MOVING BEYOND THE INDIVIDUAL IN REPRODUCTIVE HEALTH: EXPLORING THE SOCIAL DETERMINANTS OF UNINTENDED PREGNANCY

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Public health has moved away from its original mission to address and promote health on a societal level towards an individually focused, victim-blaming paradigm. In particular, research regarding women's reproductive health is heavily reliant on the biomedical paradigm to document and explain existing health trends related to women's fertility. This research often targets behavior in isolation of its social context. In order to promote the integration of a population health perspective into the current medically dominated realm of women's reproductive health, this dissertation highlights the issue of unintended pregnancy (UIP).

The United States (US) continues to have the highest rate of UIP of all industrialized countries. These UIPs, and their negative health consequences, are disproportionately experienced in the high-risk populations of low-income, young and minority women. In efforts to foster greater understanding of UIP and of these disparities, this dissertation encompasses three distinct manuscripts. Based on a review of public health and women's health literature, the first manuscript argues for the adoption of a broadened perspective that focuses on external factors that impact women's reproductive behavior. Manuscript 2 discusses the first component of a mixed-methods research study involving surveys of women at high-risk for UIP who sought pregnancy tests in Pittsburgh, which reveal that assessing women's pregnancy intentions prior to pregnancy testing is feasible and may provide a more accurate portrayal of women's intentions to become pregnant than existing retrospective measures. The third manuscript, which highlights

qualitative interviews with ten women from the above sample, presents evidence for the influence of external factors on women's experience of UIP.

This dissertation challenges current individually focused paradigms for understanding UIP among US women. The public health significance of this dissertation lies in the findings of the research presented, which demonstrate that a reciprocal relationship exists between the social context of women's lives and their UIP experiences and which emphasize the need to broaden the perspective of current UIP research. Future research, programs, and policy should integrate the perspective and findings highlighted in this dissertation in order to reduce negative health consequences of UIP and promote population-level healthy pregnancy outcomes.

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PREFACE

This experience has certainly been a journey, one that has been shaped, molded and touched by so many. I extend my heartfelt gratitude to all who have helped me along my path in order to reach this point.

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Finally, I would like to dedicate this dissertation to the memory of Professor Carol McAllister. My dissertation journey was originally inspired by Carol's ethnographic interviewing methods, and her involvement during my graduate training and comprehensive and overview processes was integral to shaping my research direction. I thank her for encouraging me to stay true to our mutual passion for women's reproductive health issues. I am hopeful that Carol would be proud of how her methods have helped to shed light on salient issues for a population to whom she dedicated her life's work. Her spirit lives on in these pages.

1.0   INTRODUCTION AND OVERVIEW

1.1   OVERVIEW

Public health has moved away from its original mission of addressing and promoting population health towards an individually focused, medically dominated paradigm. In recognition of the significant impact of social epidemiology, political economy, sociology, and human rights on the relationship of non-medical and non-behavioral factors to health outcomes[1], the field should integrate these cross-disciplinary perspectives into its central paradigm and return to its original focus on health at the population level. Admittedly, recent efforts within public health have adopted a more multi-disciplinary, social determinants-focused approach to improving population health, in tobacco use prevention and cessation, for example[2]. Unfortunately, this holistic population view of public health has been slow to emerge and develop in many areas of the field.

In particular, research regarding women's reproductive health is heavily reliant on the biomedical paradigm to document and explain existing health trends related to women's fertility[3]. Much of this research uses an individually focused approach to explain observed trends, essentially placing the burden of responsibility for controlling sexual behavior and managing consequences of this behavior entirely on individual women. In addition, initiatives based on this research often target behavior in isolation of the social context within which it occurs. In order to promote the integration of a population health perspective into the current medically-dominated realm of women's reproductive health, this dissertation uses the issue of

unintended pregnancy (UIP) to explore the social, cultural, structural, and environmental factors that impact women's fertility experiences and to improve current understandings of this issue by highlighting perspectives of women at high risk for UIP.

Addressing the issue of UIP in the United States (US) has been a top priority in the public health community for a number of years. The topic warrants such attention because the US has the highest rate of UIP of any industrialized country(4). UIP is generally accepted as problematic within much of the medical and public health literature due to its widely documented association with poverty, marginality, and adverse health outcomes for both mothers and children(5). Rates of UIP and of resulting poor health outcomes are disproportionately higher in women of low socioeconomic status and in minority women(6). In efforts to identify risk factors for UIP and, particularly, to document disparities, many epidemiological studies have focused on elucidating the connections between individual-level factors and UIPs(7). In contrast, little attention has been given to contextual and structural factors, which fall outside the realm of individual control and impact women's ability to manage their fertility and make reproductive health decisions. Programs that address UIP reflect the results of these methodologically myopic epidemiological studies and, accordingly, target individual-level sexual behavior and decision-making processes as the focus for change(2). However, as the lack of a significant decline in UIP rates illustrates(8), contemporary initiatives based on this research are falling short of goals to reduce UIP. I contend that this may be partly due to their failure to identify the fundamental causes of UIP.

In order to fully understand the continuing high rates of UIP and to begin to address them, it is imperative that researchers and policymakers explore UIP from the perspectives of women who experience it and the various levels at which social, cultural, structural, and

environmental factors impact women's experience and management of an UIP. Current approaches to addressing UIP are based on narrowly focused models that target women's sexual behavior in isolation yet it is unrealistic to expect women to change particular behaviors if the broader societal and cultural contexts are not supportive of and/or actually impede these changes. In order to understand, intervene in, and improve women's reproductive health with regards to UIP, a paradigm shift in the field of reproductive health is needed that reflects a reorientation to this reality and that moves the field towards a more holistic conceptualization of UIP. The significance of this research lies in its adoption of an upstream public health approach, which emphasizes the influence of non-individual level factors on women's fertility, in order to elucidate the deeper understanding of the context within which UIPs occur and within which women manage them. It privileges the perspectives of women, especially those at "high risk" for UIP, in exploring the usefulness of current measures of UIP in the context of women's day-to-day lives.

1.2   INDIVIDUALIZATION IN WOMEN'S HEALTH

The current approach to addressing UIP in the US is misdirected in its individual-level solutions to what has been identified as a societal problem(9). This philosophy represents a fundamental disconnect that diverges from the original mission of public health work. The focus on this rational and individual decision-making process in reproductive health can be clearly linked to the domination in American public health of models targeted at individual health behavior change, or public health behaviorism(10). These behavioral models are normative in that they dictate what women should do to avoid UIP until they are ready, as deemed by societal norms, to

become pregnant. This approach situates decision-making and factors that impact it entirely at the individual level, downplaying the diverse structural, social, political, and cultural factors that are intimately involved in women's reproductive health and related decisions. In her exploration of the politics of reproduction throughout the past two centuries, Solinger(11) traces the connectedness of women's fertility to societal needs and norms. Her thesis, that women's reproductive health is ultimately directed by those who have the power – whether it is the nation, the state, the family, or, lastly, the woman – reveals the importance of attending to external factors in women's fertility and related decision-making. Unfortunately, many contemporary public health professionals and policy makers do not echo Solinger's awareness of these issues and, as a result, many initiatives to address UIP fail(2).

Disregard for the interaction and influence of external factors on an individual's fertility decision-making process, while simultaneously over-emphasizing the merits of individual behavior change, is a fatal flaw in the public health field's current approach to addressing UIP. Reproductive and sexual health education has traditionally been the cornerstone of family planning programs(2), based on the assumption that women who understand what contraception is and how it works will accordingly make socially appropriate decisions regarding when and how to use it. While education is undoubtedly an integral part of any reproductive health program – higher levels of women's overall education have consistently been associated with higher levels of contraceptive use throughout the developing world(12) – it cannot be employed in isolation. Relying solely on educational efforts to encourage women to plan and limit family size supports the standard health behavior model emphasizing individual choice and responsibility as opposed to collective measures and gains, imparts the message that there are morally-tinged "right" and "wrong" ways of controlling one's fertility, and blames the woman

who is unable to conform to societal fertility rules as being irresponsible or "morally lacking". This approach fails to recognize the contextual factors that impede or facilitate individuals in their ability to change their behavior according to the recommended guidelines of experts and corresponds to a deflection of professional and governmental attention away from structural and collective determinants of reproductive ill health. This omission justifies the need to broaden approaches to addressing UIP in order to recognize the complexity of women's fertility and the influence of the structural and environmental context on their decision-making around fertility.

1.3 UNINTENDED PREGNANCY

1.3.1 Measurement of unintended pregnancy

Prior to the introduction of modern forms of contraception that offered women and couples the ability to plan pregnancies, the concept of "intention" was not very relevant in relation to pregnancy. Measurement of pregnancy intention was first conducted within the context of the first National Survey of Family Growth (NSFG) in 1973[7]. This survey, conducted under the auspices of the National Center for Health Statistics, was the first national study to examine the fertility patterns of all reproductive-aged women, including unmarried women. In the NSFG, a pregnancy is classified as unintended if it was unwanted at the time of conception, regardless of the use of contraception[13]. The exact NSFG question sequence used to determine pregnancy intendedness is shown in Figure 1.

As noted in Figure 1, the NSFG divides UIPs into two sub-categories: mistimed and unwanted. Mistimed pregnancies are those that occurred sooner than desired, while unwanted pregnancies occurred when women never or after women no longer wanted to become pregnant.

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1. Before you became pregnant . . . had you stopped using all methods of birth control?
    Yes No
    (If yes, go to question 2; if no, go to question 3.)

2. Was the reason you had stopped using any methods because you yourself wanted to become pregnant?
    Yes No
    (If yes, go to question 5; if no, go to question 3.)

3. At the time you became pregnant . . . did you yourself actually want to have a(nother) baby at *some* time?
    Yes No Don't know
    (If yes, go to question 5; if no, go to question 6; if don't know, go to question 4.)
    (*If no, the pregnancy is considered* **unwanted**.)

4. It is sometimes difficult to recall these things, but just before that pregnancy began, would you say you probably wanted a(nother) baby at *some* time or probably not?
    Probably yes Probably no Didn't care
    (If probably yes, go to question 5; if probably no or didn't care, go to question 6.)
    (*A probably no answer confirms that the pregnancy is considered* **unwanted**.)

5. Did you become pregnant sooner than you wanted, later than you wanted, or at about the right time?
    Sooner Later Right time Didn't care
    (*If sooner, the pregnancy is considered* **mistimed**.

Figure 1. NSFG question sequence for pregnancy intendedness(13)

The default category of intended pregnancies includes all other pregnancies that women do not rate according to these definitions, i.e., those that women are indifferent about (see Figure 1) or those reported as occurring later than desired. The measures of UIP are quantified as dichotomous outcomes; pregnancies and births are classified as intended or unintended, planned or unplanned, wanted or unwanted.

Much of the current national data regarding UIP in the context of women's sexual and reproductive health is derived from the NSFG. The Institute of Medicine (IOM), Centers for

Disease Control and Prevention (CDC), and the National Institutes of Health (NIH) are just a few of the national organizations that rely on the NSFG definitions of pregnancy intendedness and wantedness in their studies and interventions. At the state level, the Pregnancy Risk Assessment Monitoring System (PRAMS) measures UIP using a single question: "Thinking back to just before you were pregnant, how did you feel about becoming pregnant?"(14).

1.3.2 Epidemiology and consequences of unintended pregnancy

The US government's Healthy People (HP) 2010 initiative identifies the explicit goal of "improv[ing] pregnancy planning and spacing and prevent[ing] unintended pregnancies" in order to achieve the broad HP goals of eliminating health disparities and helping individuals increase their quality of life(15). The most recent data from the NSFG indicate that this goal remains an elusive one for much of the American population: in 2001 approximately half of all pregnancies in the US (49%) were unintended, and 48% of these resulted in abortion(6). This abortion rate, along with fetal losses due to natural causes in the womb prior to birth, resulted in 35% of recent births being retrospectively classified as unintended at the time of conception(8). In total, 48% of all American women aged 15-44 have had at least one UIP in their lifetime(4).

Vast disparities in UIP and in unintended births exist among women of varying income levels, education, ages, and races/ethnicities. Poor women have five times the number of unintended births as women in the highest income level, and UIPs are less likely to end in abortion for poorer women(8). Of women aged 25-44 years with less than a high school education, 61% have had an unintended birth compared with just 18% of women with college degrees(6). The prevalence of UIP is highest for women ages 15-19 (the NSFG queries women above the age of 14), and it tends to decline with older age(8). Black and Hispanic women (69%

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and 54% respectively) have higher rates of UIP than do white women (40%), even when adjusted for income levels, and they subsequently have higher rates of abortions and unintended births(6). PRAMS data show significant differences across states in the proportion of live births that result from UIP, ranging from a low of 34% in Maine to a high of 52% in Louisiana in 1999(14).

Abortion is one of the most common outcomes of UIPs – 54% of UIPs in the US end in abortion(8). These abortions carry a financial cost to both the individual women who seek them and to the society as a whole, which subsidizes abortion costs in public clinics. Similarly, although legal abortions in this country are extremely safe for women – the risk of major complications is less than 1% and there is no evidence of subsequent childbearing problems with abortion(16) – avoiding the UIP that raised the need for an abortion would be preferable to dealing with the emotional and physical burden of having to terminate a pregnancy, however minimal this impact may be(17).

When women elect to continue an UIP, studies have indicated that the pregnancy is associated with particular negative outcomes for the expectant mother, the family, and her baby(5). Women who have UIPs are less likely than those with intended pregnancies to seek prenatal care and more likely to drink and/or smoke during the pregnancy(18). UIPs that result in live births are associated with physical abuse and violence during the pregnancy and in the year prior to conception(19). Women who continue UIPs are less likely to breastfeed their babies than women who have intended pregnancies(20). Young women incur additional consequences of becoming pregnant unexpectedly: younger age is associated with higher levels of poverty, increased rates of single parenthood, and lower educational attainment, in addition to higher rates of pregnancy-related health problems and postneonatal mortality(5). Some European longitudinal studies(21, 22) have demonstrated a link between UIPs and child development, documenting an

association between UIPs and poor outcomes in schooling, social adjustment, alcohol and drug use, criminal activity, and employment. US studies(23-25) however, challenge these findings and suggest that the inverse relationship between UIPs and child development can better be attributed to the mother's preexisting physical condition and socioeconomic status than to her pregnancy intentions.

1.3.3   Limitations of unintended pregnancy measurement

Demographers have widely used the aforementioned definitions of unintended, unwanted, and mistimed pregnancies to track and describe fertility trends at the population level in the US. Heavy reliance on these terms in the research literature indicates that the measures are seemingly self-evident and unproblematic. The previously discussed consequences of UIP notwithstanding, there is substantial research(26) indicating that the current concept of UIP being researched and addressed has several limitations. While survey measures of UIP are helpful in documenting societal-level patterns, they are less useful in describing intentions and behavior of individual women(27, 28). Misusing information regarding the epidemiology of UIP for non-epidemiological purposes may result in an oversimplification of (1) the complex decisions women make about their fertility and (2) the nuanced understandings that women have regarding the fertility concepts that are being discussed in relation to their reproductive health.

In the conclusions of many reproductive health studies, researchers recommend increasing women's knowledge about, and access to, contraceptives, understanding women's intentions regarding pregnancy, and promoting behavioral interventions that strengthen women's decision-making skills. Although these represent important health promotion strategies that may indeed contribute to decreasing UIP rates, they do so in isolation. These conclusions situate the

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control over becoming pregnant with the individual woman, paying little attention to the context within which she negotiates and experiences structural barriers or facilitators that impact her reproductive decisions and behavior.

1.3.4.1 Timing of measurement The retrospective classification of a pregnancy as mistimed or unwanted is a problematic feature of the NSFG's and other surveys' measurement of UIP. A woman's perspective on her pregnancy or birth elicited long after it occurred would logically be influenced by her experiences during the pregnancy and/or birth in conjunction with external support and/or barriers that she perceives that enable her to continue or end her pregnancy.

Indeed, when women were asked about their feelings towards a pregnancy after the birth, they were more likely to classify it as wanted than if they were asked about it during the pregnancy(27). For example, in his study of middle-class couples, Miller(29) demonstrated that reports of pregnancy wantedness became more positive as time passed, both during the pregnancy and after the birth. In a study of inner-city women in New Orleans, Kendall et al.(30) concluded that, among the women in their study, pregnancy intention seemed to be more of a rationalization after discovering the pregnancy rather than the outcome of a deliberate choice. Westoff and Ryder(31) characterized this phenomenon as "ex post rationalization," the tendency to become more accustomed to a pregnancy (regardless of whether it was intended or not) as time passes.

1.3.4.2 Distinguishing between terms The interchangeable use of the terms unintended, unplanned, unwanted, and mistimed in the literature on UIP introduces confusion due to the blending of attitudinal variables (want/desire) with behavioral terms (intention/plan/timing)

when there should be a distinction. In their review of the most frequently cited national surveys regarding UIP, Peterson and Moos(32) discuss the confusion derived from the contemporary indiscriminate use of the pregnancy terms "unintended" and "unwanted" and the pre-1960s societal categorization of unwanted pregnancies as all those that occurred outside of wedlock. Miller(33) identified a fundamental difference based on the temporal nature of intendedness and wantedness: an individual's orientation to the possibility of becoming pregnant (associated with intendedness of conception) incorporated psychologically different states than her reaction to the reality of a pregnancy once it had already occurred (related to wantedness of pregnancy).

Relying on qualitative data derived from focus groups, Stanford et al.(34) demonstrated that the pregnancy planning (intention) dimension was highly correlated with one's preparation, education, and life goals, while the affective dimension (wanting) was more related to one's community, partner, and personal values. Fischer and colleagues(35) used qualitative methods to elicit how women characterized past, present, and hypothetical pregnancies. They found that women had distinct differences in their interpretations of the concepts of pregnancy intention and pregnancy wantedness and that the concept of wantedness held more relevance for women when deciding to continue or terminate the pregnancy than did intendedness. Women additionally incorporated different language to describe the concepts of intendedness and wantedness: planning and intention were described by women with more action-oriented language while speaking about wantedness elicited more emotional factors. Sable and colleagues(36) found similar evidence to support the conclusion that women identify more readily with the concept of pregnancy wantedness than pregnancy intendedness when the researchers incorporated additional measures of pregnancy wantedness (happiness, certainty, and a composite variable of the two) that were not directly related to the timing of the pregnancy.

Acknowledging the confusion inherent in the interchangeable use of the terms wantedness and intendedness along with the complexity that was involved in defining each of these concepts, Stanford and colleagues(34) identified five distinct temporal dimensions of pregnancy intendedness that emerged from in-depth interviews: preconception desire for pregnancy, steps taken to prepare for pregnancy, fertility behavior and expectations, postconception desire for pregnancy, and adaptation to pregnancy and baby. These unique dimensions indicate that the NSFG categorization of unintended pregnancies may be oversimplified and too narrow to appropriately capture the complexities of the concept. Echoing this sentiment, Bachrach and Newcomer(37) argue that dimensions of pregnancy intendedness and planning are separate concepts linked to a broader set of circumstances that have traditionally been ignored. They concluded that intendedness is influenced by one's community, partner, and values about childbearing, while planning is tied to one's preparation, life goals, and education.

Several researchers(34, 35, 37) have questioned the appropriateness of dichotomizing the concept of pregnancy intention, and they suggest that it should instead be conceptualized as falling along a continuum. Miller(38) was one of the early researchers to portray both intendedness and wantedness as falling along continuums. He applied a 7-point scale to describe the range of pregnancy intention behavior concurrently with a similar 5-point scale to describe the pregnancy wantedness concept and developed several models to describe the motivations, desires, and intentions involved in the pregnancy decision-making process.

