical review of the historical, empirical, and conceptual literature to date related to reproductive life planning among rural women.

Influences on Women's Reproductive Health Decision-Making

Rural women's reproductive health decision-making processes may be influenced by a variety of factors, including the sociopolitical history of reproductive health, the perception of empowerment for women, the stages of women's development, and rural culture.

History of contraception and reproductive health. Women's reproductive health and health care in the U.S. have been impacted by powerful historical events and trends. One of the most significant trends was the development of effective birth control methods. Effective birth control is defined as a contraceptive method resulting in a pregnancy rate of fewer than 10 pregnancies per 100 woman-years and was not widely available to women until 1960. Prior to modern contraception, withdrawal, abstinence, abortion, and sterilization were the only existing family planning methods (Our Bodies Ourselves, 2014; Zurawin, 2012). Since the 1970's, birth control has become more widely available, with more effective methods introduced as well as emergency contraception for contraceptive accidents or non-use (Our Bodies Ourselves, 2014).

In spite of the advances in contraception, during the 20th century many American women continued to have more children than they wanted, with research identifying that women with lower socioeconomic status experienced inequitable access to contraceptives. Research also identified an association between unintended pregnancy, increased poverty, and dependence on public assistance programs, resulting in the reduction of women's opportunities to participate in the workforce or complete an education (Gold, 2001).

In response to the research, in 1965 the Federal Government developed grants to support the provision of family planning services as part of the Johnson administration's War on Poverty

that culminated with the enactment of Title X of the Public Health Service Act in 1979. The Title X program remains central to the national effort, and is the only federal program dedicated solely to family planning (Gold, 2001), with other federal programs, including Medicaid, and state/local funds available to subsidize family planning.

Empowering women. While affordable, effective, and available contraception is essential to unintended pregnancy prevention, empowerment is also key to women achieving their reproductive life goals. The working definition of women's empowerment includes having decision-making power, access to information and resources, a variety of options to choose from, the ability to make changes in one's life, the ability to learn skills a woman defines as important, and the means to increase positive self-image and overcome stigma (Chamberlin, 2013). Empowerment is a process rather than an event (Chamberlin, 2013) and is a multi-leveled concept with environmental, cultural, and historical factors playing important roles that influence one's perception of empowerment (Sadan, 2004).

Women's development. A woman's current stage of development is another key element to consider in reproductive life planning (Schuiling & Low, 2006). Young adult women may face a variety of social, cultural, and economic challenges that may influence achieving their reproductive goals. An important factor to consider regarding reproductive health decision-making is moral/spiritual development which may be related to the physical and social environment (Milestones of Human Development, 2012). A 2011 Guttmacher Report examined the impact of spiritual and religious beliefs on reproductive age women's contraceptive use and found that the majority of reproductive aged women (age 15-44) had a religious affiliation, attended religious services at least once a month, and indicated religion is very important in their daily lives (Jones & Dreweke, 2011). Evangelical women of reproductive age who reported

never having had sex were more likely to give religious or moral reasons as their primary reason for abstinence (Jones & Dreweke, 2011). Among sexually experienced women, 99% had used a contraceptive method other than natural family planning, with a woman's religious service attendance or importance of religion to her daily life unrelated to her use of highly effective contraceptive methods (Jones & Dreweke, 2011). In addition, Srikanthan and Reid (2008) reported both religious and cultural factors have the potential to influence the acceptance and use of contraception by couples.

Rural influences. The literature has established that place matters, however little research dedicated to rural women and their reproductive health needs has been reported. Rural culture, economics, and health care—specifically reproductive health care—are important factors to consider. Rural communities have a unique but diverse culture with distinct features, each possessing a variety of distinctive strengths and challenges (Kouame, 2010). Hallmarks of rural America include: low population density, limited available services, challenging geographic distance or terrain, limited transportation services, larger proportions of elderly, higher unemployment and underemployment rates, higher percentages of low-income, uninsured and underinsured individuals, and a higher percentage of minorities (Hart, Larson, & Lishner, 2005; Kouame, 2010; National Rural Health Association [NRHA], 2013). Social isolation and higher prevalence rates of substance abuse, domestic violence, chronic illness, unintended injuries, and premature deaths are common in rural areas (Kouame, 2010; NRHA, 2013). On average, rural women are less likely to engage in preventive and health promotion behaviors, including mammography, cervical cancer screening, and prenatal care and are more likely to engage in high-risk behaviors such as smoking, lack of seat belt use, and lack of regular exercise (Leipert, Leach, & Thurston 2012; NRHA, 2013).

In contrast to urban communities, rural cultures often have distinctive religious, political, and cultural influences (Kouame, 2010). Rural residents are generally more religious (Dillon & Savage, 2006), morally conservative, and family-oriented, adhering to traditional values (Gimpel & Karnes, 2006). However, many—although a minority—avoid church and religious involvement and hold more liberal values (Dillon & Savage, 2006). In regards to political affiliation, political conservatives are more concentrated in rural areas (Pew Research Center, 2014). Local religious, cultural, and political systems may influence the contraceptive choices available to rural women (Srikanthan & Reid, 2008), shaping the family planning and reproductive health care services available to them.

Another important element of rural culture is the social dynamics. Living in a rural community promotes familiarity among residents and can be viewed as both a strength and a challenge. The perceived and genuine lack of anonymity in some communities (especially where health care and social services are scarce) is a significant barrier to consider when accessing health care, particularly reproductive health care. Frequently, professional-patient relationships overlap, with health care providers being related to or participating in many of the same social activities as their patients. These multiple relationships can enhance as well as complicate the provision of care with rural providers often possessing a level of knowledge of their patients that is unlikely to occur in most other settings (Klugman & Dalinis, 2008).

Rural reproductive health research. Few studies exist that focus on rural U.S. reproductive health care. Martin, Damm, Hellerstedt, and Gilliam (2014) support this observation, stating urban/rural differences have been an under-recognized factor shaping the dynamics of U.S. family planning care. Kitsantas, Gaffney, and Cheema (2012) compared prenatal care between rural and urban women with high-risk pregnancies and found no

difference in rates of unintended pregnancy between the two groups. Both rural and urban women experienced a significantly increased risk of not starting early prenatal care if they did not have a Medicaid card, did not have available childcare, had too many things going on, or did not want anyone to know they were pregnant. Having two or more of these barriers increased the risk of starting prenatal care late by 2.85 times for rural women and 2.01 times for urban women. McCall-Hosenfeld and Weisman (2011) found rural women were less likely to report receiving preventive counseling services; predictive factors to receiving counseling included younger age, higher educational level, having continuous health insurance coverage, seeing an obstetrician/gynecologist, and having the need for counseling, such as smoking status or obesity (McCall-Hosenfeld & Weisman, 2011). Campo, Askelson, Spies, and Losch (2010) found significant barriers to preventing unintended pregnancy and contraceptive use for rural young adults included the cost of contraception, fear of parents knowing about contraceptive use, alcohol use, lack of planning, inconsistent use and forgetting or difficulty using particular methods, such as oral contraceptives.

Reproductive Life Planning

In 2006 the CDC published official recommendations to improve preconception health and health care including the recommendation for every woman, man, and couple to develop a Reproductive Life Plan (RLP). A Reproductive Life Plan is a patient-centered blueprint that takes into consideration the stages of the woman's development, her future intentions for children (CDC, 2006) and her intentions for the number and timing of pregnancies in relation to personal values and life goals (CDC, 2007). It outlines a plan to achieve those goals (Files et al., 2011), with a focus on the specific health, economic, social, and cultural issues pertinent to the individual.

Research on reproductive life planning. The current state of the science regarding reproductive life planning is limited. Five studies found in the literature (Bello, Adkins, Stulberg, & Rao, 2013; Bommaraju, Malat, & Mooney, 2015; Dunlop, Logue, Miranda, & Narayan, 2010; Moos, Bangdiwala, Meibohm, & Cefalo, 1996; Stern, Larsson, Kristiansson, & Tyden, 2013) came to a number of important conclusions. First, exposure to preconceptional health information during routine family planning visits might affect the intendedness of subsequent pregnancies. Second, both patients and providers reported that reviewing the patient's reproductive plans was important in their health care visits. Both patients and providers reported the reproductive life plan presented new and thought-provoking material that promoted patient participation and facilitated counseling during the appointment. Finally, study results suggest that using a reproductive health self-assessment tool may activate women to participate more fully in their health care, including contraceptive choice and continuity (Bello et al., 2013). Reproductive life planning may empower women by helping them understand what aspects of reproduction they can control—such as lifestyle habits--and those they cannot—such as declining fertility with advancing age (Stern et al., 2013). In a large 2105 study, Bommaraju and colleagues (2015) looked at RLP counseling and effective contraceptive use among urban women served by one Title X clinic. Results indicated RLP counseling did not encourage effective method use. However, a major limitation noted by the authors was the lack of fidelity related to the RLP intervention, with no standardized curriculum used and reliance on the providers reporting they discussed RLP with their clients. Additional limitations were that no input from the consumers was included and that the sample only included women receiving services at an urban Title X clinic.