1.3.4.3 Conceptual vagueness In the NSFG, women provide retrospective accounts of attitudes and behaviors related to their pregnancies at the time of conception (represented by unintended

or intended pregnancies) and, if the pregnancy did not end in abortion or fetal loss, at the time of birth (represented by unintended or intended births)(13). As previously mentioned, the category of "intended pregnancy" was a default category rather than an active one – if a woman was indifferent toward a pregnancy or did not classify it as mistimed or unwanted, the pregnancy was measured as "intended." Trussell, Vaughan, and Stanford(39) highlight potential limitations of this default categorization in cases when, although a woman reported using contraception (indicating she did not want to get pregnant), her pregnancy was classified as intended if she did not explicitly categorize it as mistimed or unwanted.

The concept of UIP that is being measured in the NSFG today is entirely different from the originally intended concept that was being measured when the survey was being developed and refined following World War II, despite very few modifications to the initial definitions of "unintended pregnancy"(26). While UIP was originally measured as excess fertility towards the end of a woman's reproductive life – or a woman's desire and/or ability to limit the size of her family – it is now being measured at the opposite end of the reproductive spectrum among women who have not yet begun a family, that is, measuring women's desire to put off childbearing rather than to limit it(40).

A logical extension of this reasoning is to question the appropriateness of applying the antiquated definitions of UIP as a universal measure to women of all ages to capture their contemporary pregnancy intentions: is the concept measuring different experiences for dissimilar groups of women? Women in the oldest segment of the reproductive aged population may indeed be conceptualizing pregnancy intention in the original sense of the term, while younger women may be defining the term in an entirely different way. For example, the increased prevalence of nonmarital sex and fertility in almost all developed countries(41) and increasingly

older age at first marriage(8) indicate that the newest generation of reproductive aged women are making reproductive decisions within the context of strikingly different societal norms and expectations than were women of older generations. When these two groups (and all of the groups in between) are incorporated into one homogeneous population of women, do the resulting measurements reflect realistic statistics to accurately describe pregnancy intentions of US women? Comparing the increased responsibility that comes with actively deciding whether or not to become a parent with the seemingly distinct decision to have or not have an additional child, it seems reasonable to assume that younger women – who have entered reproductive life with highly effective contraceptive options and the back-up of abortion always available to them – would define their pregnancy intentions in very different terms than their older counterparts.

Anthropological studies regarding UIP(42-45) have enhanced the medical and public health literature regarding the cultural and contextual experiences of UIP by questioning the appropriateness of the traditional assumptions associated with UIP. The determinants of UIP vary for different groups of women: for example, social circumstances and limited access to reproductive health services that poor US women experience(46) are different from the sexuality ambivalence and resulting inconsistent use of contraceptives of middle-class US women(42, 44). The widely held assumption that women follow a rational course of action regarding becoming pregnant or avoiding pregnancy is not supported by the findings of a study in which 60% of inner-city minority women who participated in an HIV prevention program indicated that they had not considered the possibility of becoming pregnant when they last conceived(43). Esacove and Andringa(45) also challenged the overly simplified and utilitarian model of unintended pregnancy in their exploration of women's use of emergency contraception, and they

hypothesized that women do not always necessarily know whether they want to become pregnant.

1.3.4   Factors impacting unintended pregnancy

Sociodemographic and cultural characteristics of women found to be associated with UIP include age, education, race, ethnicity, income, parity, and marital status(6, 36, 47). In addition, behavioral and attitudinal variables such as contraceptive use(48), perceived low risk of pregnancy, embarrassment(49), sexual self-efficacy, confidence, and perceptions of negative consequences of UIP(50) are all strong predictors of UIPs. Each of these aforementioned determinants of UIP represents individual level characteristics of women.

Although its analysis and recommendations do not necessarily reflect it, a report based on the latest NSFG data(8) proposes a model for thinking about women's fertility patterns in a broader context than just individually based attitudes and behaviors (see Figure 2). Although three boxes in Figure 2 highlight individual level variables (intercourse, conception, and pregnancy outcome variables), only one encompasses "social" factors that impact women's fertility. Interestingly, many of these "social" factors, such as education, race and ethnicity, religion, labor force participation, and income, are ones that can both describe what women nominally are as individuals and what their societal experience is as a member of the group or groups to which they belong. They are factors that will undoubtedly play a role in impacting fertility outcomes, but the outcomes may be more accurately attributed to cultural and societal conditions than to the mere fact that women are members of a particular race, for example. In addition culture, which should certainly be included as a social factor that impacts fertility outcomes, is not explicitly identified in this figure.

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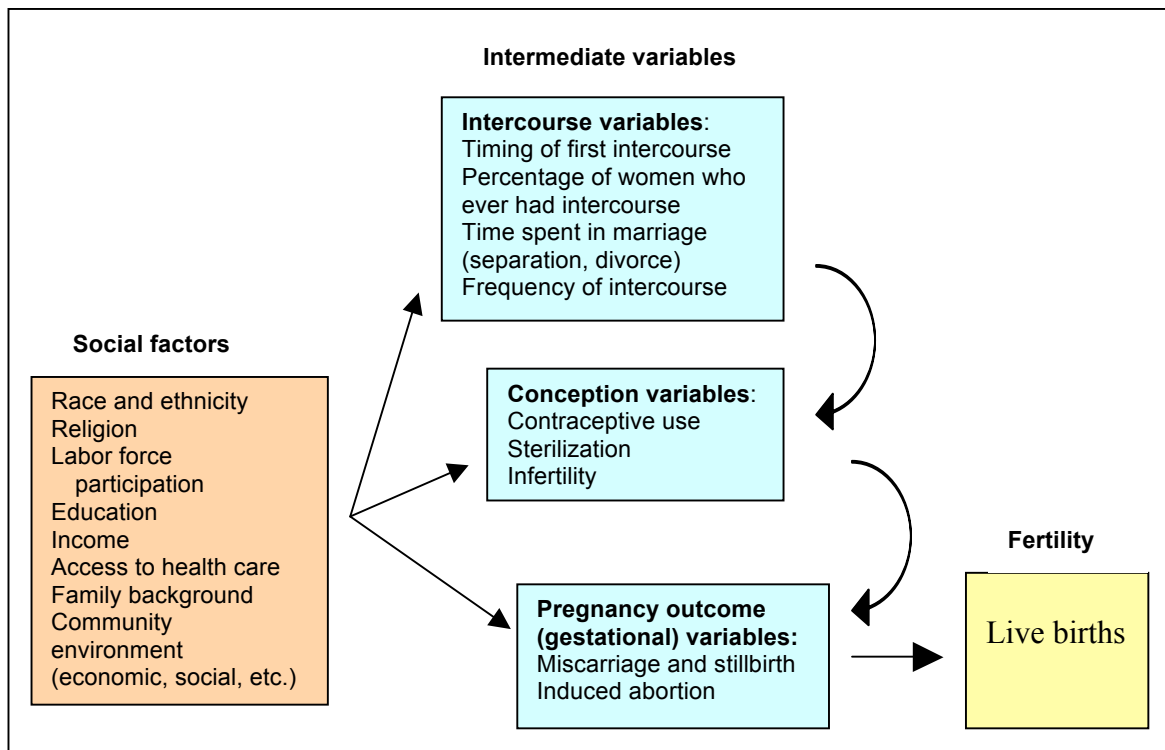
Figure 2. Factors affecting fertility(8)

Despite an abundance of research on the impact of many of the abovementioned individual-level factors on UIP, very little research has been conducted that explores higher-level factors. Understanding the relationship between these higher-level factors and the outcome of UIP has been significantly neglected in the literature on women's fertility and this area therefore warrants further attention.

No studies were identified that specifically focused on the relationship between distal, higher-level characteristics and UIP. However, a few studies that have explored the association between these factors and reproductive choices(51, 52), unprotected sex(53, 54), contraceptive use(55-57), perception of medical abortion(58) and adolescent pregnancy(59) provide some useful insight into potential higher-level factors. Multi-level modeling of NSFG data revealed that adolescents' decisions about engaging in sexual activity were significantly shaped by the

level of social disintegration of the surrounding community as well as employment opportunities for young women(51). A review of studies that explored the reasons for unprotected intercourse in adult women found that societal factors that impacted women having unprotected sex included access and quality of services, health insurance and cost issues, and occurrences of forced or unwanted sex(53). Poor neighborhood quality was associated with less contraceptive use at first intercourse in Chicago(55), while community characteristics of rapid population growth, high levels of religious affiliation, high socioeconomic status, and access to family planning information and services were all associated with higher levels of effective contraceptive use in a 1993 analysis of NSFG data(56).

To complement these quantitative, statistically-based analyses regarding the relationship between structural factors and reproductive health outcomes, several studies incorporated qualitative research methods to explore the nature of this relationship. Terry(52), in her doctoral dissertation research regarding the context of reproductive health decision-making in a region of Mexico, found that certain social institutions characteristic of the local culture as well as the cultural factor of religion and the structural factor of economic subsistence were influential factors on women's decisions regarding their reproductive health. Bull and Shlay(57) used qualitative interviews to understand how women's use of contraception was influenced by access to services and financial support, clinic factors including cost, location and hours of operation, and experiences of abuse. Edin and Kefalas'(60) five-year ethnographic exploration of poor women's lives regarding motherhood and marriage drew attention to the enormous disconnect between society's widely touted middle-class values surrounding these issues and the realities of these women's lives. The women included in the study experienced significant life hardships

(e.g. unemployment, abuse, drugs, and incarceration), which impacted their fertility management.

Likewise, focus groups with women who were potential users of the medical abortion pill revealed that this sample of women perceived cultural and religious norms, work schedules, and location of clinics as impacting their perceptions of medical abortion(58). Another set of focus groups with reproductive aged women indicated that cost and access issues were influential in whether they experienced unprotected sex(54). Finally, de la Cuesta(59) conducted in-depth interviews with adolescent women in Colombia to describe adolescent pregnancy occurring within the context of a love affair in which ideas about romantic love and gender rules guided young women's perceptions of adolescent pregnancy and impacted their resulting experiences of UIP.

Although all of these studies focus on a reproductive health outcome different from UIP, they have implications for this dissertation research. It is probable that many of the higher-level factors identified in these studies also impact whether women experience UIP. These results informed the development of the conceptual framework used herein.

1.4   CONCEPTUAL FRAMEWORKS

In an effort to move away from a focus on individual-level behavior, theories that describe individual behavior change will not be emphasized in this dissertation. Instead, theories and models that acknowledge and incorporate the impact of structural and social factors on behavior related to women's fertility will be used to explore the context of UIP by conceptualizing the connections between factors, behavior, and outcomes.

1.4.1   Social determinants of health

This study uses the Social Determinants of Health (SDH) framework as a foundation from which to study non-individual level factors that impact women's sexual behavior, whether women experience an UIP and how women manage UIPs. Figure 3 presents a model for the relationship between social determinants of health and the outcomes of health equity and wellbeing
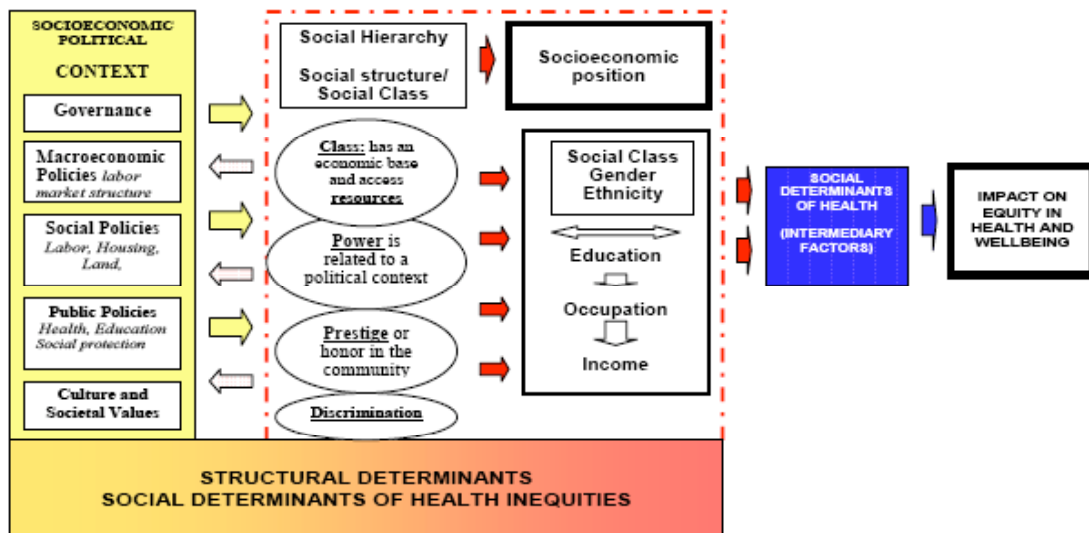
Figure 3. Social determinants of health (SDH)(61)

developed by the Commission on the Social Determinants of Health of the World Health Organization(61). Scholarly interest for understanding the social determinants of health arose from a recognition that individually-focused, lifestyle theories about people's behavior did not capture the economic, political, and structural facilitators and barriers that impact individuals' abilities to adopt or reject a particular behavior(62). A dominant assumption of the SDH framework is that inequalities in health across groups of individuals are due to the impact of these structural factors. The "fundamental causes" of health inequalities across groups of

individuals are likely due to the economic and political institutions and policies that create, enforce, and perpetuate economic and/or social privilege and inequality throughout a society(63).

The CDC(64) has identified socioeconomic status, transportation, housing, access to services, discrimination by social grouping, and social or environmental stressors as key social determinants of health. Incorporating the SDH perspective requires a shift from viewing behavior as personally motivated and/or resulting only from individual decision-making to the recognition that external factors may impede or influence individual motivations and behaviors. Applying this perspective to UIP draws attention to these external factors (such as access to health care, education, existence of community supports for family planning, organizational policies regarding contraceptive or abortion access, for example) that impact whether women experience an UIP and, if they do, how they are able to manage the pregnancy rather than narrowly focusing on women's use or non-use of contraception as the sole reason for the occurrence of UIPs.

1.4.2   Social ecological model

The Social Ecological Model (SEM)(65) provides a heuristic for investigating the connections between factors at different levels and the mechanisms by which these factors impact individual women. It helps in conceptualizing the relationships among structural, community, and individual-level factors that impact health (see Figure 4). Although this model omits the role of culture in shaping health behaviors, it emphasizes the need to examine multiple levels of influence on individual behavior and recognizes that individual behavior and decisions cannot be isolated from the context of factors at higher analytic levels. This model is useful for developing ideas about the connections among various factors at the structural, environmental, cultural,

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interpersonal, and individual levels that facilitate or impede women's fertility objectives that will be explored in this research.

Figure 4. Social ecological model

For example, women's ability to avoid becoming pregnant may be hindered or helped by factors at each of the SEM levels: the absence or presence of supportive family members or partners, community programs regarding young parenthood, educational policies regarding sexual health education and societal values regarding single parenthood.

1.4.3 Factors impacting women's health

Integrating the SDH model within the context of women's health work, Moss(66) proposed a framework for exploring the interrelationship between gender equity and socioeconomic

inequality and how they affect women's health at both micro and macro levels (see Table 1). She argues that much of women's health research focuses on the right-hand side of the framework, and too little attention is paid to the more macro-level factors that impact women's health outcomes. While not all of the factors will translate to the domestic reproductive health area, this general model is useful for guiding an analysis of the factors that specifically impact women's experience and management of UIP.

Table 1. A comprehensive framework of factors influencing women's health(65)

Geopolitical Environment	Culture, Norms, Sanctions	Women's Roles In Reproduction & Production	Health-Related Mediators	Health Outcomes
Geography	Discrimination:	Household:	Social capital/	Chronic Disease
	Ethnic	Structure	Social networks/	Infectious Disease
Policy & Services:	Gender	Div of labor	Support:	Disability
Transportation	Age	Ownership/property	Friendship	Functioning
Welfare		Support/caretaking	Family	Mortality
Employment	Sociodemographic	Equality of access to	Work mates	Mental health/
Health care	Characteristics:	Household	Other ties	illness
Child care	Age	resources, e.g:		
	Gender	Wages	Psychosocial:	
Legal rights:	Ethnicity	Other income	Stress	
Women's	Birthplace	Land	Mood	
Health	Education	Other assets	Coping	
Human	Marital status	Community roles	Spirituality	
Employment	Language	Labor market role		
			Health services:	
Organizations:		Workplace:	Availability/use	
Banks		Sector:		
Credit coops		Formal	Behaviors:	
Political parties		Home/market-based	Sexual	
Advocacy		Hierarchies, control,	Substance use	
Unions		Authority,	Physical activity	
		discretion,	Diet	
Economic:		Sex segregation/	Contraception	
Policy		discrimination	Breastfeeding	
Extent of Inequality			Smoking. drinking	
			Violence	

The focus in most studies of the impact of non-individual level factors on reproductive health outcomes is on outcomes of contraceptive use and decision-making, two behaviors that are very much linked to UIP but that are nonetheless distinct. Contraceptive behavior cannot be thought of as a proxy for UIP; it represents one facet of the complex web of factors that impact

UIP outcomes. Barrett et al.(67) recognized that contraceptive behavior was just one of several factors that influenced circumstances in which unplanned pregnancy occurs and they modeled this knowledge (see Figure 5) to develop a scale to measure pregnancy planning.
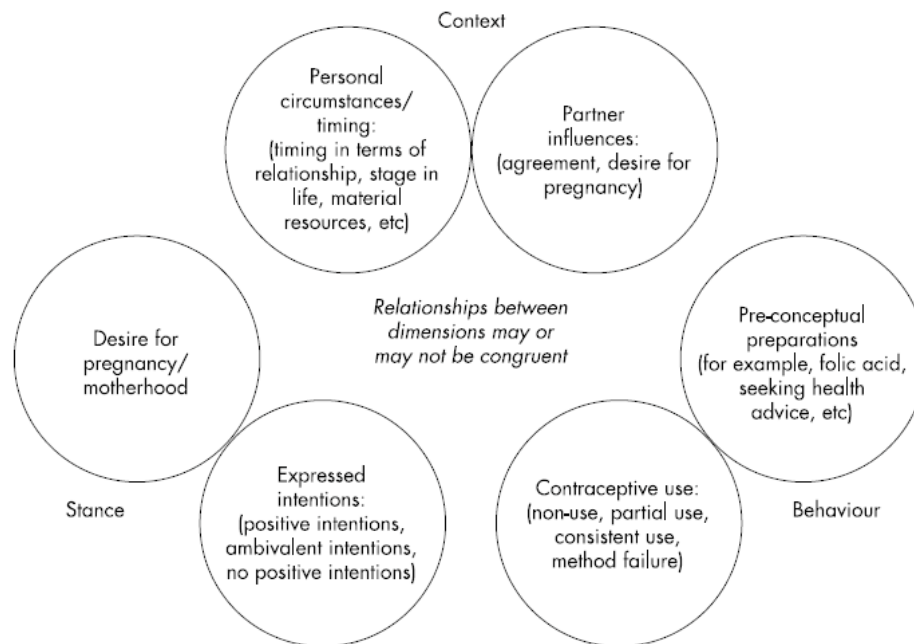
Figure 5. Conceptual model of pregnancy planning/unplanned pregnancy(67)

Although this model provides a useful tool for understanding various aspects of an individual's life (behavior, perceptions, desires, circumstances, e.g.), it does not elaborate on higher-level factors that might impact pregnancy planning. The model identifies one dimension as the "context", including personal circumstances and partner influences, and clarifies these as including material resources, but there is no other acknowledgement of broader external factors or context that could impact pregnancy planning such as community resources or organizational policies. In addition, cultural factors are glaringly missing from this model, despite the fact that many of the conditions or factors identified may be influenced by culture. No models could be found in the literature that broadened the focus from these more narrow conceptualizations of the

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factors that impact pregnancy experiences, but these frameworks are presented here in order to call attention to their limitations.