Reproductive life planning tools. While the research suggests the importance of reproductive life planning, very few evaluated assessment tools are available, as suggested by the Bommaraju et al. study (2015). The "Life Plan Booklet" is one available tool (Thompson & Archer, 2012) which covers a range of topics related to preconception health and well-being, including future dreams, financial security, alcohol and tobacco use, and family planning. The evaluation of the booklet indicated that women felt positively about the tool, reporting a sense of empowerment after reading it and that articulating goals and writing them down made the goals tangible and made the women feel accountable to work towards achieving them. The positive reports regarding the usefulness of a Reproductive Life Plan support the need for further development of effective reproductive life planning tools and improved ways to administer and evaluate them.

Conceptual Framework

Pender's HPM was used as the conceptual framework for this study. This well-established model states that biological, psychological, and socio-cultural factors can influence behavior and decision-making (Pender et al., 2011). The HPM's theoretical propositions are applicable to reproductive life planning and rural women. The specific HPM elements relevant to this study include the following:

- Prior related behavior (past contraceptive use)
- Personal factors (age, race, ethnicity, educational level, religious beliefs)
- Perceived barriers (insurance status, cost of contraceptives)
- Perceived self-efficacy (current contraceptive use)
- Activity-related affect (readiness and feelings if learned pregnant today)
- Interpersonal influences (family, health care providers)

One previous application of the HPM to reproductive health (Baheiraei, et al., 2011) identified health-promoting behaviors of reproductive aged women and their determinants. Proposed determinants, or influences, included perceived social support, sociodemographic characteristics (including age, marital status, education, occupation, sufficiency of income for expenses), and primary support source (A. Baheiraei, personal communication, December 21, 2014). Identifying the health-promoting behaviors of reproductive aged women and their determinants need consideration if preventive strategies and interventions are to be effective in promoting women's health (Baheiraei, et al., 2011).

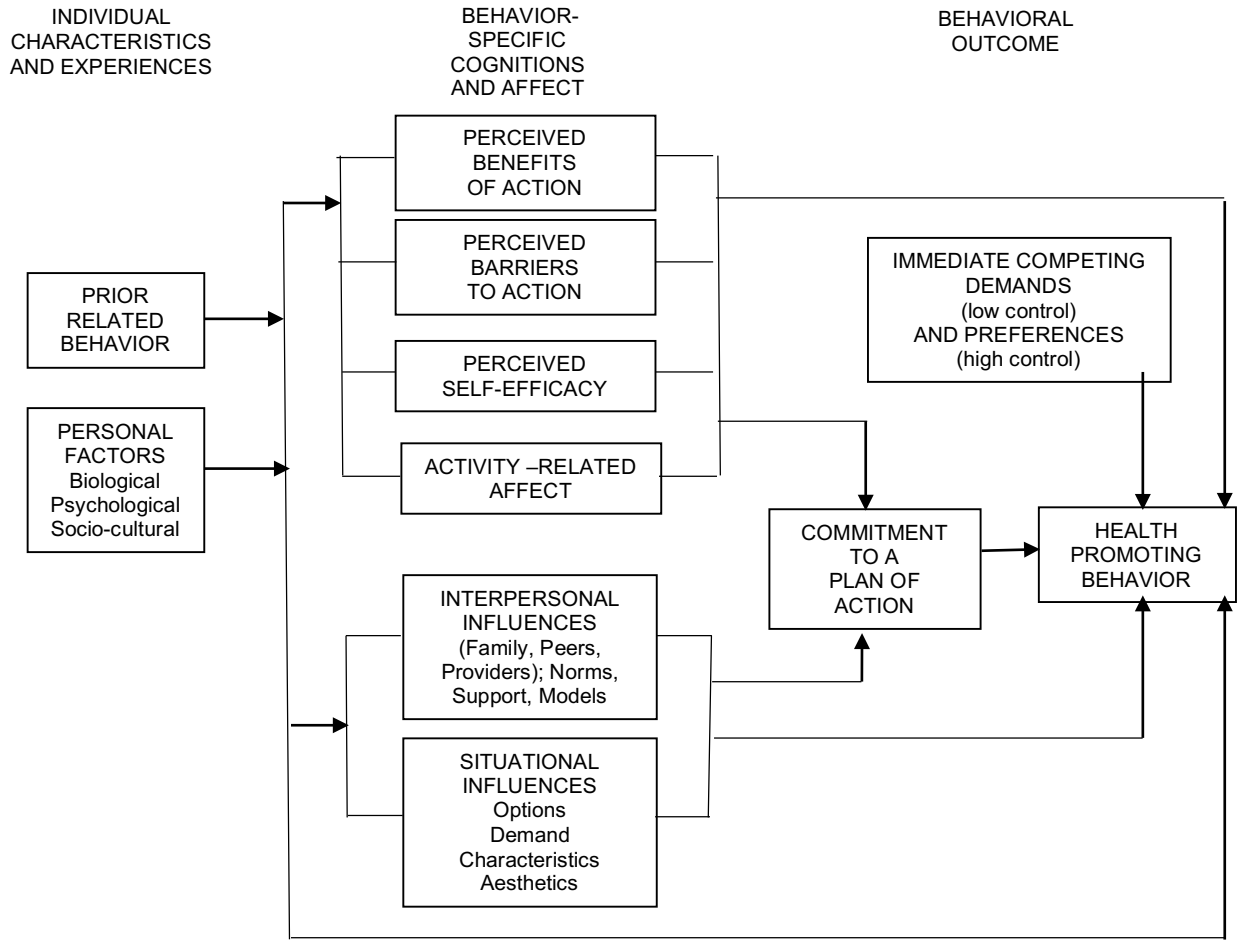

Figure 1. Health Promotion Model Diagram. Reprinted with permission from http://deepblue.lib.umich.edu/handle/2027.42/85351.

Purpose Statement

Given the uniqueness of rural cultures, the purpose of this study was to explore the influences on reproductive life planning among rural, young adult women.

Methodology

The study used a cross-sectional, quantitative, descriptive design and a survey instrument developed based on samples found in the literature and the conceptual framework. The population sampled included residents of two rural Northern California counties, both classified as nonmetropolitan counties consistent with current rural/urban definitions (United States Department of Agriculture Economic Research Service [USDA ERS], 2013). The two counties had similar age and race/ethnic distributions, education/income levels, and political makeup with the majority of the population over the age of 65 years, white, with a high school education, and registered voters with the Republican Party. However, County B had a much higher percentage of religious affiliation in 2010 with 69% of residents affiliated with a religious organization compared to County A (24%) and California as a whole (45%). Of the 69% in County B, the majority (80%) were Catholic, followed by Evangelical Protestant (Association of Religious Data Archives [ARDA], 2010). The predominant religious group in County A was also Catholic, followed by Evangelical Protestant, the Church of Jesus Christ of Latter-day Saints, and mainline Protestant (ARDA, 2010).

Data were collected at a beauty salon located in County A, which provided access to community-based participants who may or may not be motivated to seek health care or have access to health care services. The salon catered to a younger population with seven of the eight stylists between the ages of 18 and 35 years. One stylist was fluent in Spanish. Inclusion criteria were females, non-pregnant, age 18-35 years, English speaking and reading, and living in

County A or B. Exclusion criteria were non-English speakers, pregnant women, women who could no longer bear children, and non-County A or B residents. Given time and resource constraints, the sample size was limited to 30 women and included both stylists and customers. Thirty-three surveys were completed with three surveys excluded from the analysis; two participants reported their age as older than 35 years and one reported residency outside of County A or B. Two women identified as eligible to participate declined, for a refusal rate of 6%. One hundred percent of those eligible who agreed to participate completed the survey.

No suitable established tool was available to measure rural women's reproductive life planning, thus constructing a new tool for this study was necessary (the tool is available upon request). Based on the HPM, the intent was to identify background or modifying factors having the potential to influence rural women's reproductive life planning. The proposed modifying factors included demographic characteristics (age, education, relationship status, and race/ethnicity); prior related behavior (past contraceptive use); situational factors (current health insurance status, county of residence, and current number of children); current behavioral factors (current contraceptive use, importance of pregnancy planning, current readiness for children, reaction if learned she was pregnant today, and ideal number/spacing of future pregnancies); and interpersonal influences (how important religion was to their daily life, and having a regular source of health care). Finally, questions were incorporated addressing the woman's perception of the tool's overall usefulness when thinking about her future family plans. The instrument was administered electronically using Qualtric and allowed the use of the program's branching function, or skip logic so participants only viewed the questions relevant to them. The survey questions were primarily multiple-choice with some fill-in-the-blank and had a Flesch-Kincaid reading grade level of 4.2. The instrument was reviewed and critiqued by research colleagues

specializing in rural nursing, primary care, and psychology. The instrument was then pre-tested with a small sample of rural women. Final revisions were made based on the feedback received.