In reviewing anthropological contributions to the UIP literature, Santelli et al.(26) note that pregnancy cannot be understood only as a product of intentions but that it should be conceptualized as a result of multiple, interconnected cultural, social, economic, and political influences. Sumartojo(68) applied a similar perspective when he explored the structural factors related to HIV prevention and defined these as physical, social, cultural, organizational, community, economic, legal, or policy aspects of the environment that impede or facilitate a person's effort to avoid HIV infection. Brewster and her colleagues(51) posited that community characteristics can affect individuals' behavior in two ways: (1) by defining a local opportunity structure that channels and/or constrains behavior, and (2) by establishing a prevailing normative climate that creates boundaries of acceptable and desirable behaviors. Most reproductive health interventions, however, have not integrated this perspective to address the impact of structural factors on women's pregnancy intentions and sexual behavior(69). This dissertation addresses this gap in knowledge by exploring how contextual factors and cultural norms and values impact women's lives and reproductive health experiences in order to broaden the narrow medical lens through which current research and programs address UIP.

Although no complete model of the higher-level factors that impact the experience and outcome of UIP could be created before having data to inform its construction, the four models presented above (pages 29, 31, 32, and 33) informed the preliminary hypotheses regarding possible factors that might impact women's experience and management of UIP. Based on previously reviewed literature and on these four frameworks, the four groups of factors that were originally targeted for exploration in this study included **social** (interpersonal relationships and

interactions and community resources), **cultural** (meaning systems, social group norms, values and behaviors, and group identity by race, ethnicity and religion), **environmental** (physical aspects of residence, work, and clinics, and access to transportation and medical services), and **structural** (organization systems, policies, social services, and existence of social inequalities within society due to race, gender and class).

1.5   WORKING HYPOTHESES AND SPECIFIC AIMS

The purpose of this dissertation is to investigate the conceptualization of UIP within the broader field of women's sexual and reproductive health. This is achieved through an examination of the literature, analysis of a proposed question sequence to improve measurement of this concept, and an in-depth exploration into why women experience UIPs and, if they do, how they manage them. Specifically, working hypotheses will focus on (1) the existing limitations of how the women's health field studies and addresses UIP, (2) the relationship between a prospective pregnancy intention measure and women's stated pregnancy intentions and outcome decisions, and (3) the nature of the relationship between external factors and women's experience of UIP.

1.5.1   Broadening the focus in reproductive health research

The overwhelming perspective in current women's health research is one that focuses primarily on the individual woman as the unit of change, with minimal attention to other factors that may impact whether and how individual women can change their behavior. The first working hypothesis is that broadening this perspective will lead to a better understanding of the realities

of women's reproductive health and how behavior change in this area can be encouraged within the broader realm of their lives.

1.5.2 Relationship between prospective pregnancy intentions, test result, and pregnancy outcome decision

No current research exists regarding the prospective measurement of pregnancy intentions among a population of women who believe that they might be pregnant prior to confirmation of an existing pregnancy. However, based on existing studies indicating that women's intentions, feelings and plans about pregnancy are affected by the time at which these are measured, it was anticipated that the prospective measurement of pregnancy intention would provide a more accurate account of women's plans regarding their pregnancies than would traditional measures carried out after a pregnancy has been confirmed or a birth has occurred. The second working hypothesis integrates this assumption into one main premise: that this prospective pregnancy planning classification will closely parallel women's reports of their current feelings, plans, and intentions regarding pregnancy and influence women's pregnancy outcome decisions, whether these include a decision to terminate the pregnancy, continue the pregnancy to adoption or continue the pregnancy to parenthood.

1.5.3 Non-individual level factors impacting UIP

The overarching working hypothesis of the full dissertation is that external factors that fall outside of the realm of women's control impact whether women experience UIP and, if they do, how they manage it. Due to the nature of the iterative process between study development, data

collection, and data analysis in a qualitative study, no explicit hypotheses were formed prior to data collection about the nature of the relationship between these non-individual level factors and women's experience and management of UIP. Rather, this portion of the research was guided by the conceptual frameworks described in the previous section. Hypotheses about the relationships between non-individual level factors and women's UIP experiences emerged continuously and were revised based on data collected throughout the course of the research study.

1.5.4   Specific aims

In sum, the objective of this dissertation is to incorporate a public health perspective into the exploration of women's reproductive health. It addresses the following three specific aims:

1. To evaluate the extent to which current women's reproductive health research and literature need to incorporate a broadened perspective that focuses on external factors which impact women's reproductive behavior;

2. To examine the relationships among women's prospective pregnancy planning status, anticipated pregnancy outcome if confirmed, and pregnancy test result; and

3. To identify factors falling at the social, cultural, environmental and structural levels that impact women's experiences and management of UIP.

1.6   GENERAL METHODOLOGY

Building on existing epidemiological studies that have linked several individually situated risk factors to the outcome of UIP, this study used mixed methods in order to understand the nature of these connections, improve on existing measures for classifying pregnancy planning status and describe the broader context within which women experience and manage their fertility. Specifically, the dissertation research employed both quantitative surveys and in-depth semi-structured interviews. To simplify the description of the two methodological pieces used in this research study, the quantitative survey will heretofore be referred to as Component I and the qualitative interviews will be referred to as Component II, and the data collection of these two research elements overlapped in timing and interpretation. This research study (including both Component I and Component II) was approved by the University of Pittsburgh Institutional Review Board (study ID PRO07050260).   Funding for Component I and Component II was provided by the RAND-University of Pittsburgh Health Institute (RUPHI)/Magee Women's Research Institute (MWRI) Pilot Grant Program and the University of Pittsburgh Women's Studies Student Research Fund, respectively.

The first manuscript is a commentary incorporating a literature review that encompasses background information from this first chapter. I authored this first manuscript, and Dr. John Marx is listed as a co-author on the manuscript for his assistance with conceptualizing many of the ideas reflected and for his feedback on drafts of the manuscript.

1.6.1 Component I

1.6.1.1 Population and sampling The study population for Component I included literate English-speaking women of reproductive age (15-44) who had no disability that prevented them from reading and responding to a survey and who believed that they might be pregnant as determined by their visit to one of four clinics for a pregnancy test in Pittsburgh, PA between January 4 – May 31, 2008.

The two research sites included Magee Women's Hospital (site of two separate family planning clinics) and Planned Parenthood of Western Pennsylvania (site of one family planning clinic and one abortion clinic). Each of these sites offers walk-in urine pregnancy tests free of charge and were selected because of this service. Feedback obtained from clinicians who work at these sites indicated that low-income women, young women, and minority women (all populations of interest in this study) use the pregnancy testing services at these sites whether or not they continue to make contact with the medical system after receiving the results of a pregnancy test. Planned Parenthood served as a location in which to identify women (many of whom were low-income) who might be more likely to terminate confirmed pregnancies due to the presence of the abortion clinic in the same building while Magee Women's Hospital provided access to a cross-section of women who might either continue or terminate confirmed pregnancies and who represented women from a variety of income levels.

The sampling frame for Component I included all women who visited one of these four clinics for pregnancy testing services during the study timeframe identified above. A convenience sample of approximately 250 women was drawn from the two clinics. This sample size calculation assumed an 80% response rate(70) and was based on an expected 55% proportion of women who would classify their potential pregnancies as either unintended or

ambivalent (based on the hypothesis that the proportion would be slightly higher than that of the 50% of women who retrospectively classify their pregnancies(70)), a margin of error of +/- 7%, and a 95% confidence level.*

1.6.1.2 Data collection All women who visited one of the four clinics for a walk-in pregnancy test between January 2008 and May 2008 and who met the selection criteria (age 15-44, English speaking, and no presence of a handicap or disability that would prevent them from participating) were asked to fill out a survey by clinic staff while in the waiting room of the clinic between the time that they provided urine for the pregnancy test and the time that they received the results of the test. Respondents sealed their surveys in envelopes and returned them to clinic staff allowing a woman's responses to remain private. All women were provided with a chocolate bar as a thank you for their participation in the study. Each week when survey packets were collected from the research sites, pregnancy test results of each participant that consented to participate were recorded on the completed survey.

The 41-item survey instrument took approximately 5-10 minutes for women to complete and included questions regarding women's demographic characteristics, reproductive and contraceptive histories. It also included a single-item measure of pregnancy intentions, which asked women "Which of the following best describes your current situation?" Response options included: trying to get pregnant, wouldn't mind getting pregnant, wouldn't mind avoiding pregnancy, trying to avoid pregnancy or don't know. Women were asked what the outcome of the pregnancy would be if they received a positive pregnancy test result; response options

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* $n = Z^2 \; * \; (P)(1-P) \, / \, d^2 = (1.96)^2 * [(0.55)(0.45)]/(0.07)^2$

included abortion, continue to adoption, continue to parenthood or don't know. The survey also

included a question sequence adapted from Barrett, Smith and Welling's(67) London

Measurement of Unplanned Pregnancy (LMUP) to assess prospective pregnancy intentions prior

to receiving a confirmation of a pregnancy, which we call the prospective-LMUP (pLMUP) (see

Appendix A). One question originally incorporated in the LMUP sequence that asked women

about their feelings regarding a baby was omitted because of the time point at which intentions

were being assessed. Research staff agreed that asking women about a baby when they were

very early in their pregnancy, if pregnant at all, places a value on the early pregnancy that may

not be shared by all women, especially if they intend to terminate the pregnancy. Schunmann

and Glasier(71) omitted this same question for similar reasons in their study of pregnancy

intentions among women undergoing abortion and were able to successfully use the question

sequence to capture pregnancy intentions.   Women were asked to provide identifying

information at the end of the survey (name, phone number, address) if they were interested in

possibly being contacted for the qualitative interviews (Component II).   The Component I

survey, therefore, served two purposes: (1) to collect data from a larger sample of women

regarding how they classified their potential pregnancies; and (2) to identify and recruit potential

participants for Component II of the study.

1.6.1.3 Data analysis Scoring of the pLMUP sequence was based on the original scoring schema

proposed by Barrett, Smith and Wellings(67).   Due to the omission of one of the original

questions in the sequence, the pLMUP score ranged from 0 (least intended) to 10 (most

intended). Although the authors stressed that there were no obvious cutoff points in the scale, we

used their suggested scoring schema to guide our clustering of scores into three groups: 0-3 (not

planning), 4-7 (ambivalent), and 8-10 (planning). We characterized the study participants in terms of sociodemographic data (age, ethnicity, race, marital status, education, employment status, income, insurance), reproductive histories and behavior regarding pregnancy and contraception. Women who responded to the single-item measure of pregnancy intention as "wouldn't mind getting pregnant," "wouldn't mind avoiding pregnancy," or "don't know" were categorized as having ambivalent pregnancy intentions. Data from all interviews were entered into an Excel spreadsheet and analyzed using STATA version 9.0 computer software (StataCorp, College Station, TX USA). We used χ^2 tests to determine differences between women according to sociodemographic and reproductive characteristics by test result, prospective pregnancy intentions, and anticipated outcome of confirmed pregnancy. Results were considered significant at $p<0.05$.

As the Principal Investigator on the study, I authored the manuscript developed out of Component I data. My role involved conceptualizing the study design, developing the survey instrument, collecting data, analyzing data and writing the manuscript. Listed as a co-author on the first manuscript, Dr. E. Bimla Schwarz provided assistance with study conceptualization, survey development, funding, and feedback on drafts of the manuscript.

1.6.2   Component II

1.6.2.1 Sample selection Based on responses and demographic information from the Component I surveys and women's written indication that they would be interested in participating in Component II, women were purposively selected for inclusion in Component II. Component II participants must have met all of the selection criteria for Component I in addition to having

classified their potential pregnancies as falling into either the unintended or ambivalent categories (according to the prospective-LMUP question sequence) and having classified themselves as either non-Hispanic white or non-Hispanic Black on the survey. Initially, only women who had received a positive pregnancy test result were included in the Component II population in order to specifically examine UIP from the perspective of a woman who had confirmed a pregnancy that she indicated was either unintended or she was ambivalent towards. Over the course of the Component II recruitment process, however, the criteria for incorporating women into the Component II population were broadened to include women who had received a negative test result but who had classified their potential pregnancies in the unintended or ambivalent categories.

This modification of the eligibility criteria was made because only a few women who had received a positive pregnancy test result indicated interest in participating in the interviews as compared to significantly higher numbers of women who had received a negative test result. The PI and her mentors agreed that the perspectives of women who had received a negative test result, but who had classified their potential pregnancies as falling into the unplanned or ambivalent categories, were equally valuable in the study objective of understanding the factors that influence women's fertility experiences. One possible explanation for the observed discrepancy between the two groups of women regarding interest in participating in the interviews is that women who have just learned of a confirmed unplanned or ambivalent pregnancy likely experience a significantly higher burden of stress and life disruption associated with deciding how to cope with this information than women who learn that they are not pregnant.

Hispanic women were omitted from the qualitative sample due to the decision to compare a single minority population, non-Hispanic African American women, who have been documented to be at significantly high risk for UIP and who represent a much larger segment of the Pittsburgh population than do Hispanic women with the dominant, majority population of non-Hispanic white women. Limiting the in-depth interviews to only non-Hispanic white and non-Hispanic African American women allowed for greater exploration into the reasons for the stark disparities in UIP rates between these two sub-groups of women and into the meaning of UIP for these women.

In order to collect rich data and delve deeply into the circumstances of women's lives within which they experience and manage UIP, ten women who reflect a population to whom the research question was relevant, i.e. those who had been identified in the literature as being at high risk for UIP, were purposively selected for inclusion in the Component II sample. These "high risk" women (African American women, young women, and low-income women) were oversampled in Component II in order to highlight the importance of their perspectives in the determination of pregnancy intention and the ways by which non-individual level factors impact their fertility experiences. The perspectives of these populations are often overlooked in current research and programs aimed at studying and addressing UIP, and several studies(42, 44) indicate that middle-class assumptions about the value of planning for pregnancy do not hold relevance for some of these "high risk" populations. The number of women included in Component I of the study far exceeded the number of women included in Component II due to the minimal burden placed on women regarding filling out a quick, simple survey. Also, as Component II places a significant burden on women in terms of giving up a couple of hours of

their time for the two interviews, a significantly higher number of subjects in Component I helped to ensure that the target number of ten women in Component II was met.

A sample of ten women was chosen for Component II due to the desire of the researchers to delve deeply into these women's thoughts, beliefs and experiences. During the process of purposive sampling in Component II it became clear that all participants fell into at least one and often more than one of the "high-risk for UIP" categories (minority, low-income and/or young); all ten of the participants self-identified as African American. Women who did not self-identify as African American did not express an interest to participate in the Component II interviews. With a qualitative sample that had such narrow eligibility criteria, the PI decided that a sample of ten sufficiently represented the perspectives of women to whom the research question was relevant.

1.6.2.2 Data collection Component II was designed according to the principles of ethnographic and qualitative methodology research. The details, though not the fundamental components, of data collection thus changed over the course of the study, depending on initial findings and input from study participants. For example, questions were adapted, improved and sequentially changed as interviews progressed based on participants' responses and perceived comprehension. Qualitative methods were chosen for Component II because the research question was a descriptive one and this methodology allowed for an in-depth exploration into the topic by providing an emic (insider) perspective of the participants' lived experiences(72). The qualitative process was an entirely data-driven one; perceptions, ideas, thoughts, and experiences of those being studied remained the central focus of research. With very little existing research that identified or described the influence of non-individual level factors on women's experiences

and management of UIP, this research study began to develop hypotheses and initial theories to describe this relationship through identifying themes that emerged from the qualitative data.

Women selected for Component II were contacted by telephone within two weeks of their completion of the Component I survey, reminded of their Component I participation and asked if they were still interested in participating in the Component II interviews. To maximize the comfort and convenience of participants, they were asked whether they would prefer to have the interviews conducted in their home or at a neutral research location. All interviews were conducted by the author of this dissertation.

Component II consisted of two interviews with each participant, the first of which was approximately 90 minutes and the second of which was approximately 30 minutes in length. The two interview sessions were conducted within two weeks of each other. Two interviews were employed in this study design in order to capture changes in thoughts and feelings regarding pregnancy and motherhood prompted by issues that arose during the first interview and/or to verify women's descriptions from the first interview regarding these issues. Two meetings were also chosen over a single one in order to minimize the burden placed on women regarding their time and energy in sharing substantially emotionally draining personal information.

Although the interviews were open-ended and ethnographically focused, a semi-structured interview guide for each session was loosely followed in order to ensure that certain topics were covered with each participant (see Appendix B1 and B2). The first interview guide incorporated several questions from Kendall et al.'s field guide(30), which was created to gain insight into the multiple dimensions of women's reproductive behaviors and desires, and Edin and Kefalas' interview guide(60), which directed their research regarding motherhood and marriage of poor women. During the second interview session, women were provided with a

blank diagram showing levels of factors that might impact their ability to prevent pregnancy and asked to fill it in (see Appendix B3). At the completion of the second interview, women were provided with a $50 gift card as a thank you for participation. All interviews were tape recorded (after consent from participants was obtained), and field notes and transcriptions of each session were written soon after completion of each interview. All interviews were conducted between February 1, 2008 and May 6, 2008. Women were provided with a $50 gift card after completing the second interview.

1.6.2.3 Data analysis Content analysis was the analytic technique employed in this research study. An initial coding guide based on the interview guides and existing literature was developed prior to data collection and subsequently adapted and updated throughout the interview and coding process. Transcriptions of interviews were independently reviewed several times and coded by the Principal Investigator and two other members of the research team. Collectively all three researchers examined and discussed coding strategies, identified emergent themes that arose from these codes, and agreed on or revised these themes through a process of consensus. Transcripts were coded and analyzed for codes and themes with the assistance of Atlas.ti, a qualitative data analysis management software application. The codebook is included as Appendix C.

During the development of the interview guide, the PI established four initial factor groups to encompass potential external factors that could impact women's fertility: social, cultural, environmental and structural. Based on discussions with the research team and with mentors, these groups were revised over the course of the analysis to reflect the women's stories more appropriately. To build on individual-level factors that impact women's fertility, the final

factor levels through which women's stories are framed in this article include: interpersonal (including social relational or psychological factors, communication between or among women and others); social structural (including consequences of economic, political and stratification systems for positions, statuses and roles distributed by social class, race/ethnicity, gender, age, etc. and formal or informal normative structures); environmental (including physical aspects and condition of the built environment, crime, neighborhood, work, etc.); and cultural (made up of abstract symbols and symbol systems, metaphors and models of and for these systems, language and linguistic variations, values and identifications).

As the Principal Investigator on the study, I authored the manuscript developed out of Component II data. My role involved conceptualizing the study design, developing the interview guide, conducting interviews, transcribing interviews, analyzing data and writing the manuscript. Listed as co-authors on the second manuscript, Dr. Martha Ann Terry and Dr. Patricia Documét provided assistance with study conceptualization, interview guide development and feedback on drafts of the manuscript.