To protect the confidentiality of participants, all potential participants received a flyer upon entering the salon describing the purpose of the study, the eligibility criteria, and a request for participation. If a woman agreed to participate and was eligible, she completed the on-line survey using an iPad provided by the investigator. When finished, she received a preconception health pamphlet titled "Show Your Love! Steps to a Healthier Me!" (http://www.cdc.gov/preconception/showyourlove/documents/trifoldhealthierbaby-me508.pdf) modified to reflect "health care provider" rather than "physician" as the source of health care (with permission from the CDC) and a small thank you gift.

Approval was obtained from the University of California, Davis Institutional Review Board prior to data collection (ID#625011-2). Participation was voluntary and anonymous. To ensure anonymity, signed consents were not obtained; however, a consent information sheet was provided. Identifiable data traceable to individual participants were not collected. Participants were informed they could skip any of the questions they did not want to answer and could stop the survey at any time. Although there was minimal risk to participants in this study, there was a potential risk of psychological stress secondary to answering personal questions. The PI was an experience registered nurse who monitored participants during the data collection for stress symptoms and could stop the survey and provide referrals to local resources as needed. The data were entered into an Excel spreadsheet and analyzed using descriptive statistics. For continuous variables, means, standard deviations, and ranges were computed. For categorical variables, frequencies and percentages of responses were compiled. Qualitative comments were compiled as stated by the participants.

Results

The sample included predominantly single, white, educated, religious young adult women who were long-term rural residents, with health insurance and a regular healthcare provider (See Table 1). Sixty-three percent of the participants lived in County A with the majority (95%) having lived there for more than one year. Most were high school graduates and had completed some post-secondary education (80%). Regarding the importance of religion, only 20% reported it was not at all important in their daily life. Eighty percent of the women reported they had health insurance and two-thirds (67%) reported having a regular healthcare provider. Of the 30 participants, 53% (n = 16) reported currently having children with the majority their biological children. The range of the current number of children was one to four. Of those who currently had children, 63% (n=10) indicated that they wanted to have more. Of this 63%, most reported wanting one or two more children and indicated they wanted to wait one to eight years between births of future children with a mean of 4.10 years (SD = 2.3).

Of the 47% (n=14) who reported that they currently did not have children, only one participant reported she did not want to have children in the future. The most frequent answer to the question "How many children do you want to have?" was two. One participant reported she was not sure and none of the women reported wanting more than three. When asked about birth spacing, those who currently did not have children but desired them in the future reported wanting to space children by one to three years with a mean of 2.09 years (SD = .54). The majority of those who currently did not have children reported they wanted to have their first

child one to five years from now. Of all the participants who desired children in the future (n=23), 43% reported wanting to finish childbearing by age 30 and 43% by age 35 years.

Table 1

Characteristics of Study Participants

Future Family Plans Survey N=30			
Variables	n	%	M (SD)
Age			26.7 (5.6)
18-20	5	16	
21-23	3	10	
24-26	8	27	
27-29	5	16	
30-32	1	3	
33-35	8	27	
County of residence			
County A	19	63	
County B	11	37	
Education			
Less high school	0	0	
High School	1	3	
Some college	24	80	
Bachelor's or higher	5	17	
Marital status			
Married/domestic partner	11	37	
Single (never married)	17	57	
Divorced	2	7	
Widowed	0	0	
Separated	0	0	
Race/ethnicity			
White	20	67	
Hispanic or Latino	7	23	
African-American/AA	0	0	
Native American or American Indian	1	3	
Asian/Pacific Islander	0	0	
Something else	2	7	

Thirteen percent reported they wanted to finish childbearing by age 40 years and none responded by age 25 years or age 45 years.

When asked how ready they would be if they learned they were pregnant today (N=30), more reported feeling "not ready" than "ready" with 17% unsure (See Figure 2). More women reported they would feel "very happy" or "fairly happy" versus "very unhappy" or "fairly unhappy" if they learned they were pregnant today (See Figure 3). Finally, when asked how important it was for them to not get pregnant, only 17% reported it was not important and none responded "not sure" (see Figure 4).