2.0   BROADENING THE FOCUS OF WOMEN'S SEXUAL AND REPRODUCTIVE HEALTH RESEARCH: THE CASE FOR REFOCUSING UPSTREAM

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Manuscript in preparation

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2.1   ABSTRACT

Public health, especially those aspects of the field involved in women's sexual and reproductive health, has veered away from its original mission to address and promote health on a societal level towards an individually-focused, victim-blaming paradigm. From the perspective of a doctoral candidate about to embark on a public health career focused on women's sexual and reproductive health, the field seems to be in need of a restructuring and refocusing return to its original thrust towards social justice and population health. This paper argues for the incorporation of a public health perspective into the women's sexual and reproductive health field that situates the locus of responsibility for achieving health at the societal level rather than the individual level, that emphasizes a commitment to social justice issues, and that encourages public health professionals in this area – present and future – to revisit the spirit of social action that initially drove so many of them to enter the field. Adopting this perspective may lead to a better understanding of the realities of women's reproductive health and how behavior change in this area can be encouraged within the broader realm of their lives.

2.2   INTRODUCTION

In 1920, CEA Winslow wrote that "public health is the science and art of preventing disease, prolonging life, and promoting health and efficiency through organized community effort" (Winslow, 1920). The 1988 Institute of Medicine (IOM) report (1988, p.1), *The Future of Public Health*, identified the crux of the public health mission as being "what we, as a society, do collectively to assure the conditions in which people can be healthy." Twenty years later, the

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widespread adoption of this mindset regarding the collective responsibility of the society to act in the interests of the entire population in matters of health – and in more general social domains – remains an elusive pipe dream. The public health system in the United States (US) has veered away from notions of disease prevention and "health for all" (or, at the least, for most) towards a far more individually-focused, morally-weighted, health promotion emphasis.

Collectively, the US population has felt the brunt of this change in course: despite copious evidence indicating that population-level prevention efforts have the most "bang for the buck" in terms of improving population-level health outcomes, 95% of the money spent on health in the US goes toward individually-focused health solutions, such as clinical medicine and hospital treatment, rather than towards illness prevention and public health initiatives (McGinnis and Foege, 1993). Ironically, or perhaps not so, the sectors of society that would benefit most from far-reaching and proactive health and social reform initiatives often consist of the same groups of people that lack the resources – both financial and political – to access appropriate medicine and healthcare. Simultaneously, those with little to gain personally from population-level initiatives, and who drive health policy decisions regarding the focus of public health, are also the people who can afford to pay for expensive, private medical options.

In particular, research regarding women's reproductive health is heavily reliant on the biomedical paradigm to document and explain existing health trends related to women's fertility (Inhorn, 2006). Much of this research uses an individually-focused model to explain observed trends, essentially placing the burden of responsibility for controlling sexual behavior and managing consequences of this behavior entirely on individual women. In addition, initiatives based on this research often target behavior in isolation of the social context within which it occurs.

Public health should return to its "health for all" approach: currently, a small fraction of the population is benefiting from the individually-focused public health approach while a shift in focus towards population-level health initiatives would benefit the majority of the population. It is time for those of us in public health, especially in women's sexual and reproductive health (SRH), to return to the original mission of public health, to revisit our own personal reasons for entering the field, and to redirect the course of contemporary public health towards a path that will yield fruitful health improvements for all, rather than just a select few. In order to demonstrate potential significant outcomes that could be realized with a return to a "collective responsibility" approach to public health, this paper focuses on the SRH field as one that could benefit greatly from the adoption of this approach.

2.3   REVISITING THE ORIGINS OF PUBLIC HEALTH

American public health originated in mid to late 19th century sanitarian efforts aimed at radical social environmental reform that preceded the European bacteriological revolution of the 1880s (Berliner, 1980). Early American public health approaches were population-level social justice initiatives focused on sanitation developments, improving substandard living and working conditions and implementing vaccination strategies (Starr, 1982). Successes in these areas were realized through mutual recognition of shared responsibility for the health of the collectivity among sanitarians and public health and government workers.

As the market-driven and individually-focused field of clinical medicine gained momentum with the rise of professional sovereignty and its transformation into an industry (Starr, 1982), these original notions of the purpose of public health receded and became

subordinate to epidemiologists' preoccupation with identifying risk factors for various health outcomes. Relying on the biomedical paradigm to search for these risk factors essentially uncoupled disease and prevention issues from the social roots of population health focused public health (Brandt and Gardner, 2000). In addition, the introduction of antibiotics and a surge of psychological literature focusing on self-efficacy and individually focused models of behavior in the early 20th century further supported this directional shift and promoted scientific inquiry that focused on individuals' ability to control and change their behavior (Wilcox, 2007). Even Winslow, a prominent public health scholar who championed the importance of community efforts to address public health issues, turned his attention to promoting health education for individual behavior change (Winslow, 1914). The locus of change for public health initiatives shifted from the population to the individual, or from the exploration of structural and societal factors that impact health to the behavioral domain, and it has yet to turn back. Likewise, the burden of changing the conditions associated with poor health shifted from society to the individual. Perhaps this transition was to be expected; after all, as long ago as 1980, Berliner pointed out that:

> Because public health deals with populations and strives to improve their collective health, it comes into conflict with political and economic forces in societies in which social well-being is not the paramount goal, such as in a capitalist system, where profit and accumulation take precedence over health (1980, p.178).

Since Berliner's essay, there have been few efforts to broaden the scope of public health to recognize the impact on health of more than just individual, lifestyle factors. Notable luminaries such as Nancy Krieger and John McKinlay, to name just two, have consistently drawn attention to the limitations of individualistically oriented social philosophy (Krieger, 1994) and biophysiologic reductionism (McKinlay and Marceau, 2000) widely practiced within public

health. Evidence of a subtle shift also can be seen in the development of multi-layered health determinant models, such as the Social Ecological Model, as well as the field's current commitment to social justice as a core value underlying the practice of public health. Similarly, the widely documented recognition of health disparities and purported commitment on the part of prestigious public health organizations to decrease these disparities with some attention to community-level factors reflects an acknowledgement of the need to look beyond the individual for possible causes. Contemporary public health research has made significant strides in documenting and describing causal pathways for health outcomes; for example, the Task Force on Community Preventive Services has developed a social environment and health model that acknowledges the role of the social and physical environment in shaping, influencing, and harming human health (Anderson, Scrimshaw, Fullilove and Fielding, 2003). While these renewed efforts reflect an important shift in the rhetoric of the public health field, I contend that the rhetoric has yet to be fully transformed into practice.

It is no wonder that American culture has been slow to re-adopt this collectivist perspective towards achieving healthy citizens and a healthy society. Our deeply held values of self-determination and self-worth based on individual achievements exemplified in the notion of the "American dream" clash strongly with notions of collective benefits. The individualist-capitalist ideological foundation of American society has allowed, nay encouraged, shifting the burden of maintaining health and treating illness from the collectivity to the individual. This shift concurrently supports the adoption of a victim-blaming perspective that places the pursuit of health in the hands of the individual and assumes that the inability of the individual to maintain nationally-accepted standards of health represents personal moral failure, which justifies the assignment of blame to that individual (Knowles, 1977). This perspective, while relieving those in power of the responsibility to protect the health of the public, rests on several false assumptions including, but not limited to: (1) the individual actor makes decisions

independent of her surroundings; (2) the individual has the knowledge to make the most healthy choices; (3) the individual resides and/or works in an environment in which it is appropriate and safe to adopt healthy behaviors; and (4) the individual has the financial ability, the personal autonomy, and the mental capacity to adopt recommended healthy behaviors. Sociocultural, educational, and economic differences among individuals, which facilitate or inhibit health promoting behaviors, are typically ignored.

The reproductive health field can be understood as falling victim to the same patterns and events that shaped the movement of public health towards an emphasis on the individual rather than on the collective. The current approach in the US to addressing unintended pregnancy (UIP) is misdirected in its proposed individual-level solutions to what has been identified as a societal problem (Stephenson and Wagner, 1993). This philosophy represents a fundamental disconnect that diverges from the original mission of public health work. The basis for this rational and individual decision-making process focused on in reproductive health can be clearly linked to the domination in public health of models focused on individual health behavior change, or public health behaviorism (Basu, 2004). These behavioral models are normative in that they dictate what women should do to avoid UIP until they are ready, as deemed by societal norms, to become pregnant. This approach to reproductive health situates decision-making and factors that impact it entirely at the individual level, negating or neglecting the multifaceted structural, social, political, and cultural factors that are intricately embedded in women's reproductive health outcomes. Paradoxically, the reproductive health field places blame and responsibility for controlling reproduction at the individual level in a society that boasts a very public, population-level morality regarding whether, how, and to what extent women should control their reproduction.

In many SRH studies, researchers recommend increasing women's knowledge about and access to contraceptives, better understanding women's intentions regarding pregnancy, and promoting behavioral interventions that strengthen women's decision-making skills. These recommendations situate control over becoming pregnant with individual women, paying little attention to the context within which they negotiate and experience structural barriers or facilitators that impact their reproductive decisions and behavior. Reproductive and sexual health education has traditionally been the cornerstone of family planning programs (DiCenso, Guyatt, Willan and Griffith 2002), based on the assumption that women who understand what contraception is and how it works will accordingly make socially appropriate decisions regarding when and how to use it. While education is undoubtedly an integral part of any reproductive health program that may, indeed, contribute to decreasing UIP rates, it cannot be employed in isolation. Relying solely on educational efforts to encourage women to plan and limit family size supports the standard health behavior model emphasizing individual choice and responsibility as opposed to collective measures and gains, imparts the message that there are morally-tinged "right" and "wrong" ways of controlling one's fertility, and blames the woman who is unable to conform to societal fertility rules for being irresponsible or "morally lacking." These approaches fail to recognize contextual factors that impede or facilitate individuals in their ability to change behavior according to the recommended guidelines of "experts" and correspond to a deflection of professional and governmental attention away from structural and collective determinants of reproductive ill health.

2.4   WHY DID WE BECOME INVOLVED IN PUBLIC HEALTH IN THE FIRST

PLACE?

In his 1997 reflection on the integration of the health and human rights fields, Mann (2006, p.1942) described people engaged in public health as being "uneasy, uncomfortable, dissatisfied with the state of the world…with a belief that, in joining together, we can change the world for the better." Mann's sentiment is at the heart of why so many people, more now than ever, are joining a field that suggests that concern for the health of society should be held higher than the health of the individual. Unease with the state of affairs combined with a commitment to social action have been heralded as the public health field's core value of social justice – at least on paper (the extent to whether this has been translated into practice remains unclear). Working for the fair disbursement of common advantages and shared burdens is not such a new idea (Gostin and Powers, 2006), even though it continues to be challenged both from within and outside the field. Additionally, the notion of social justice is in direct contrast with American capitalism's prioritization of accumulation and wealth above health. The pursuit of "health for all" has become subordinate to the notion of "health for those who can afford it." In the US, health has undoubtedly become a commodity and a privilege rather than a right, in direct contradiction to its inclusion in the United Nations 1948 Declaration of Human Rights as a basic human right (United Nations, 1948).

With regards to women's SRH, a principal element of relying on the rational idea of "planning" for a pregnancy is one overly simplistic assumption: if women and their partners have sufficient knowledge regarding how to access and use contraception effectively, they will become pregnant when they deem it is fitting to do so. Too often, those individuals who are least able to meet public health recommendations for managing fertility or achieving optimal

reproductive health through adopting behavioral recommendations are the same individuals who are disproportionately impacted by the burden of UIP. Examining the widely documented disparities in UIP rates across subgroups of women (Finer and Henshaw, 2006), it is clear that vast inequalities surround the issue of controlling fertility for women of different social classes, educational levels, ethnicities and/or races. Reproductive health disparities represent a widespread social justice issue because of the exacerbation of these disparities by poverty, gender and racial/ethnic discrimination.

The standard public health assumptions regarding the need to change individual level behavior in order to reduce these inequalities in UIP lead to the conclusion that the "fault" for failing to reduce UIP lies with the individual women who comprise the UIP statistics. While this stance relieves higher-level organizations and government of blame or responsibility for the outcome, it misses a fundamental piece of the puzzle consistently overlooked in programs that address UIP: women's reproduction cannot be targeted in isolation from the rest of their lives. Actively electing to become a mother or finding oneself becoming a mother without planning to do so are both outcomes that impact a woman's ability to fulfill her role as an active participant in society, whether it is through career, educational, vocational or familial pursuits.

We have lost sight of the original aspirations for the field of public health. The task ahead of us as public health professionals involved in women's SRH is multifaceted. Within our community, we must acknowledge that there are more levels at which to optimally target health promotion and prevention activities than just the individual one. While there will always be a place for the identification of individual risk factors, this paper argues for broadening the perspective of public health professionals involved in women's SRH (including those in research, practice, and policy) to refocus efforts towards upstream, societal-level change

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initiatives. When trying to understand racial disparities in UIP, public health policies and programs that ignore structural factors and suggest only individual-level or family factors in achieving "ideal" reproductive capabilities must be challenged. We must address the impact that cultural and contextual factors such as poverty, racism, and gender inequality have on women's lives and reproductive health experiences in order to broaden the lens through which research and programs address UIP. We must improve our ability as public health workers to demonstrate success of programs that are targeted at the societal level, despite the fact that these results take longer to achieve than programs directed at individuals. This feat likely will prove difficult because, to quote Rose's (1992, p. 12) prevention paradox, "a preventive measure that brings large benefits to the community affords little to each participating individual." We must develop initiatives that truly change health outcomes at the population level, rather than the current tendency of "population-level" programs relying on individual-level behavior change measured in aggregate.

The contemporary trend in the public health and reproductive health fields reverses the original mission of public health by designing and legitimating policies and programs in individualistic, civil libertarian terms that maximize personal autonomy, choice, and responsibility while downplaying communal benefits and collective welfare. However, this contemporary focus of attention clearly allows those in power to act in the best interests of those whom they believe make up "the public," and the "mutual advantage" realized by this approach is certainly not universally experienced throughout the population. In contrast, a reorientation of the public health field towards societally-realized health benefits would support an approach that focuses on the collective good and health of society. Adopting this perspective within public health and promoting it within the society as a whole emphasizes striving towards health

achievements that result in overall societal health. For example, within the field of SRH, recognizing that changes in reproductive health policies at the population level to benefit the most marginalized women impact all women's experiences of UIP at the individual level is an initial step towards decreasing, and eventually eliminating, current reproductive health disparities. The field of public health is well-situated to take on the effort of refocusing the popular perception of health towards a rights-based, collective good, population-oriented approach because of the special calling that many of us who make up the field felt in addressing the ill health of society. It is our duty, both as public health professionals and as concerned citizens – a role that ultimately attracted many of us to the profession in the first place – to strive towards the promotion of the collective good in our public health initiatives.

2.5   CONCLUSION

There is a fatal flaw in the way that we in the US, as a field, have conventionally defined and tackled public health issues. This flaw lies in the currently popular mentality promoted by public health professionals that an individual must take on a personal burden and responsibility to change her behavior, rather than targeting the societal level as the locus of change. This individually-focused, morally weighted approach (1) sets up an expert/lay person divide in that public health professional experts define what is an undesirable and desirable outcome and how best to change behavior in order to reach the desirable outcome; (2) endorses the belief that individual behavior change is the favored response for reaching healthy outcomes or avoiding unhealthy ones, and assumes that all individuals have an equal ability to adopt whatever behavior is recommended; therefore, they are morally irresponsible if they fail to adopt the behavior; and

(3) allows the government and public officials to shirk their duties in protecting the collective good by endorsing a hands-off approach to addressing societal issues and fundamental causes of poor health.

The modern field of public health has lost sight of its original purpose. It is time that the public health community returns to its origins and that its members revisit their initial reasons for joining the field. The SRH field, especially, must incorporate this perspective into future research and programming in order to address the glaring reproductive health disparities among sub-groups of women. Improving the health of the public must truly become the responsibility of all of us to look towards the collective good for a healthy society. In order to strive towards this ideal, public health initiatives must be focused upstream and directed towards results that are realized on the population level, which tackle the underlying fundamental *causes of the causes* – the social conditions that create the unequal distribution of poor health in contemporary American society (Rose, 1992). As an applied social science with the original purpose of attending to the fundamental causes of poor health and the structural inequalities that exist in society, public health is uniquely situated to engage both the general public as well as governmental leaders in conversations regarding the health of the public and to subscribe to the notion that health is, indeed, a human right rather than a commodity. Public health workers within the field of SRH would do well to encourage fellow colleagues to follow suit by situating women's health within the social context of their lives rather than focusing on narrow aspects of women's behavior in future research and programming.

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3.0 PROSPECTIVE ASSESSMENT OF PREGNANCY INTENTIONS USING A SINGLE VS. MULTI-ITEM MEASURE

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3.1   ABSTRACT

Introduction

Bias is inevitable when pregnancy intentions are assessed after pregnancy has been confirmed or a birth has occurred.

Methods

We prospectively assessed pregnancy intentions of 202 women ages 15-44 seeking pregnancy tests at four family planning clinics in Pittsburgh, PA.   While awaiting the results, women completed a survey containing items adapted from the London Measurement of Unplanned Pregnancy (LMUP) as well as a single-item measure of pregnancy intention.

Results

The survey completion rate was 83%. Using the prospective-LMUP (pLMUP) scale, we found 21% of women were planning for pregnancy. The remainder of women were classified as either ambivalent (40%) or not planning (39%). Women who were not planning for pregnancy were more likely to indicate that they planned to have an abortion if their test was positive (p<0.001). Responses to the single-item measure closely paralleled pLMUP classifications: 75% of women trying to avoid pregnancy would be categorized by the pLMUP as not planning for pregnancy while 87% who stated they were trying to become pregnant would be categorized by the pLMUP as planning for pregnancy.

Conclusions

Assessing women's pregnancy intentions prior to pregnancy testing is feasible and provides a useful tool for identifying women ambivalent about pregnancy before time and a confirmed pregnancy can influence resulting feelings and plans.

3.2   INTRODUCTION

Among industrialized countries, the United States continues to have the highest rates of unintended pregnancy (UIP) and approximately half of all American women between the ages of 15-44 have experienced at least one UIP in their lifetime(1). Several studies have documented the health and economic consequences of these UIPs for mothers, children and the society as a whole(2). Rates of UIP and of abortion are disproportionately higher in young women, minority women and low-income women(3). Consequently, the public health impact of UIP is far-reaching. As a result, the US government's Healthy People 2010 initiative focuses on preventing UIP in order to move towards the broader goals of eliminating health disparities and improving quality of life(4).

Current discourse regarding UIP, reflected in reproductive health policies and programs, often takes the stance that the concept of UIP is unproblematic and self-evident, despite growing evidence that the measurement and conceptualization of UIP has significant limitations(5). Some of these limitations result from interchangeable use of the terms unintended, unwanted and unplanned pregnancy(6-8), dichotomous categorization of these concepts as unintended/intended, unwanted/wanted and unplanned/planned, universal application of the concept of UIP to different sub-populations of women(9), and significant differences between

researchers and policy makers on the one hand and the women being researched on the other regarding the definitions and values of planned and unplanned pregnancies(10). In response to the drawbacks of divergent definitions of existing measures, Barrett, Smith and Wellings developed and validated a simple question sequence, the London Measurement of Unplanned Pregnancy (LMUP), to measure pregnancy planning across diverse groups of women(11).