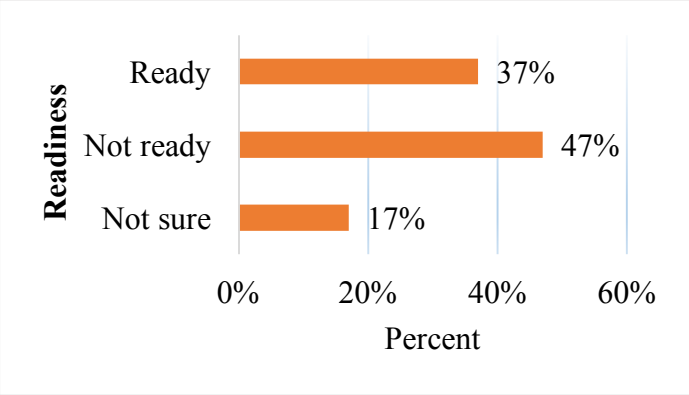

Figure 2. Pregnancy Readiness (N=30)

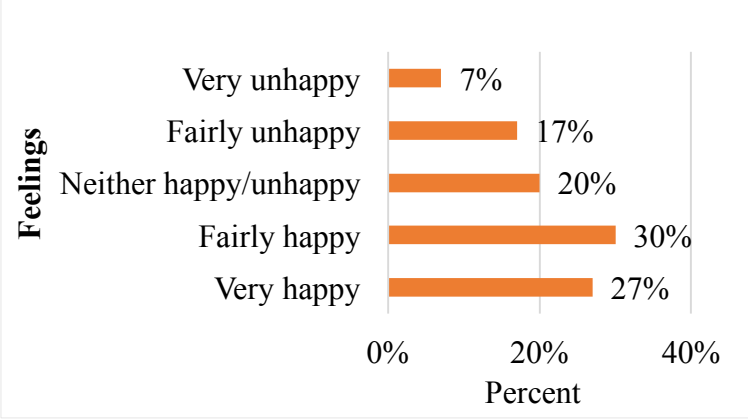

Figure 3. Feelings if Learned Pregnant Today (N=30)

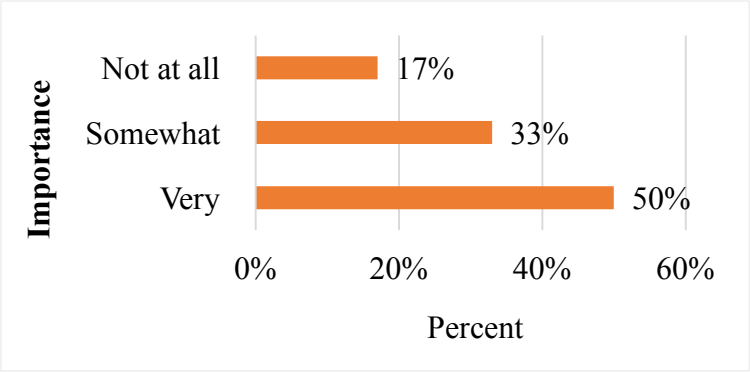

Figure 4. Importance of Not Getting Pregnant (N=30)

Of the 30 participants, 47% (n=14) reported that they were currently using a method of birth control and 53% (n=16) were not. A variety of birth control methods were listed with multiple responses allowed by the participant (e.g. participant could choose both birth control pills and condoms as current methods of birth control). Of the methods being currently used, birth control pills (29.6%), and condoms (29.6%) were the most frequently reported, followed by abstinence (18.5%). One participant reported an "other" method (3.7%) which she declined to describe.

Of the 16 participants who were not currently using birth control, 13 (81%) reported having used it in the past. Those who reported currently or ever having used birth control (n=27) were asked if they had ever stopped using a method, with 96% (n=26) responding affirmatively. The top three reasons reported for stopping a method were side effects (80%), didn't like using it (58%), and forgot to use (32%). Four participants responded "another reason" for stopping their method of birth control, reporting in narrative format "no need to be on it" (n=1), "lowered sex drive significantly" (n=1), "not sexually active at the moment" (n=1), and " I was taking it for regulating purposes and no longer needed it" (n=1) as the other reasons. Of the three women who reported never using a method of birth control, reasons reported were "I didn't think it was

healthy to use" (n=1), "didn't think I could use for medical reasons" (n=1), and "afraid someone would find out" (n=1).

Finally, participants were asked a series of questions evaluating the survey overall. When asked how difficult it was to complete, 97% responded it was "very easy" and 3% "somewhat easy". All thirty participants reported the questions were "very understandable" and 100% indicated that the survey was "somewhat" or "very interesting". When asked how helpful the survey was in assisting them in thinking about their future family plans, 98% (n=29) felt it was "very" or "somewhat helpful".