Several studies indicate that dichotomous outcomes of intention do not capture the experiences of a large portion of women who are ambivalent about becoming pregnant. Women who are characterized as being ambivalent towards pregnancy use less effective contraceptive methods(12, 13). In addition, the retrospective assessment of UIP significantly limits the accuracy of the current measurement of the concept(14-16). Rates of UIP fluctuate broadly depending on the time point at which it is measured, whether it is during a pregnancy or after a birth. Most commonly, women tend to become more accustomed to a pregnancy with time, and rates of both intention and desire for pregnancy increase with time from conception(15-17).

Prospective assessment of pregnancy intention as a multi-dimensional concept may increase health care providers' ability to identify this group of ambivalent women for targeted contraceptive and pre-conception interventions in order to improve population-level pregnancy outcomes. Our goal was to prospectively assess pregnancy intentions in a population of women at high risk for UIP using two different measurement strategies and to describe the relationship between these intentions, the decision regarding the outcome of the potential pregnancy and the pregnancy test result.

3.3   METHODS

We conducted a cross-sectional survey of women regarding their reproductive health histories and prospective pregnancy intentions as part of a larger study of the social determinants of unintended pregnancy in a high-risk population of women. This study was approved by the Institutional Review Board at the University of Pittsburgh.

Literate, English-speaking women between the ages of 15-44 who sought walk-in pregnancy testing services at one of four research sites in Pittsburgh, PA were recruited for the study. Three of the sites were general family planning clinics (two located in an academic teaching women's hospital and one in a Planned Parenthood facility) and the fourth site was a Planned Parenthood abortion clinic. These sites were selected because they provided urine pregnancy tests free of charge and served a large number of women at high risk for unintended pregnancy – low-income, minority, and young women.

All women who met the eligibility criteria and who visited one of the four clinic sites for a walk-in pregnancy test during the study period (January – May 2008) were asked to complete a survey while awaiting the results of their pregnancy test. The survey took approximately 5-10 minutes to complete. Respondents sealed their surveys in envelopes and returned them to clinic staff allowing a woman's responses to remain private. All women who returned a sealed envelope were provided with a chocolate bar as a token of appreciation for participating in the study. Chart review was used to ascertain the results of subjects' pregnancy tests.

The 41-item quantitative survey instrument included questions regarding women's demographic characteristics, reproductive and contraceptive histories, and a single-item measure that asked women to indicate their current situation as one of the following: trying to get pregnant, wouldn't mind becoming pregnant, wouldn't mind avoiding pregnancy, trying to avoid

pregnancy, and don't know. In addition, women were asked what they would do if they received a positive pregnancy test result (choose abortion, continue to adoption, continue to parenthood or don't know). The survey also included a question sequence adapted from the LMUP(11) to assess prospective pregnancy intentions prior to receiving a confirmation of a pregnancy, which we call the prospective-LMUP (pLMUP). One question originally incorporated in the LMUP sequence that asked women about their feelings regarding a baby was omitted because of the time point at which intentions were being assessed. Research staff agreed that asking women about a baby when they were very early in their pregnancy, if pregnant at all, places a value on the early pregnancy that may not be shared by all women, especially if they intend to terminate the pregnancy. Schunmann and Glasier(18) omitted this same question for similar reasons in their study of pregnancy intentions among women undergoing abortion and were able to successfully use the question sequence to capture pregnancy intentions.

Scoring of the pLMUP sequence was based on the original scoring schema proposed by Barrett, Smith and Wellings(11). Due to the omission of one of the original questions in the sequence, the pLMUP score ranged from 0 (least intended) to 10 (most intended). Although the authors stressed that there were no obvious cutoff points in the scale, we used their suggested scoring schema to guide our clustering of scores into three groups: 0-3 (not planning), 4-7 (ambivalent), and 8-10 (planning). Our pLMUP question sequence along with our scoring system for each question is shown in Table 3.1.

We characterized the study participants in terms of sociodemographic data (age, ethnicity, race, marital status, education, employment status, income, insurance), reproductive histories and behavior regarding pregnancy and contraception. Women who responded to the single-item measure of pregnancy intention as "wouldn't mind getting pregnant," "wouldn't

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mind avoiding pregnancy," or "don't know" were categorized as having ambivalent pregnancy intentions.

<p align="center">**Table 3.1.** pLMUP question and scoring sequence</p>

Question	Answer (paraphrased)	Score
Q1. Since my last period:	Always used contraception	0
	Inconsistent use of contraception	1
	Not used contraception	2
Q2. If I am pregnant, in terms of becoming a mother:	Wrong time	0
	Ok, but not quite right time	1
	Right time	2
Q3. If I am pregnant, in terms of becoming pregnant:	Did not intend to get pregnant	0
	Intentions kept changing	1
	Intended to get pregnant	2
Q4. If I am pregnant, in terms of becoming pregnant with partner:	Had never discussed having children together	0
	Discussed having children together, but no agreement	1
	Agreement with partner on becoming pregnant	2
Q5. Since my last period:	No actions	0
	Health preparations (one action*)	1
	Health preparations (two or more actions*)	2

* Actions taken in preparation for pregnancy include taking folic acid, stopping or cutting down on smoking and/or alcohol, eating more healthily and seeking medical/health advice

Data from all interviews were entered into an Excel spreadsheet and analyzed using STATA version 9.0 computer software (StataCorp, College Station, TX USA). We used χ^2 tests to determine differences between women according to sociodemographic and reproductive characteristics by test result, prospective pregnancy intentions, and anticipated outcome of confirmed pregnancy. Results were considered significant at $p<0.05$.

3.4   RESULTS

Of 243 surveys distributed, 202 (83%) were completed with consents that allowed us to record pregnancy test results. Staff members reported that only an occasional eligible patient did not receive the survey packet due to issues of staff flow in the clinic, and these women were not counted in the overall completion rate because they did not have the opportunity to participate.

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The 202 women included in this sample reflected a typical family planning clinic patient population(19) with high proportions of young women, minority women and women of low income. Two-thirds of the sample (67%) was between the ages of 15-24 and 77% of the sample self-identified as African-American. Of those women who reported their income on the survey, 53% had a household income at or below the 2008 federal poverty guideline. Half of the women (50%) indicated that their highest level of education was a high school degree. Approximately half of the women (54%) had never been married, and 31% indicated that they lived with their sexual partner. The majority of women (63%) were unemployed at the time of the survey. A greater proportion of women reported having either public or private health insurance (55%) than those who had none (45%). Most women (65%) had had at least one prior pregnancy, 46% reported giving birth at least once and 11% reported ever having an abortion. A majority of the sample (65%) had not used any birth control since their last period. Approximately half of the women (48%) received a positive pregnancy test result during the clinic visit.

Using the pLMUP scale, we found 21% of women were planning for pregnancy. The remainder of women were classified as either ambivalent (40%) or not planning (39%). Of women who received positive pregnancy test results, 24% were categorized as planning for this pregnancy. Table 3.2 presents the sociodemographic characteristics and health-related characteristics of the sample by their pLMUP status. The lowest income women (those who reported < $5000 annual household income) were significantly less likely to be planning for pregnancy than women who reported higher incomes (p=0.01). Younger women (under 25 years old) were also less likely to be planning for pregnancy than women 25 and older (p=0.03). Women with pLMUP scores indicating that they were not planning a pregnancy were more likely to indicate that they sometimes or always used birth control (p=0.002).

Table 3.2. Sociodemographic and health-related characteristics of study participants
by prospective pregnancy planning status*

Characteristic	Total[†]	Not planning (n = 75)	Ambivalent (n = 78)	Planning (n = 40)
Age, years (n = 167)				
15-19	31 (18.6)	15 (50.0)	10 (33.3)	5 (16.7)
20-24	80 (47.9)	33 (41.8)	34 (43.0)	12 (15.2)
25-29	32 (19.2)	8 (26.7)	14 (46.7)	8 (26.7)
30-34	11 (6.6)	1 (12.5)	1 (12.5)	6 (75.0)
35-44	13 (7.8)	5 (38.5)	3 (23.1)	5 (38.5)
Ethnicity (n = 199)				
Non-Hispanic	194 (97.5)	72 (38.9)	75 (40.5)	38 (20.5)
Hispanic	5 (2.5)	2 (40.0)	2 (40.0)	1 (20.0)
Race (n = 173)				
White	25 (14.5)	10 (40.0)	8 (32.0)	7 (28.0)
Black	133 (76.9)	50 (39.4)	51 (40.2)	26 (20.5)
Other	15 (8.7)	5 (33.3)	6 (40.0)	4 (26.7)
Marital status (n = 188)				
Married	9 (4.8)	3 (33.3)	3 (33.3)	3 (33.3)
Living as married	58 (30.9)	14 (25.5)	30 (54.6)	11 (20.0)
Previously married	20 (10.6)	7 (36.8)	5 (26.3)	7 (36.8)
Never married	101 (53.7)	48 (49.5)	34 (35.1)	15 (15.5)
Education (n = 151)				
Less than high school	75 (49.7)	26 (36.6)	27 (38.0)	18 (25.4)
Trade school	25 (16.6)	8 (33.3)	8 (33.3)	8 (33.3)
College and/or graduate school	51 (33.8)	21 (42.9)	21 (42.9)	7 (14.3)
Employment (n = 179)				
Working full-time	33 (18.4)	8 (25.8)	12 (38.7)	11 (35.5)
Working part-time	34 (19.0)	14 (41.2)	13 (38.2)	7 (20.6)
Not working	112 (62.6)	45 (42.9)	41 (39.1)	19 (18.1)
Income, annual household (n = 125)				
<$5000	34 (27.2)	14 (45.2)	10 (32.3)	7 (22.6)
$5000-$20,000	50 (40.0)	19 (38.8)	19 (38.8)	11 (22.5)
$20,001-$50,000	37 (29.6)	6 (17.1)	20 (57.1)	9 (25.7)
>$50,000	4 (3.2)	3 (75.0)	0 (0.0)	1 (25.0)
Health insurance (n = 176)				
None	79 (44.9)	19 (24.4)	34 (43.6)	25 (32.1)
Public assistance	48 (27.3)	20 (43.5)	22 (47.8)	4 (8.7)
Private insurance	49 (27.8)	25 (58.1)	12 (27.9)	6 (14.0)
Reproductive history				
Prior pregnancy (n = 191)	124 (64.9)	44 (37.3)	46 (39.0)	28 (23.7)
Prior birth (n = 189)	86 (45.5)	31 (38.3)	30 (37.0)	20 (24.7)
Prior abortion (n = 176)	19 (10.8)	5 (27.8)	8 (44.4)	5 (27.8)

Values are shown as n (%)
* pregnancy intentions were assessed using the pLMUP, a 5-item measure adapted from the LMUP
[†] totals displayed are based on number of responses to each question, which varies by characteristic

Women characterized as ambivalent towards becoming pregnant by the pLMUP scale
were more likely to indicate that they would continue their pregnancy planning to parent if they
received confirmation of the pregnancy (p<0.001). Those women who were not planning for
pregnancy were more likely to indicate that they planned to have an abortion if their test was
positive, based on both the pLMUP scale (p<0.001) and the single-item measure (p=0.002).

Women with positive pregnancy test results were more likely to indicate that they had not been using birth control since their last period (p=0.001). Women with positive tests (who may have experienced more pregnancy symptoms and/or had perhaps already tested positive) were less likely to have pLMUP scores indicating they were not planning for pregnancy than women with negative tests (p=0.002). There were no significant associations between sociodemographic or reproductive health characteristics of women and their pregnancy test results.

Responses to the single-item measure closely paralleled pLMUP classifications: 75% of women trying to avoid pregnancy would be categorized by the pLMUP as not planning for pregnancy while 87% of women who stated they were trying to become pregnant would be categorized by the pLMUP as planning for pregnancy. Table 3.3 presents the percentage of the overall sample that gave each combination of responses between the single-item and multi-item

Table 3.3. Percentage distribution of responses to single-item measure and pLMUP question sequence for pregnancy planning (N=181)

Response to single-item measure	pLMUP status regarding potential pregnancy			Single-item measure totals
	Planning	Ambivalent	Not planning	
Trying to become pregnant	7.2	0.55	0.55	8.3
Ambivalent about pregnancy*	10.5	33.1	15.5	59.1
Trying to avoid pregnancy	0.55	7.7	24.3	32.6
pLMUP totals	18.3	41.4	40.4	100

    * Based on responses to the single-item measure of pregnancy planning, women were defined as being ambivalent about pregnancy if they reported they "wouldn't mind getting pregnant," "wouldn't mind avoiding pregnancy," or "don't know".

measures for classifying pregnancy planning status. Overall, 65% of responses were concordant and 35% were discordant.

3.5   DISCUSSION

Most existing studies that have measured women's pregnancy intentions have done so after a pregnancy was confirmed or a birth had occurred. Only two studies(12, 13) have prospectively assessed pregnancy intentions, and both of these did so in populations of non-pregnant women. To the best of our knowledge, our study is the first to assess pregnancy intentions prospectively in a population of both pregnant and non-pregnant women. Prospective measurement of this concept allows for a more accurate assessment of women's genuine feelings, plans and behaviors regarding a possible pregnancy before time or the confirmation of a pregnancy can influence them. Incorporating this time point into both research and practice on women's fertility would facilitate identification of women who would benefit from targeted interventions, including contraception and pregnancy care, to improve reproductive health outcomes. For women who present to clinic settings for a pregnancy test but who are not pregnant, prospective assessment of pregnancy intentions provides an opportunity for clinicians to address contraceptive or other barriers that women who are not actively planning for pregnancy may be experiencing in order to assist them in their fertility goals.

Almost half of our sample received a positive pregnancy test result. This proportion is higher than other studies focused on pregnancy test samples(20, 21). It is possible that the increased diversity, sensitivity and availability of at-home pregnancy tests since the dates of these two studies (1996 and 2002) has decreased the number of women seeking pregnancy tests in clinic settings. Alternatively, many women who present at clinics for pregnancy testing services may already have used an at-home test but desire confirmation of the test result from a clinician. Only 25% of women who received confirmation of a pregnancy were categorized as planning for the pregnancy. The high rate of ambivalence and lack of planning for a pregnancy

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among women who received a positive test result documented here is characteristic of family planning clinics that serve populations of women considered to be at high risk for UIP(20). Our data suggest that these clinic populations would be well-served by efforts to prospectively assess pregnancy intentions for interventions to improve women's efforts to plan or avoid pregnancy.

Despite our modification of the original LMUP questions, our study indicates that this adaptation can be used to measure women's pregnancy intentions prospectively. We found good accord between our pLMUP question sequence and the single-item measure of pregnancy intention. Because the pLMUP sequence queries women regarding multiple dimensions of fertility (plans, desires, behaviors, partner influences, e.g.), it is able to capture less clearly defined feelings and plans than a single question about their current fertility situation. It is thus not surprising that the single-item measure categorized smaller proportions of women as trying to get pregnant or trying to avoid pregnancy than the pLMUP.

Our data support the theory that dichotomous measures of pregnancy planning/intention are insufficient to capture the large proportion of women who are ambivalent about becoming pregnant. Both the single-item and multi-item measures of pregnancy intention used in this study indicated that more women were classified as ambivalent than either the planning or not planning categories. Ambivalence among women towards pregnancy is common and associated with less effective use or non-use of birth control (12, 13, 18). Although other studies have documented an association between race and ambivalence(12) and speculated about the impact of cultural norms and values on ambivalence(20), this same relationship was not observed in our sample. Further study is needed to better understand the reasons for and nature of women's ambivalence towards pregnancy. In addition, efforts are needed to address the unique needs of this population with regards to contraception and pregnancy planning.

While our study overcomes the common limitations associated with retrospective surveys and presents evidence for the need to prospectively assess women's pregnancy intentions with non-dichotomous measures, one significant limitation must be addressed. Our sample focused on women at high risk for UIP in a narrow geographic area; as such, generalizability to other populations of women is limited.

Rates of UIP continue to be high in populations of low-income, minority and young women. Our study indicates that these populations have high rates of ambivalence towards pregnancy and concurrent low use of effective contraception. Prospective assessment of pregnancy intentions to identify this population of women is a valuable tool that provides the opportunity for clinicians to address ambivalent women's concerns and needs for future contraception and healthy pregnancies. In addition, prospective assessments of pregnancy intention in research and policy areas will provide more accurate accounts of the concept before time and a confirmed pregnancy can influence women's feelings, motivations, plans and reactions. Moving away from dichotomous measures of pregnancy intention will further increase our efforts, as researchers, clinicians and policy makers, to develop strategies that highlight the unique needs of women at varying stages of pregnancy intention in order to improve population-level pregnancy outcomes.

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4.0 LIFE STABILITY AND UNINTENDED PREGNANCY: HOW SOCIAL CONTEXT SHAPES WOMEN'S FERTILITY EXPERIENCES

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4.1   ABSTRACT

This qualitative study explores how the social context of women's lives influences their ability to avoid pregnancy. Based on the working hypothesis that factors outside of women's direct control impact their ability to avoid pregnancy and their choices regarding how to manage an unintended pregnancy, this exploratory study used ethnographic interviews with ten women at high risk for unintended pregnancy (young women, non-Hispanic African American women and/or low-income women who were recruited from a population of women seeking pregnancy testing services) to describe external factors that impact women's ability to avoid pregnancy. Data were analyzed using content analysis. Women describe the stable circumstances necessary for them, either in the present or the future, to optimally become pregnant. Upward mobility to improve their life situations to reflect this life stability is impacted by women's ability to manage the external factors in their lives. Delaying or avoiding pregnancy is perceived to be the primary means by which women can be upwardly mobile to achieve stability. Paradoxically, although women clearly describe delaying or avoiding pregnancy as a means by which they feel they can achieve stability, they are very ambivalent regarding how they will achieve this goal. Women's narratives presented here provide evidence that current program and policy resources for addressing unintended pregnancy are misdirected. Acknowledging the impact that social context has on the experience and management of unintended pregnancy and further exploration into the pregnancy ambivalence expressed by these women are necessary next steps that public health

professionals, clinicians and policy makers must undertake in order to reduce the negative health consequences of unintended pregnancy and improve population-level pregnancy outcomes.

4.2   INTRODUCTION

The prevailing discourse in the sexual and reproductive health (SRH) arena is one that situates responsibility for behavior change almost entirely at the individual level and accordingly targets policies, programs and interventions at the individual woman, with little acknowledgement of the external factors that impact her ability to control her own fertility(1). While significant headway has been made in other areas of public health regarding the recognition that contextual, structural and external factors have on health outcomes and the disparities in these health outcomes among populations(2), women's SRH lags behind most other public health areas in maintaining its focus for research and recommendations at the individual level.

This trend is exemplified in the quest to discover risk factors for and/or predictors of unintended pregnancy (UIP) in American women. The majority of existing studies on UIP examines and reports the relationship between individual-level attributes of women (race, education, income, attitudes, beliefs, etc.) and the outcome of UIP(3). Some studies have acknowledged the role that a woman's partner has on her ability and desire to prevent UIP(4). However, few studies go beyond these individual and inter-personal levels into the realm of social context in order to discover possible reasons for the observed association between minority status, young age and low income on the one hand(5) and high rates of UIP on the other. Statements in the discussion sections of many UIP studies, which speculate about the reasons for these observed relationships, focus on the confounding nature of these variables as

the problem to be overcome in future research rather than on the need to understand the social context or circumstances of women's lives that may in fact drive the relationships.

Results from studies in a related area of SRH, identifying factors that impact women's contraceptive use, are encouraging in the attention given to higher-level factors beyond individual descriptors of women. Studies using multi-level modeling techniques identified community and societal level factors of access and quality of health services, health insurance and cost issues(6), neighborhood quality(7), population growth and levels of religious affiliation(8) as all being related to women's use of contraception. Complementing these quantitative studies, qualitative explorations using interviews and focus groups identified the higher-level factors of economic subsistence(9), access to and characteristics of healthcare services(10) and cost and access issues(11) as impacting women's use of contraception. However, although these studies have certainly broadened the traditional perspective adopted in most SRH research, use of their results to singularly inform interventions and policies for reducing UIP must be undertaken with caution. Although contraceptive behavior is intricately connected to women's experience of UIP, it cannot be used as a proxy measure for the fertility outcome. As modeled in the 2002 National Survey of Family Growth report(12), contraceptive use is just one of several variables or factors that affect women's fertility. Contraceptive use can be thought of as a proximate cause of UIP, and this study seeks to broaden these current models of UIP by identifying more distal causes.

In order to explore possible factors that fall above the individual level and impact women's ability to control and manage UIP, qualitative methods are especially useful to investigate and describe circumstances of women's lives, such as the more abstract concepts of social inequalities, cultural meanings and values, organizational policies and environmental

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stressors, which may be less accessible to quantitative measures. This study is an exploratory, in-depth investigation into women's perspectives regarding the factors that impact their ability to avoid and manage UIP in an attempt to broaden current discourse regarding the appropriate targets for interventions aimed at reducing UIP. By privileging the voices of women deemed to be at high risk for UIP, greater understanding of the issues and factors that specifically hinder or help this population of women to achieve their ideal fertility goals will be fostered.

4.3   METHODS

The data for this analysis come from a larger study regarding the prospective assessment of women's pregnancy intentions at the time of pregnancy testing in family planning clinics in Pittsburgh, PA. Due to the exploratory nature of the research questions and the limited data available on the research topic, qualitative methods were used to develop an understanding of the participants' beliefs and experiences regarding pregnancy prevention within the context of their lives. This portion of the research was an ethnographic study design using semi-structured, open-ended interviews to elicit information from participants regarding reasons for seeking pregnancy testing services, experiences surrounding possible conception, and general perspectives on barriers or factors that hinder or help them in achieving their fertility goals. Individual interviews were chosen over group interview techniques due to the sensitive and personal nature of the information shared by each participant. This study was approved by the University of Pittsburgh Institutional Review Board.

4.3.1 Participants

Between February and May of 2008 a total of ten women participated in a set of two interviews with a single investigator (MLK). Participants were recruited from one of four family planning clinics in the Pittsburgh area when they visited these sites for a pregnancy test and responded to a quantitative survey regarding their pregnancy intentions and reproductive health history. Women signified their interest in participation in this portion of the research by entering their contact information at the end of the survey. Initial eligibility criteria included having received a positive pregnancy test result, having self-identified as either non-Hispanic African American or non-Hispanic white, being within the age range of 15-44, speaking English, and falling into the categories of "unplanned" or "ambivalent" regarding the current pregnancy based on responses to the survey. Detailed descriptions of the determination of these categories are available elsewhere(13). During the sample selection, eligibility criteria were broadened to include women who had received a negative pregnancy test result but who met all of the other previously mentioned criteria. In order to highlight the perspectives of women at high risk for UIP, women who were young, non-Hispanic African American and/or low income were purposively selected for participation. Data collection continued until similar themes and concepts became redundant in the transcripts, thus resulting in a final sample of ten women.

4.3.2 Data collection

Eligible participants were contacted by telephone, and interviews were scheduled at the convenience of the participant. All interviews took place either in the participant's home or in a quiet, private conference room within a university setting, depending on the preference of the

participant. Written informed consent was obtained at the beginning of the first interview. The first interview, lasting approximately 90 minutes, took place within two weeks of the participant's visit to the family planning clinic, and the second interview, lasting approximately 30 minutes, was conducted within two weeks of the first interview, with the exception of one respondent with whom it took six weeks to follow up for the second interview. The Principal Investigator (MLK), who is trained in qualitative methods, conducted all interviews and, with the permission of participants, tape-recorded and transcribed each session verbatim soon after completion. All participants were provided with a $50 gift card upon completion of the second interview.

Each interview session followed a semi-structured interview guide developed by the Principal Investigator, which incorporated questions and concepts used in other studies of women's reproductive behavior and motherhood(14, 15). The open-ended nature of the questions allowed both the participants and investigator flexibility in shaping the direction of the conversation so that participants' responses could be explored in depth and the investigator could probe for clarity and follow-up information when necessary. Two interviews were employed in this study design in order to capture changes in thoughts and feelings regarding pregnancy and motherhood prompted by issues that arose during the first interview and/or to verify women's descriptions from the first interview regarding these issues. Two meetings were also chosen over a single one in order to minimize the burden placed on women regarding their time and energy in sharing substantially emotionally draining personal information.

4.3.3   Data analysis

Content analysis was the analytic technique employed in this research study. An initial coding guide based on the interview guides and existing literature was developed prior to data collection and subsequently adapted and updated throughout the interview and coding process. Transcriptions of interviews were independently reviewed several times and coded by the Principal Investigator and two other members of the research team. Collectively all three researchers examined and discussed coding strategies, identified emergent themes that arose from the coded transcripts, and agreed on or revised these themes through a process of consensus. Code divergence was resolved through discussion or the development of new codes. Transcripts were coded and analyzed for codes and themes with the assistance of Atlas.ti, a qualitative data analysis management software application.

During the development of the interview guide, the PI established four initial factor groups to encompass potential external factors that could impact women's fertility: social, cultural, environmental and structural.   Based on discussions with the research team and with mentors, these groups were revised over the course of the analysis to reflect the women's stories more appropriately. In addition to individual-level factors that impact women's fertility, the final factor levels through which women's stories are framed in this article include: interpersonal (including social relational or psychological factors, communication between or among women and others); social structural (including consequences of economic, political and stratification systems for positions, statuses and roles distributed by social class, race/ethnicity, gender, age, etc. and formal or informal normative structures); environmental (including physical aspects and condition of the built environment, crime, neighborhood, work, etc.); and cultural (made up of

abstract symbols and symbol systems, metaphors and models of and for these systems, language
and linguistic variations, values and identifications).

4.4   RESULTS

4.4.1   Participants

Table 4.1 lists the pseudonyms and key characteristics for the ten women included in this
sample.

Table 4.1. Pseudonyms and key characteristics of ten women respondents

Pseudonym	Age	Children	Race/ethnicity	Education	Marital status	Pregnant (outcome)	Poverty*	Pregnancy planning status**
Angeline	22	0	Non-Hispanic Black	GED	No	Yes (continue)	Yes	Ambivalent
Chastity	24	1	Non-Hispanic Black	Associate's Degree	No	Yes (abortion)	Yes	Ambivalent
Christine	22	1	Non-Hispanic Black and white	Trade/technical school	No	Yes (continue)	No	Ambivalent
Erika	17	0	Non-Hispanic Black	High school	No	No	Yes	Ambivalent
Jasmine	38	3	Non-Hispanic Black	Trade/technical school	Yes	No	Yes	Not planning
Krista	23	0	Non-Hispanic Black	High school	No	No	No	Not planning
Laura	17	0	Non-Hispanic Black	High school	No	No	Yes	Ambivalent
Melinda	20	1	Non-Hispanic Black	High school	No	Yes (abortion)	Yes	Not planning
Rachel	20	0	Non-Hispanic Black	High school	No	Yes (abortion)	Yes	Not planning
Tammi	24	1	Non-Hispanic Black	GED	No	Yes (continue)	Missing†	Not planning

* At or below 2008 federal poverty level based on household size
** Based on responses to pLMUP adapted question sequence(13)
† Tammi's household income information was omitted on the recruitment survey

All of the women self-identified as non-Hispanic Black and one, Christine, also identified as white. No women who racially self-identified solely as white agreed to participate in the study. The average age of the ten respondents was 22.7 years. Most of the women reported living at or below the 2008 federal poverty levels based on household size. Half of the women were already mothers. In response to questions regarding their planning status for a current possible pregnancy on the recruitment survey, all of the women fell into the ambivalent or not planning categories(13). Six women had received confirmation of a current pregnancy; of these, half chose to terminate the pregnancy and half chose to continue the pregnancy planning to parent.

Respondents' stories highlighted three central themes: the concept of stability as central to being a good mother, the impact of external factors on the experience of management of an UIP, and the reciprocal relationship between managing these external factors to create stability and the experience of an UIP. Quotes presented are taken verbatim from the relevant transcript, cited as follows: (Name, age, line #). Line numbers indicate locations in the transcripts where the quotes can be found.

4.4.2   Stability is central to being a good mother

When asked about what would need to change about their life in order for them to feel differently about the pregnancy (either confirmed or avoided), if anything, one of the most strikingly common sentiments expressed by these women was their yearning for life stability. Most women indicated that stability was a prerequisite for either continuing a current confirmed pregnancy or for becoming pregnant in the future (for the first time or again). Certain conditions had to be met in order for women to feel that they could parent a first or additional child. Not surprisingly, stability was described in primarily concrete terms, such as becoming financially

secure, finding better housing, obtaining insurance, completing school, securing a stable job or career, and obtaining a car. For many participants the notion of stability also encompassed non-tangible aspects of their lifestyle, such as being more mature, having a committed partner who would be present in the child's life, and having a sense of accomplishment in being an independent provider, if necessary.

Respondents who were not yet mothers described conditions that they perceived to be ideal for achieving stability and becoming a mother in the future. Laura, a teenager who was thankful to have received a negative pregnancy test result, relayed her reasons for being happy about the results of the test:

> I don't think that [pregnancy as a teenager] would be good, because I want my own stuff first. I want to get me a house and all that. I want to get my money in line and stuff, be able to take care of me first before I can take care of the kid (Laura, age 17, line 136).

Although Angeline had received a positive pregnancy test result and was happy about becoming a mother, she admitted that her current situation did not necessarily reflect her ideas about stability. When thinking about becoming pregnant again in the future, she hopes for certain changes in her life situation:

> I think that I want to have a house and have money saved up or something. I want to be ready, like have my own house, because I don't have my own house, and have more money, because I don't have any money. I just want to be more ready – like a house, a career and a car (Angeline, age 22, line 139).

Rachel, who was pregnant for the first time and having an abortion, was adamant about how her life circumstances would need to change in order to be stable enough to become a mother:

> I would want to go to school and get my RN and I would want stability of some sort. A home – not just this. I would need to have money in the bank and insurance – hopefully – by then. Stuff like that (Rachel, age 20, line 148).

Participants overwhelmingly valued independence and noted that this trait was one of the most important aspects of stability they wanted to establish before becoming a mother for the first time or again. Independence was related to being able to provide financially for children's food, shelter, education and clothes without having to rely on the child's father, her own family or, sometimes, government support. Some women expressed pride if they had achieved any of these things, and/or a longing for the time when they would be able to hold themselves out to their peers, family and friends as having achieved at least some of these aspects of independence. Laura, for instance, was proud of her independence in supporting herself, despite her minor status and living at home with her mother:

> Some people think that we need to use the government. How can we use the government? I don't think that, I want my own stuff. I want to do my own thing. Yes, most other people around me think the opposite. Most people say and do the opposite things that I would do. I think I've experienced a lot of stuff and I have seen a lot of stuff going on in my life. So I want to do my own thing. I want to do what I want to do. I had to make my own money. I've had a job since I was 13 so I have to buy my own stuff. I really just do my own thing. Now I don't depend on nobody. I've got me a job and I'm going to keep me a job… I don't think that I am going to be at Giant Eagle long. It's not going to be my career. I want to get a better job. The job is just to help support myself and to further myself towards those things like being a medical assistant and a registered nurse. I am independent, because I didn't have a dad in my life. He was there, but he wasn't (Laura, age 17, line 89).

As shown in Laura's comments above and in descriptions of the value placed on being independent, it became evident that many of these women did not have strong male role models in their lives. Many of them talked about the absence of their own father or of a current child's father in their life, and many talked about their friends' difficulties related to seeking financial or emotional support from their own children's fathers. For some of the women who were pregnant by men with whom they were not seriously involved, doubt about whether these men would stay in their lives, and especially in a future child's life, was prominent. Although several women

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included the presence of a partner as one component of an ideal, stable future, they also expressed doubt as to whether this ideal would be met based on their life experiences. Being a single mother was an accepted fact of life for several of these women, either because they already were one or because they anticipated being one in the future. The intense emphasis placed on independence as a component of stability seemed to be related to this perception that single motherhood is the norm in their life experience, and these women seemed to be preparing themselves for this reality.

Krista, a young woman who received a negative pregnancy test result, considered the benefits of parenting with a partner in the future, but her own experience of being raised by a single mother influenced her ideas about whether she could count on being part of a couple:

> I would rather be a parent with someone else, but if I have to, I would do it by myself (Krista, age 23, line 70).

Christine, a mother who was pregnant again and had decided to continue the pregnancy, relates how she has adjusted to single parenthood and found value in being the sole provider for her family:

> At first with my son I didn't really expect to be a single mom, but it was just the way my cards were dealt. I didn't want to change it after I became accustomed to it. Now I am comfortable with it. I like being a single mom. I love being the sole provider. I want my son to grow up and say, you know what, my dad took care of me but my mom held down the household and it was really my mom who did it for me. I like being the only person that my son comes to…. I am very content being a single parent (Christine, age 22, line 56).

Despite the dismal living conditions that many of these women described and the many stresses of everyday life that they faced living at, near, or below the poverty line, these women demonstrated remarkable resiliency in bouncing back, moving forward, and improving their lives. Related to their ideas about achieving stability, another prominent theme was participants' desire to have the lives of their children (either current or future) be better than their own. While

this concept may seem to be patently obvious (indeed, these women expressed the viewpoint that it is what all mothers want for their children), it is noteworthy in the context of these interviews because, for many of these women, it is this desire that drives their decisions about readiness and preparation for motherhood. Whether or not women were already a mother, all except one placed a great deal of social value on the role of being a mother.

Requiring stability as a condition to become a mother (either for the first time or again) is intricately connected to a feeling of currently being, at least somewhat, unstable. Elaborating on the concept of having their children's lives be better than their own, participants wanted their children to live in better conditions, escape the confines of poverty that held themselves back from achieving certain goals in their lives, pursue more education than they themselves had, and, for daughters, avoid their social group's norm of becoming pregnant at an early age. Respondents expressed hope that their children would not repeat some of the mistakes they themselves had made. For instance, Melinda, who was angry about being pregnant and had decided to have an abortion, asked:

> Who wants to raise their kids in a slum? Not me. I want more for my children. I want them to see that there is more to life than this (Melinda, age 20, line 139).

Laura, a teenager about to finish high school who was happy about not being pregnant, hoped that her future children would not follow the same path that she had:

> I was a bad kid and I don't want my kids to be like that. But now I am better – I make As and Bs – I am not a dumb kid. I just don't want them to be like me. I would fight all of the time and my kids, I want them to be different and I want them to be better than I was (Laura, age 17, line 100).

The above quotes demonstrate how women create a picture of their ideal conditions for being a mother, which emphasizes conditions and circumstances that create a stable life for themselves and their children. Their sense of what encompasses stability is influenced by their life

experiences, their perceptions of others' stability, and the impact of external factors over which they have limited control.

4.4.3 Impact of external factors on experience and management of UIP

The primary assumption on which this study was based is that women's ability to avoid an unintended pregnancy, and manage one if it occurred, is heavily impacted by non-individual level factors. It is clear from these interviews that this is, indeed, the case for the population of women that was included in this study. Although many participants mentioned personal desires and motivations, use of birth control, and general ignorance about how pregnancy occurs as critical aspects of avoiding pregnancy and stated that these were individually based, each of these aforementioned factors can also be thought of as a function of the different social realities that each person creates for herself and, as such, cannot be entirely individually based in isolation of the impact of the social context of her life. Participants conveyed their ideas about the impact of four groups of external factors on their fertility, those at the interpersonal, social structural, environmental and cultural levels.

4.4.3.1 Interpersonal factors Participants shared the importance of interpersonal relationships that they had with sexual partners, family members, friends, and other community members and community programs, organizations or resources, either in direct connection to their fertility management or in general discussion. Others' perspectives, advice, judgments, and ideas about the importance or burden of pregnancy and/or motherhood clearly impacted how these women felt about the subject, especially if these viewpoints came from close family or friends. Participants indicated that communication with parents, especially one's mother, was particularly important in not becoming pregnant. Communication included feeling open and comfortable

talking with one's mother about sex questions as well as having a trusting relationship in which

women could share their experiences as well as their plans with their mother. These women

believed that so many young women in their communities were pregnant because of a lack of

parental involvement, indicating that improved communication would go a long way towards

decreasing teenage pregnancies. For example, Erika relayed how her teenaged peers might have

avoided early pregnancy if they had had a more open relationship with their mother, like she did:

> I want me and my child to have the type of relationship where she can just talk to me about anything…. I tell my mom everything. I tell my mom if I broke my nail, I am just open to my mom like that. And that is how I always was and that is how I want my child to be…. My mom just always says, if you lay down and have a baby, you have to take care of it and it seems like she doesn't want me to have a baby. But in a way she is saying that it is all up to me…. These little girls are out here having babies, little girls younger than me, who are not even in high school, yet they're having babies. Or it's just their first year of high school, getting pregnant. How did your mom let you have a baby at this young age? Where is she when you are having sex? How come she didn't care or didn't do anything? Why is your mom letting you have this baby? should be the question. But then there are those moms who just don't care. I think it is the parents because they are not having an open relationship with their child like they should. I think more parents should be like my mom to their children than these other moms who just let their kids have babies at young ages and they don't care. I'm not saying my mom is the best mom in the world. But she was there to talk to me and tell me what is wrong and what is not wrong. And what is right and what is not right. But some kids out there don't have their moms (Erika, age 17, line 101).

Christine also had an open relationship with her mother and hopes to have this

relationship with her children:

> Super young. I don't even know what is going on – [young girls getting pregnant] – I think it is the moms. My daughter is not going to be pregnant at 14. Depending on how you raise your child, like my mother always brought me up right when you start having sex don't ever feel like you can't come to me…so we can get your birth control or whatever you need, that is how I was raised. I think that a lot of kids get pregnant because their parents tell them not to…don't make them hide it and you might not have grandkids (Christine, age 22, line 96).

Communication with one's sex partner was also very important, although several of the women who were interviewed admitted that their lives did not reflect their ideal in this area. For instance, many of the women felt pressure from their male partners to not use birth control and/or to become pregnant. Some of the teenagers in the sample described school environments in which male teenagers were seen as "cool" if they got a girl pregnant: "everybody who is young and wants to have a baby is in the cool clique" (Erika, age 17, line 116). In the face of their partners' wishes for them to become pregnant, some women expressed a need for more open communication between themselves and their partners about clear expectations for how to manage the decision of becoming pregnant. For women who did not have a strong relationship with their current sex partner, communication with a partner was identified as one aspect of future stability that women wanted in place in order to be comfortable with becoming a mother. Chastity, who initially wanted to continue the current pregnancy but then decided to have an abortion, described her initial optimism followed by frustration with her current sexual partner regarding his dishonesty and lack of commitment to help parent their potential child as playing a pivotal role in her decision to have an abortion:

> He is happy and says that it is a gift from God. He wants it. I already have one child. I am already a single parent and he is separating from his wife. I don't really know what I am going to do. He wants me to continue the pregnancy but he already has a son. He has a good job and he is an engineer but it is still…. I feel threatened because he was already in a previous relationship and his actions…now I don't know because of his other relationship. So far he has been active around me and helping me out a lot but it is always good at the beginning. I don't know…it is scary because I know him but I don't. We have only been together for three to four months…. I was arguing with this guy last night telling him I just want him to get himself together and stop lying about everything. He's been lying to me since I've known him. If you can be honest with me then I can make my decisions. If I want to accept you for who you are then that is my decision but if you keep lying to me it is just not even worth it. There are just so many signs saying don't [have this baby]. You can say that you will be there but actions speak louder than words…if you isn't here now what makes you think that

you will be in my life in nine months when this baby is born? I am not going to
do that to myself (Chastity, age 24, line 49).