Additional Findings

Of the 16 women reporting that they were not currently using birth control, five (31%) reported it was "very important" and seven (44%) reported it was "somewhat important" not to get pregnant right now. Of the 10 women reporting they wanted to wait one to five years or more before having a child, half were currently not using a method of birth control. Ten (83%) of the twelve women who indicated that religion was a "very" or "fairly important" part of their daily life reported they were not currently using a method of birth control.

Discussion

The purpose of this cross-sectional descriptive study was to explore the potential influences on reproductive life planning among rural young adult women, using a specifically designed survey based on the HPM.

Strengths of this study included the fact that 100% of the women who started the survey completed it and only two women who were eligible to take the survey declined. The iPad proved to be an effective method to administer the survey, maintaining privacy and ease of use for the participants. In addition, using the Qualtric software program's skip logic was very

effective in targeting appropriate questions for each individual and helped ensure effective use of the participant's time with only questions relevant to that woman asked. The women completing the survey were generally open to the questions asked with only seven "decline to answer" responses documented regarding methods of birth control currently in use or used in the past. The data collection location was creative in that it was not a health care facility, with participants recruited who may not be motivated and/or able to access reproductive health care services. The ethnic diversity in the sample, the fact that participants were rural women—a frequently overlooked population in research—and that religious influence was included as a variable were additional strengths. Finally, the survey included questions about the importance of not getting pregnant and what their feelings would be if they learned they were pregnant today, two variables not found in prior studies.

Limitations of this study included the small sample drawn from only one geographic area, limiting the generalizability of the findings given the diversity of rural populations. Although small, the sample did reflect the rural population from which it was drawn. The survey also did not ask County B participants how long they had lived in their community. The scope of the survey did not include men, nor prior unintended pregnancy.

Discussion of Findings in Relation to Previous Research and Conceptual Framework

The results of this study reflect the findings of previous research (Bello et. al, 2013; Campo et al, 2010; Dunlop et. al, 2010; Stern et. al, 2013) suggesting that rural women in this study were similar to other study participants in regards to their future family plans. For example, 57% percent of the women in this study who did not have children reported they wanted to wait one to five years before having a child, similar to Dunlop et al.'s (2010) results where 30.6% of urban participants indicated they wanted to wait a year or more before having a child. Of those women

who expressed a desire to wait a year or more before having a child in the Dunlop study, 45% were at risk for unintended pregnancy. Fifty percent of similar participants in the current study were also not currently using a method of birth control. In Stern et al.'s (2013) study, the mean preferred age of urban women for last child was 34-35 years, consistent with the results of this study where 86% of the participants reported wanting to finish childbearing by age 30 or 35 years. Barriers to contraceptive use reported in this study were also consistent with Campo et al.'s (2010) findings, where common barriers to effective contraceptive use for young rural women were expense, inconsistent use (i.e. "forgetting to use"), and side effects. Additionally, reasons reported for never having used birth control in this sample were consistent with Campo et al.'s (2010) findings. The majority of participants in the current study responded favorably to the reproductive life planning survey, demonstrating acceptability levels consistent with Bello et al. (2013), Dunlop et al. (2010), and Stern et al.'s (2013) previous findings.

The prior reproductive life planning studies did not address the influence of religion. However, the rural sociological literature suggests religion is an important influence for many rural women (Dillon & Savage, 2006). This study's findings offer support to that premise; the majority of participants revealed religion played an important role in their daily lives, suggesting personal religious/spiritual beliefs may be an important influence on behavior and reproductive decision-making among rural women. The 2011 Guttmacher study reported a large majority of sexually active women of all religious denominations, urban and rural, practiced contraception and used highly effective methods (Jones & Dreweke, 2011). Although this study did not ask about specific religious affiliation, of the 17 women who reported that religion was "very important" or "fairly important" in their daily lives, the majority (59%) reported they were not

currently using birth control. Further research examining whether religious influence is greater for rural women is suggested.

In summary, the rural women in this study gave similar responses to rural and urban women described in other studies (Bello et. al, 2013; Campo et al, 2010; Dunlop et. al, 2010; Stern et. al, 2013). An important finding in all of the research is that many women who indicate that it is important they not become pregnant now are at risk of unintended pregnancy. This is in spite of having health care coverage, a regular health care provider, and access to contraceptives. It is vital that health care providers address this inconsistency, by asking the important questions at each encounter about the individual's pregnancy intentions, what she/he is doing to accomplish that goal, as well as identifying the barriers and benefits for each individual woman/man/couple to achieve their personal reproductive goals.