While some women mentioned community programs or groups that they perceived as

being helpful to women seeking to avoid pregnancy or dealing with an unintended pregnancy,

others were dismayed at the lack of services that they felt were available to them in their

particular communities regarding these issues. These women felt "isolated" and "neglected"

within their neighborhoods or communities, and the expression "they don't care about us" arose

frequently in the interviews to describe their perception of their community's interest in

supporting them. Jasmine, a 38-year-old married mother of three had strong opinions about how

women needed to be supported by community-level programs in their fertility goals:

> I believe the word needs to get out a little bit more. I understand that they do give
> the guy condoms, and I believe when you teach a person something, a person
> doesn't know unless they are taught. If there aren't any flyers going around, like
> in this community. They are not given out. It doesn't seem really important to
> them. People need to know how they can not get pregnant. That means not only
> telling a person here, here is some foam. The majority of people do not know
> how to use it. Even though there are directions, like the woman's condom. True,
> you may give it to them, but if they don't know how to use it, why even give it to
> them? I think they could be doing this education at places like UPMC, if they
> offer it. Then it should be done. Places like community centers should have
> classes pertaining to this…. Don't push it on them, but it needs to be out there
> more instead of just handing it out here, here, here, here (Jasmine, age 38, line
> 56).

Some of the teenagers talked about mentor programs connected to their schools in which

older role models talked to teens about a variety of topics, including teen pregnancy, and

encouraged open dialogue to address any misinformation that existed. These programs all

stressed the importance of communication within relationships, an important factor noted by

these women in preventing unintended pregnancies. Three of the women talked about their

involvement with JobCorps as having a positive impact both on their ability to work towards life

stability (helping secure educational degrees and find employment opportunities) and to access birth control.

4.4.3.2 Social structural factors Women described how their fertility, and their management of it, is embedded within their life experiences as young, minority women living with a low or non-existent income. These experiences are shaped by societal systems that create differences among groups of people based on education, income, race/ethnicity, gender and age. Consequences of membership within one or more of these socially created groups include perceiving other group members' qualities as shaping one's own qualities and having varying abilities to deviate from the norms of these groups. Various social groups that women brought up during the interviews included their peer group by age (such as teenagers), their racial group (such as black women), their income status (poor or low income), as well as general, American norms. Some women explicitly identified these various groups while others made general references to people "like them."

For example, single motherhood was an accepted norm for most of the women in this sample. Those who were already mothers, with one exception, discussed the struggles of supporting their child on their own, with varying degrees of help from the father of the child. Some of the women commented on the normalcy of single motherhood, indicating that this was an accepted, and often expected, component of deciding to continue a pregnancy:

> I already have one child. I am already a single parent…. I don't know about going through with this pregnancy because then I will be a single mom again – mother of kids to two different guys – taking care of these kids by myself (Chastity, age 24, line 50).

In addition, although several women made abstract references to wanting to be married at some point in the future, the notion of marriage brought with it a sense of commitment that required

extensive consideration before entering into it for these women. It was something that would be addressed at some point in the future and was not necessarily connected with the existing potential pregnancy. Some women expressed the opinion that marriage was not necessarily something that they desired for themselves due to their perception of the broad failure of the institution within American society:

> Sometimes [staying with a man] works, but 90% of the time as a mother, we are left with a child, unless you have a standup type of guy (Chastity, age 24, line 231).

Due to the normalcy of single motherhood in these women's lives, many of these women sought support for continuing or terminating pregnancies from elsewhere. As alluded to previously, the most common provider of support for these women was their own mother.

Jail was mentioned frequently during the interviews, most often in relation to male partners or other male members of their families who had served or were currently serving time in the jail system. Dealing with losing fathers, brothers and/or partners to prison for significant portions of time was a fact of life for many of these women, one more factor that contributed to their need to obtain financial independence and become the sole provider in the future for their children. Melinda, who was dealing with legal issues herself, had not yet been able to get an abortion due to financial problems incurred by her partner's incarceration: "he ended up getting locked up the day before my abortion, but he was going to pay for [the abortion]" (Melinda, age 20, line 62). Preparing for single motherhood, whether created by choice or by circumstances, was an accepted fact of life for these women, whose life experiences had shown them that they could not definitely count on the presence of a male partner to provide money or emotional support in raising a child. Even if women reported a current strong relationship with a male partner, there was always an unknown lurking in the background of their narratives; there were

no guarantees that a relationship would endure in the face of childrearing responsibilities or the accepted realities of crime and jail that were part of these women's lives.

The social experience of living at or near the poverty level significantly impacted women's ability to avoid or manage an UIP. Having limited financial resources was a fact of life for most of these women, and the realities of what it means to be poor and a member of the lower class in a highly socially stratified society were not lost on them. Financial constraints factored prominently in these women's lives and were often the primary reason for wanting to avoid or delay a pregnancy; every woman who was interviewed discussed a lack of money and financial security as a barrier to being able to provide as a mother.

Women's stories revealed that living in poverty was associated with a feeling of being stuck in their environment and related worries about their ability to get out of the constraining effects of poverty. Having a baby or adding a child to the family increased these feelings of being stuck. Women who chose to discontinue a confirmed pregnancy did so in order to not feel trapped in their current situations, wanting to improve their circumstances for themselves before taking on the additional responsibility of raising a primary or additional child. Chastity was conflicted about her decision to have another abortion, but felt that it was the best choice for her due to her current life circumstances:

> You can't keep killing kids but I don't want to be stuck. Stuck in this
> environment. I don't want to stay on assistance and stuff. I was just getting out
> of this (Chastity, age 24, line 65).

For this sample of primarily low-income, non-Hispanic black women, racism, sexism and classism played a pivotal role in these women's perceptions of themselves, their abilities to avoid and/or manage a UIP, and their upward mobility in life. Many women struggled against the stereotypical "poor, single, black woman" image and their frustrations with themselves if they

fell into this representation. Their families' and friends' experiences regarding getting pregnant at an early age and becoming a single parent was a social group norm that they wanted to avoid, if possible. Experiencing an UIP created a setback for them in attempting to overcome this stereotype and deciding how to manage a UIP often encompassed one's feelings of coming to terms with perpetuating the stereotype.

Women who participated in the interviews generally viewed themselves as different from many other women of their social group. When they described their friends' lives and experiences of being young mothers, the young women placed a great deal of value on being different than them – in terms of not becoming a teenage mother and attaining life goals such as being financially successful, having a large house, having a satisfying career and becoming wealthy. Avoiding having a baby at a young age was, in a way, an avenue through which teenagers could accomplish many of the goals that they believed were unattainable to their peers who were already teenage mothers:

> [My friends] are broke. I want to be the one with the best house, the most stuff in my house, the nicest house. I don't want to be the one who has to depend on a man to take care of my baby. I don't want to be the one who has to be thinking how I will give my baby this and that. I don't want to be the one who, at the end of the month, don't have no more WIC for my baby. I can't get into a life like that. That is just not for me. It just doesn't fit. I want something different than everyone around me. I don't want to have to go sleep with all of these different men just so that my baby can have an Easter basket. I want to have enough money so I know if my baby needs something, I can take care of my own child. I won't have to ask anybody or beg nobody for nothing. That is how I feel, and that is why I want to wait longer down the line where I can have a job to save up money. Get a house and a car and just build my life. I don't know if my baby's dad will be in or out of my child's life…but I want to be married with a child and a dog in a mansion somewhere. And a lot of my friends are not going to be able to do that because they already have babies. Even though all three of them that have babies are still in school, they probably won't go to college – how will they be able to go to college with babies? Their baby's dad comes in and out of their lives…and I don't like that (Erika, age 17, line 120).

Several of the women, regardless of age, described themselves as different from other members of their communities because they felt that they were unusually motivated to change their life circumstances, usually by increasing their income status, and their desire to be independent was not always echoed by their friends, family members and peers. Some admitted a desire to be different from their own mothers, despite their respect for them, because they saw their own birth as having limited their mothers' abilities to achieve life success.

A common sentiment that arose in these interviews surrounded the idea that societal expectations regarding appropriate conditions for pregnancy and motherhood were out of touch with the day-to-day experiences of these women. Most often this was in terms of how they personally did not fit these perceptions. Resources perceived as being available to "other" women, specifically higher-income and/or white women, that helped them avoid UIPs, were a college education, a committed partner, and the financial security to either pay for an abortion or support having and raising a child. Rachel talked about why she thought "white girls" were better at delaying pregnancy than "black girls":

> I haven't really got white girls figured out just yet. I think that maybe their parents talk to them more or it is less stress because the ratios are more equal or the emphasis on family is still strong but not as crazed or maybe the concern…maybe just white girls feel like more "well, I am going to go to college and get a job before I do any of that stuff" so that is what they do or…whereas for other races college isn't always an option because if you didn't do so well in school and your family just doesn't have the money. Mine didn't. Maybe money is the root of all things…really, money and the class that people live in probably impact things like pregnancy, awareness, and obesity, and how you do later in life…all sorts of things (Rachel, age 20, line 232).

Some women who chose abortion for their UIPs felt that they were acting in contrast to the more common societal expectation that women who "got themselves pregnant" should bear the burden of following through with the pregnancy. Rachel talked at great length about the widespread stigma associated with abortion, and she indicated that the stigma should instead be

associated with the lifestyle that the future child would have living in poverty. She also referenced the ridiculously unrealistic popular mentality of "the gift of pregnancy and of children" and she expressed frustration with this portrayal, supported by the media, that women should treat all pregnancies as a happy miracle and make decisions accordingly:

> I am increasingly annoyed by what I see on TV and our politicians say that the family should work and blah blah blah. It makes it seem like people out there think that women should be so happy to be pregnant and have kids…I don't think that there is anything wrong to say "sometimes I wish that I had had you a little bit later so that I could have done this and this or so that I could have gone to school or something." Why is it wrong to wish that you had waited or done things differently? I don't think that being a mom is the end-all-be-all of life. I think parenting is not as easy as some people would have you believe. On TV everyone learns their lesson and the kids don't hate their parents in spite of their parents doing embarrassing things and everything is cool. People have babies and it is kind of hard but everyone still looks perfectly made up and all of the hair is done and all of the clothes are pressed and that is not what I saw. I saw vomit and dirty diapers and my mother looking like she would pass out at any moment. Everyone talks about the motherly glow and the motherly instinct and I don't know how much glow there is when your kid is screaming at you. I think that people don't know. I think that people are trying to sell people on the idea of parenting or something. I feel like it is overly hyped. I feel like it is a lot – really hyped. Like the watching of the baby bumps on celebrities who are never really going to parent their child or anything like that. They can afford around-the-clock nannies (Rachel, age 20, line 80, 132).

In terms of community resources, women mentioned welfare, the Women, Infant and Children (WIC) program, Children, Youth and Families (CYF), and Medical Assistance as specific social service programs that had a connection to supporting women in their pregnancies and/or as mothers. Interestingly, while many women expressed gratitude that these programs existed and acknowledged that their presence factored into decisions regarding how to manage a UIP, some of these same women did not want to have to rely on the government as a sole supplier of support. Christine, Erika and Julia all stressed the importance of becoming financially independent and their negative perception of peers who "worked the system" who did not attempt to break away from the support offered by these services at any point in their lives.

A balance of governmental assistance and being independent seemed to be the ideal, at least for the women included in this study.

Many of the women specifically mentioned policies and/or laws that they felt impacted their ability to avoid and/or manage an UIP. Aims of some educational policies were perceived as being out of touch with the realities of teenagers' actual experiences. Erika, Laura, Jasmine and Krista discussed the limits of abstinence-only teachings in schools that served populations in which the majority of the teens were sexually active. Programs and policies regarding this topic seemed to be mismatched with women's actual needs regarding pregnancy prevention. For example, in many high schools in the Pittsburgh area, day care services to help teenage moms stay in school are the norm. Indeed, several women remarked that the educational system is supportive of teenage moms in helping them pursue their educational goals. Paradoxically, while these daycares represent important organizational support in helping women manage UIPs, they are not matched with a complementary component to help women (especially teenagers) avoid UIPs in the first place. The approach described by the teenagers in the study focused on a reactive strategy rather than a proactive one towards prevention of teenage pregnancy. Laura talked about her school not allowing preventive sex education courses to help teenage women avoid teenage pregnancy and motherhood:

> Our day care is good and they have mothering programs too…there's no sex ed or anything like that. We used to have that stuff, and the only thing we have now is health. We used to have sex ed and that baby that you would bring home that did stuff to practice. And it's not like that anymore, they are not allowed to do that anymore. They talk about privacy and confidentiality. I don't see anything private about the fact that everyone can see that you are now pregnant, but we are not allowed to talk about that stuff. We've asked for pregnancy planning and pregnancy stuff and talks on it. But [the principal] says no (Laura, age 17, line 120).

4.4.3.3 Environmental factors Several women specifically mentioned the environment in which they lived or worked as a barrier to their ability to manage their fertility. The environments of these women encompassed both tangible aspects, such as living conditions, and more abstract characteristics of their lives, such as the accepted existence of crime. The physical conditions of living in poverty played a prominent role in women's ambitions for life stability. Many of the women described their neighborhoods as "the ghetto" or "the slums" and vividly described their personal experiences of what it was like to live in these often unsafe and neglected living conditions:

> I would change my living situation and my school situation – everything. Who wants to have two kids in an apartment with three rooms and a newborn in the slums? People leave needles and shit everywhere, broken beer bottles and glass. I know that trash makes me depressed when I just sit there and look at the trash (Melinda, age 20, line 145).

Having to deal with the living conditions of their neighborhoods, such as the dirtiness and existence of broken needles, poor quality of the housing, presence of alcohol and drug abuse and the constant feeling of being unsafe, stressed these women and made dealing with other life decisions (like avoiding or managing pregnancy) difficult. In addition, the atmosphere of some of these women's work situations, or dealing with how to address a pregnancy in the context of work, presented additional stress and impacted women's decisions regarding the outcome of their confirmed pregnancies:

> When I get ready to deliver I don't want to find a job that is going to make me quit…like maternity leave, like are you going to be fired for having a baby or for having to go if your baby is sick…as far as getting a job once you are showing far enough. People look at that when you go in to your interview, they think that [because you are pregnant] you can be a problem. You will have days scheduled off, you will be calling off and that is the way it is with the baby. That should be okay. That should be very excused, but not everybody feels that way for sure (Christine, age 22, line 104).

In addition to sometimes hostile work environments, the pervasive existence of crime in their lives cannot be ignored. Several women described having family members who had been shot and killed, witnessing violence and treating it as an everyday fact of life, and dealing with drug and alcohol abuse among friends and family. Chastity's life history revealed a laundry list of social ills that she associated with living in poverty, including working on the streets as an escort, incest, substance abuse, depression, domestic violence, rape and witnessing murder. She described how these experiences shaped the independent woman that she has become and inspired her to "put [herself] first, put [her] son first, and just keep going in life" (Chastity, age 24, line 185). She talked about the constant stress and fear associated with making sure that her two-year-old son could get from her house to the bus stop one block away without getting shot. She had personally witnessed five separate murders of individuals on the streets of the neighborhood where she was raised. Erika described an experience on the day before the interview of being in a neighborhood park with a group of toddlers when two young men shot at another young man fifty feet away from her.

4.4.3.4 Cultural factors At the most abstract level, cultural factors include values, meaning systems and symbols of these systems. While it is clear that many cultural factors impact women's ability to avoid and/or manage UIPs, it is difficult to tease out whether the experiences of these women and their perceptions of their own abilities in this area are attributed to their membership in one or the other of the following social group categories: teenager, black, low-income. It is likely that a combination of one or more of these groups shape their lived experiences and influence their perceptions of their own abilities to cope.

Several women negatively judged those women who became pregnant at an early age, concurrently giving value to those women who delayed pregnancy until an "age-appropriate" time:

> I sometimes think that culture or race plays a huge part. Not to be all stereotypical, but there are certain people who you notice have kids younger and have more of them than other people. Around here I see a lot of black girls who have kids very young. They just keep having them. I think that it is just a different mentality between whites and blacks and Latinos (Rachel, age 20, line 229).

All of the women interviewed in this study self-identified as non-Hispanic black. Many of them talked about values surrounding motherhood, pregnancy and families within their social group, which some defined as specifically encompassing low-income, African-American culture.

> I look at every society and I don't care what color, I take from each. Like black people like to beat on their kids. I don't believe that that is the answer. I take that and I don't do it. Open communication – that is what I take from white people (Jasmine, age 38, line 61).

Religion and spirituality were sometimes mentioned as an aspect their lives that helped women to find meaning in the results of the pregnancy test. The idea that God does not give you anything that you cannot handle was a somewhat commonly expressed sentiment to provide a reason for choosing to continue a confirmed pregnancy rather then to terminate it; Christine, Chastity, and Angeline all mentioned their spirituality as impacting their UIP management decisions.

As a cultural symbol that shapes American society, media have a profound impact on women's perceptions about pregnancy and motherhood. Many women brought up the role of the media in promoting sex without consequences and for painting an unrealistically rosy picture of what motherhood is like as noted above. Additionally, these women felt that the media used non-culturally relevant role models to relay their messages about motherhood, and this

contributed to the vast gap between what was being presented on TV and what these women were personally experiencing in their lives. Rachel expressed her desire to have more accurate portrayals of single motherhood and to have single mothers themselves speak out through the media about the difficulties of raising a child on one's own.

Interestingly, despite the range of external factors mentioned above that arose in every woman's story to a varying degree, when asked directly how they felt about the impact of non-individual factors on pregnancy avoidance and outcomes, some women maintained the stance that the responsibility of avoiding pregnancy lies entirely with individual women. These women, specifically Angeline, Krista and Melinda, who situate all of the control and responsibility for avoiding and/or managing a pregnancy at the individual level, represent an interesting subgroup of the sample. They seemed unaware of the influence of external factors on their own (or their peers') fertility, despite identifying many of these non-individual level factors, such as poverty, societal stigma on teenage pregnancy, education policies against sex education, culture, and crime, in their overall life circumstances. A possible explanation for this disconnect between women's perceptions and their social context could be that these women feel conflicted about wanting to be independent, which includes being responsible for one's own life situation, and also feeling a need to be externally supported, which may seem like admitting to being unsuccessful at being independent. This conflict may be played out in their expression of placing all the responsibility and control for one's fertility situation on individual women.

4.4.4 Reciprocal relationship between external factors and UIP

Stability for these women was created through management of many external factors that impacted their fertility. Through the narratives of these women, a model of a reciprocal relationship between management of the external factors to create stability and the experience of an UIP emerged. Modes of managing these external factors, primarily the social structural and environmental ones, included explicit plans such as completing a school degree, securing a steady job with good pay, and moving out of a parent's home and getting one's own house. Some women expressed more general desires to have their lives be different and better than they were at present, indicating that they wanted to "get their lives in line."