Furthermore, the findings lend support to using the Health Promotion Model framework as a relevant model for future research to identify potential influences on health behavior. For example, the HPM framework states one primary source of interpersonal influence is health care providers (Pender et al., 2011). With 67% of study participants reporting having a regular health care provider, providers may play a key role in influencing women to consider their reproductive life goals and in helping to achieve them. Second, both perceived barriers and perceived self-efficacy influence successful reproductive life planning. Examples include participants reporting they could not afford a method of birth control (perceived barrier) and those reporting they forgot to use it or became pregnant while using a method (perceived self-efficacy). Finally, personal factors such as religious beliefs play a role influencing behavior. More than half of the women who reported that religion played a role in their daily lives also reported they were not currently using a method of birth control.

Implications for Practice, Theory Development, Policy, and Research

The results of this small study have broad implications for nursing practice, theory development, policy, and research and highlight several important issues. The Affordable Care Act (ACA) supports the principle that every American has the right to affordable and effective health insurance coverage regardless of income or health status (Sonfield & Pollack, 2013). The ACA guarantees preventive services, including birth control, are covered and increases access to family planning services for low income women (National Partnership for Women and Families, 2012). Although a basic covered service, the question remains who will provide these reproductive services most efficiently and in what manner? Recognition of the powerful role that health care providers—including nurses—play in influencing patients' behavior and reproductive decision-making, particularly with rural populations, is critical. Nurses, with their foundational focus on health promotion and person/family-centered care serve at the forefront in promoting reproductive life planning and are key to providing quality, cost effective reproductive life planning counseling. Reproductive life planning should be included in all health promotion visits for all women, men, and teens of reproductive age. School nurses can play an integral role in providing family life planning education with the students and families they serve.

In relation to theory development, the HPM proved to be a valuable conceptual framework in this study, with its emphasis on biological, psychological, and socio-cultural factors as influences of behavior and decision-making. Further research using the HPM to ascertain its effectiveness in identifying religious/cultural influences (including rural culture) on behavior and reproductive health decision-making is suggested.

Finally, policy initiatives to support reproductive life planning, particularly in the area of reimbursement to pay for provision of RLP counseling, should be evaluated. California's Family Planning, Access, Care, and Treatment (FPACT) program is a model that recognizes the need to reimburse for counseling and education services by nurses, nurse practitioners, nurse midwives, physician assistants, and physicians (California Department of Health Care Services, 2014). Reimbursement for services provided by nurses is particularly important in rural settings where registered nurses often are the sole provider of health care (Winters, 2013). The feasibility of the application of the FPACT model in other states should be explored along with, mandated reimbursement by all health insurance programs for RLP counseling.

The intent of reproductive life planning is not only to decrease the rate of unintended pregnancy, but also to encourage women and men to achieve healthy lifestyles resulting in healthy birth outcomes, if that is their goal, and to prevent or treat other health conditions. A 2008 report released by the Trust for America's Health and the Robert Wood Johnson Foundation demonstrated that an annual investment of $10 per person in proven, community-based public health programs could save the United States more than $16 billion within five years—a $5.60 return for every $1 invested (Robert Wood Johnson Foundation, 2013).

In addition to practice, theory, and policy recommendations, an essential area of future research is determining if reproductive life planning is effective in decreasing the incidence of unplanned pregnancy. The inclusion of men, particularly rural men, in reproductive life planning research is also indicated. With the findings in this small study and other larger studies highlighting the "disconnect" of sexually active women who report they do not want to get pregnant yet are not using contraception, research addressing this phenomenon is crucial. Determining the best methods to promote reproductive life planning is also vital. Is print media

as effective as social media? Alternatively, is addressing RLP at each provider visit more effective? Should RLP be included in high school health education curricula, or even sooner? Finally, comparing the results from this study with a larger sample, other rural populations, other regions in the US, and internationally is recommended.

Summary

Rural women experience unique influences from their urban counterparts, particularly in relation to their reproductive health. Reproductive life planning is a valuable process for each individual of reproductive age, subject to personal, biological, social, and cultural influences as well as their own perceptions. This study addressed RLP in a sample of rural women age 18 to 35 years living in two northern California counties. Further research examining the influence of religion on rural women's reproductive decision-making as well as the disconnect of some women reporting that they are not ready to be pregnant but are not using contraception is suggested. Nurses and other health care providers must continue to facilitate positive behavior change and reproductive decision-making through effective reproductive life planning in order to reduce unintended pregnancies and the associated consequences for women, families, children, and society. Empowering women, men, and couples to plan and achieve their reproductive life goals will enhance the health of future generations.

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