When asked if they considered fertility decisions (becoming pregnant or avoiding pregnancy) when they made life plans, overwhelmingly women responded that the possibility of pregnancy played a role in their decisions to pursue a degree or take a certain job. Several women talked about how an unintended pregnancy would or could interfere with, disrupt or delay one's life plans depending on the firmness of those plans:

> [Pregnancy] can definitely hold you back. Sometimes people say they want to do something and then they get sidetracked by pregnancy. A lot of times you don't focus on what you want to do. You just say "I will wait" and then you keep waiting and it won't get done. I can say that fertility definitely has a lot to do with that (Krista, age 23, line 93).

One of the primary factors for wanting to delay pregnancy was women's recognition that they had not yet achieved one or more of their prerequisites for stability and were, therefore, not ready for motherhood:

> I just can't see a baby. It doesn't fit, where would it come? I want to go to school, regardless if I have a baby or if I don't have a baby. I am going to school. I'm going to college. My mom didn't go to college, my dad didn't go to college because they had my brother. My mom made my dad finish high school. Me, I

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am going to college, regardless of a baby or nothing. That is how I feel…what if I have a baby and then I'm going to have to drop out of college. I won't be able to be an accountant, and I don't want to go back to school when I'm 30 because I will forget everything, that is too long. That is, I just want to continue, keep going. Wait till after school to have a kid. Wait till I go to school, have a job for a couple of years, and then have the baby. The baby has to come all the way later – that is how I feel (Erika, age 17, line 119).

The UIPs that women experience impact many of the social and external factors that contributed to whether they experienced an UIP in the first place, in effect creating a cyclical pattern that causes women to feel perpetually stuck in their life circumstances. In other words, social conditions impact whether a woman experiences a UIP (and how she manages it if she does), which itself then mediates women's experience of certain social conditions, especially poverty, financial security and living conditions. Poverty impacts the outcome of UIP and the experience of a UIP can perpetuate the conditions of poverty.

One case in particular, Chastity, helps to illustrate this reciprocal relationship between external factors and the experience of an UIP. Chastity had been slowly trying to get her life back on track to become financially independent, get off of welfare, purchase her own home and secure a good job. She had recently been fired from a stable job due to harassment from co-workers and had become stressed about her ability to provide for herself and her son. Citing this stress as the driving force behind her having sex with a new partner, Chastity became pregnant unexpectedly and has been upset about this pregnancy interfering with her ability to go on job interviews. Choosing to terminate the pregnancy was a way for Chastity to regain control over her life and get back onto her life path towards stability:

When I was working, I just knew that "dang, I have to work an extra ten hours, pick up another job, just to pay my insurance or just to pay daycare." Wow, this is life. I am living life. This is what it is all about. There are so many other doors that open up for you, so many different opportunities that open up for you. But now, you keep having kids, you can't get that. You gotta find a babysitter, you are pregnant and you are going to have to take time off of your job so you are

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picking a lack of responsibility onto your goals in life because of the stuff that you are doing, you keep getting pregnant.

I need to get done with school, I have two years left. I want to start my own business, and just get financially together and get my credit together. Just get myself together, so I can have something to offer my kids and get a house. I want to buy a house and I also want to find a decent man. And then I will go for it again, because even if he leaves me at that time, at least I will be financially stable myself where I can back myself up, I can't back myself up now. If I have this baby, I would have to get on welfare, and I don't want to have to do that.

I just don't want it. I just don't want a baby. I don't want to mess up my life. I just don't know if I should have this baby because it's another life and give it a chance or should I just send it to heaven or something. There's already enough problems, but just to know that there was a possibility of sending it to heaven, and know that it will be in a better place rather than put it in a situation where it's going to be hard to get out of (Chastity, age 24, line 211).

Although many of the women related their dreams and aspirations to delaying motherhood, including becoming more stable in their lives, they were very vague when asked to detail how to ensure that they would reach their stipulated goal of avoiding pregnancy in the future. This seemed to be a glaring paradox: women's clear desire for upward mobility towards stability on the one hand and their ambivalence about achieving this stability on the other hand. Erika, whose desire to be different from her teenaged peers was made evident in her quote on the previous page and in her emphasis on completing her schooling and securing a good job, inexplicably relayed the following thoughts about if she had received a positive test result instead of a negative one:

If I was pregnant, I would be upset. I would be mad, but I would be happy, because it is really with somebody that I love. But I just don't want to be a mom [because of] my future. But if it happens it happens. And that is okay, but it will be my fault because I didn't use protection, and I should've gotten on something. But if I become a mom. I will really just take the place of being a mom. Rather than get rid of the baby. I would be mad, but I would be happy (Erika, age 17, line 127).

When asked about how they would achieve their objective to avoid pregnancy in the near future, most of the women knew they should seek some form of birth control or avoid having sex, but

most of these plans were vague references to admitting that she should do something instead of a concrete statement about how exactly pregnancy would be avoided:

> I only want to have [this] one kid. I guess [we] will just use condoms now. I think that I need to be using them more often in the future. I don't really know…maybe do that IUD thing… (Angeline, age 23, line 101).

Some of the ambivalence expressed can be attributed to women's external locus of control reflected in a common statement, "if it happens, it happens." When speculating about future pregnancies, many women placed the timing in fate's or God's hands, allowing for their own ambivalence regarding their reproductive capabilities to play out as a fatalistic event rather than one over which they had direct control. Oftentimes women attributed a future pregnancy to God's will, indicating that it wasn't entirely her decision about when she should or would become pregnant in the future. Other women reported uncertainty about their ability to avoid pregnancy, despite their desire to do so, because of partner pressure:

> We were using condoms but then we stopped and he said that he wanted me to have his baby…. I don't even know if it will change now after this [pregnancy] test. I told him I wanted to [use condoms] or we just couldn't have sex anymore. He was negative, he wasn't having it, boys always want to have sex and not use a condom… (Erika, age 17, line 35).

Ambivalence about pregnancy expressed by these women may also be related to contraceptive misuse or nonuse prevalent in this sample. Despite widespread sentiments about not wanting to become pregnant, most of the women indicated that they had not been using any form of birth control at the time of the pregnancy test. However, lack of access to birth control options was not perceived to be a significant barrier by these women. Many women stated that they knew where to access birth control and knew how to get condoms for free from various community groups, healthcare providers or organizations. More commonly, women mentioned

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perceived negative side effects of birth control as a barrier that women were not ready to accept

as a tradeoff for avoiding pregnancy:

> I don't really care for birth control. I was on Depo before and after my son but I really don't care for any birth control. I don't feel too comfortable using it. Just because my mom is a diabetic and, even though that is kind of irrelevant, there are too many health issues and side effects. I had gestational diabetes with my son. My basic weight is 125 and I was 205 when I had my son. This was just too much. I gained a lot of weight. Health issues bother me and I don't know too much about it but it keeps the pregnancy from continuing but at the same time I really don't care for medicines or anything. I just try to be natural. I don't really know what is out there and these medicines and then you get blood clots and it is just too much (Chastity, age 24, line 73).

Often women recounted stories that highlighted inaccuracies and misinformation about birth

control and its side effects, and not having used birth control one or more times in the past

seemed to be more often related to user issues than to access ones.

4.5   DISCUSSION

The women's stories presented in this exploratory study provide evidence for the impact

that external factors, including interpersonal, social structural, environmental and cultural ones,

have on women's experience and management of UIP. Issues of stability factor prominently in

women's perceptions of their ability to take on a motherhood role if faced with an UIP. For the

women in this sample, stability is achieved through upward mobility out of their current life

circumstances, which involves managing the impact that one or more external factors has on

their behavior. Upward mobility involves bettering one's life situation and getting out of the

current situation that limits them in their ability to become independent, secure financial

stability, and make a life for themselves. The experience of an UIP can interfere with women's

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pursuit of this upward mobility towards stability; therefore, delaying or avoiding pregnancy is perceived to be the primary means by which women can achieve stability.

The literature on the Social Determinants of Health (SDH) has implications for the current study, due to its recognition that individually-focused, lifestyle theories about people's behavior do not capture the economic, political, and structural facilitators and barriers that impact individuals' abilities to adopt or reject a particular behavior(16). A dominant assumption of the SDH framework is that health inequalities across groups of individuals are due to the impact of these structural factors. The "fundamental causes" of health inequalities across groups of individuals are likely due to the economic and political institutions and policies that create, enforce, and perpetuate economic and/or social privilege and inequality throughout a society(17). The SDH framework draws attention to the impact of factors at multi-levels and the interactions of these factors on individual behavior and resulting health outcomes.

Building on this conceptual model, in the case of unprotected sex and the health outcome of UIP, a reciprocal relationship between the external factors and the health outcome of UIP was observed in these women's lives. External factors, primarily those at the social structural and environmental levels, influence whether women experience an UIP and how they manage one if they do experience it. The experience of an UIP, then, reciprocally impacts how women manage these external factors. For women who become trapped in this feedback loop between the social context of their lives and the experience of UIP, breaking the cycle can be achieved through either avoiding or terminating an UIP pregnancy. Women have the most ability to address and manage social structural factors, such as poverty and the norm of single motherhood, and environmental factors, such as poor living conditions and crime. These two factor levels have primary reciprocity with the health outcome of UIP. Interpersonal factors and cultural factors,

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although both very influential in the experience and management of UIP, are less malleable to change and therefore do not factor prominently in the feedback loop described above.

This reciprocal relationship between external factors and individual behaviors/outcomes has not been described for other health outcomes. This may be because pregnancy itself is a unique health outcome that is alternatively wanted, unwanted, planned, unplanned, and everything in between depending on the time at which it happens in a woman's life compounded by the woman's life circumstances. The observed phenomenon is additionally unique because UIP is experienced solely by women and, therefore, many of the health and social consequences of UIP impact only women. The social costs of an UIP described by the women in this study, including the inability to be upwardly mobile and to achieve stability, thus affect women's life advancement and compound existing power hierarchies of the sexes that women already encounter in much of contemporary society. Negative health consequences of pregnancy primarily occur when the pregnancy is unintended(18) and only impact women, unlike obesity and smoking, which always carry with them serious public health risks and can affect anyone. The behaviors and outcomes associated with obesity and smoking do not necessarily mirror the reciprocal relationship with external factors described above for UIP.

Although it shouldn't be used as a proxy measure for UIP, the health behavior of unprotected intercourse is intricately connected to the health outcome of UIP. Most of these ten women, although either not planning for pregnancy or ambivalent about pregnancy, reported not always using any birth control at the time of obtaining a pregnancy test. This disconnect between not planning to become pregnant and not using contraception has been documented in several other studies(19-21), but the issue warrants further attention. The ambivalence expressed by these women seems to be the norm for this population(22) rather than an exception, and

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addressing this ambivalence should be a top priority for future research, policy and programs targeting UIP.

Many of these women placed value on being different than their peers in their similar income status and overcoming the barriers of poverty in terms of pursuing additional education, securing a well-paid job, establishing a committed relationship with a sexual partner, and owning one's own home. An UIP was perceived as having the potential to interfere with one's ability to be upwardly mobile either temporarily or permanently and could tip the scales against these women's efforts to change their life situations. When the ambivalence described above is juxtaposed with the obvious motivation expressed by these women to better their life situation and create a stable life for themselves and their current or future children, a conspicuous paradox is revealed. Despite their clear ideas about pregnancy being a limiting factor in their ability to be upwardly mobile to change their life situations in order to become stable, they are much less clear about the means by which they can achieve this goal and hesitant to take an active role in ensuring that this pregnancy does not occur.

It is unclear why this inconsistency exists in these women's lives. It is possible that there is a component of fatalism and religious devotion that causes women to feel that the details of avoiding/delaying a pregnancy are up to God and/or out of their hands(23, 24). While this perspective was noted by a few of the women, however, it was not necessarily expressed by the majority. Perhaps some of the women who held this viewpoint were rationalizing their lack of perceived power to avoid a pregnancy (related to pressure from a partner, for example). The observed inconsistency could also be due to women's rationalization of their perceived inability to attain their life goals or at least begin a life path to achieve them. By not explicitly stating a means by which they will avoid pregnancy in the present in order to move towards their ideal of

a stable life, women may be setting themselves up to accept a future UIP with less disappointment than if they had laid out detailed plans that they were not able to follow. Finally, it is possible that the lack of social capital in several of the communities in which these women lived impacted women's perceptions regarding their ability to have control over changing their life situations.

Hesitancy to use birth control due to perceived stigma regarding planning for sex(25) and lack of access to birth control(26) has been documented in certain minority populations. These perspectives, however, were not expressed by the women in this sample. For these women, it was the consequence of unprotected sex – pregnancy – that presented a problem rather than the act of sex itself. Interestingly, this finding was a factor identified by researchers as a significant difference between Western European countries and the US, which contributed to the high UIP rates observed among American teenagers(27). Overall, societies that address consequences of unprotected sex, such as UIP and abortion, as targets for intervention demonstrate lower UIP rates than the US, which treats premarital sex as the unacceptable behavior needing to be changed. Among teens, the tendency to live in the present compounded by the commonly described "it can't/won't happen to me" philosophy may contribute to this population's ambivalence about forming a strong plan for contraception in the future. Further exploration into the reasons for this paradox between clarity about life direction and influences and ambivalence about using contraception is warranted to address the unique needs of this population with regards to situating healthy pregnancy decisions and outcomes within future life circumstances.

Women in this study demonstrated varying knowledge and highlighted inaccuracies regarding effectiveness, appropriate use and side effects of modern contraceptive methods. This trend, specifically in low-income, African-American women, has been widely documented(6, 14,

26, 28). The relatively low levels of education achieved by the women in this study may partly explain the resistance to contraception observed here, but it is clear that external factors – specifically interpersonal ones like partner opposition and peer influence as well as social structural ones such as income and social group norms – play a role in these women's negotiation of birth control use.

Lifflander, Gaydos and Hogue(29) presented data indicating that women at "high risk" for UIP and public health practitioners who address and intervene around these concepts have different definitions of and values about unplanned and planned pregnancy. This study finds a similar disconnect between these two groups of stakeholders regarding the perceived consequences of an UIP. Although public health experts and clinicians overwhelmingly highlight the negative health consequences of UIP for the resulting children(18), these women indicate that they perceive the negative consequences of UIP to be primarily financial and logistical barriers that a UIP presents to their ability to achieve life stability and security. This finding has implications for the mismatch between interventions targeted at reducing UIP by focusing on negative health consequences and the social realities of the women's lives that are being targeted in these interventions. Future researchers, clinicians and program planners would do well to incorporate these women's perspectives in identifying appropriate targets and goals in forthcoming program and policy efforts.

Whether women were already mothers, currently pregnant, electing to terminate the pregnancy or the opposite of each of these descriptors, all in this study shared a common desire to be a good mother to current and/or future children. Motherhood was a socially valued role to most of these women. Stability, especially financial security and improved living conditions, was perceived as a means by which women could provide for children and be a good mother.

These ideal conditions for motherhood, found in other studies of low-income women who choose abortion(30) and those who continue UIPs(15), factored prominently in women's accounts of their struggles to change their life circumstances. Likewise, women in this study displayed similar reluctance to count on a sexual partner for support to help them create this stability as did low-income women in Edin and Kefalas' research(15), and their doubt regarding a future marriage commitment compounded with their desire to be financially independent were evidence of their wariness.

This study has implications for future research, program planning, clinical encounters and policy. It highlights new areas of inquiry that should be undertaken to fully understand the nature of the relationship between external factors and women's reproductive health outcomes, the paradox between women's quest for stability and their ambivalence about using contraception to avoid pregnancy to achieve it, and the centrality of stability to women's life trajectory as mothers and as valued members of society. Multi-level analyses of external factors and the outcome of UIP should prove helpful in clarifying the relationships between many of the factors identified here and the health outcome of UIP and other reproductive and sexual health outcomes in order to identify exactly how external factors can be manipulated to improve individual women's life circumstances. As shown here, qualitative exploration into women's life circumstances provides new insights into possible explanations for limitations to current programs and policy. Programs, clinical encounters, and policy should all benefit from the findings of this study that current attention on negative health consequences of UIP and increasing access to birth control may be mismatched to women's perspectives and social realities. Finally, the conclusion that life stability plays a central role in women's avoidance of

pregnancy may highlight the need for programs and policies that focus on the positive, stabilizing effect of avoiding an UIP rather than on the negative aspects of incurring one.

Due to the small number of women included in this sample, findings from this study have limited generalizability outside of this population. Because the focus was on women who are at high risk of UIP, specifically low-income, non-Hispanic African-American, and young women from Pittsburgh, no conclusions can be drawn as to whether the issues of stability and ambivalence that are salient in this sample of women hold true for other populations of women. In addition, the sample of women in this study was selected from a larger sample of women who visited a family planning or abortion clinic for a pregnancy test. These selection criteria may have missed an important subgroup of women – those who have no interaction with the medical system and who rely on at-home pregnancy tests – who may represent the most high-risk population for UIP. Finally, although issues of ambivalence and low contraceptive use factored prominently in these women's stories, explicit probing of reasons why women did not use birth control was not stressed and conclusions drawn regarding this topic must be approached with caution.

The reciprocal relationship between the SDH and the outcome of UIP described here can be used to draw attention to the influence of women's environment and social context on their individual behavior related to unprotected sex and contraceptive use. Interventions and policies focused at the societal or population level may have the most impact in changing the circumstances of women's lives to decrease negative health consequences of UIP and improve overall pregnancy outcomes. For example, government-provided universal health insurance that covers all three necessary components of reproductive health – birth control, abortion and pre-natal care – would allow women to make reproductive health decisions that are not driven by

monetary factors. Broadly focused initiatives to improve housing conditions, increase overall education of the public regarding sexual health and support mothers' return to the workplace may also help women achieve the type of stability that the women in this sample describe.

Individual level factors undoubtedly play a key role in whether women experience an UIP and how they manage it if they do. However, factors at the interpersonal, social structural, environmental and cultural levels impact these individual level factors and create conditions that are more or less optimal for becoming a mother for the first time or again. These women's life experiences provide a palpable example of how the social conditions in people's lives both directly and indirectly influence the health outcomes that they experience. While many other areas of the healthcare world have begun to integrate this notion into their preventive and treatment focused programs, women's sexual and reproductive health remains short-sighted in its narrowly targeted behavior change focus(31, 32). This study indicates that, in order to achieve a modicum of success in addressing the negative health consequences of UIP, public health professionals, clinicians, policy makers and program planners must begin to account for the social context of women's lives in both research and interventions.

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5.0   DISCUSSION AND CONCLUSIONS

5.1   OVERVIEW OF FINDINGS

The overall aim of this dissertation was to provide evidence that a broadened perspective for researching women's sexual and reproductive health (SRH) and developing public health interventions related to this topic is needed in order to improve overall SRH outcomes. A critical analysis of the literature and a mixed-methods study were conducted to realize this goal. Following is a review of the findings of the manuscripts presented in chapters 2-4, as they relate to the overall objective. Each synopsis situates the manuscript findings within the existing literature in order to demonstrate the relevance of the topics covered to current SRH discourse.

5.1.1   Refocusing upstream in women's SRH research

The first manuscript reviewed the transition in public health from a population-level focused field to one that narrowed its focus to individual level behavior change. This evolution occurred due to a multitude of societal and discipline-based changes, which included the domination of the biomedical paradigm over a collective, "health for all" approach(73), the emergence of psychological, individually-based theories about behavior(74), and the subordination of population-level health initiatives to clinical medicine(75). These events all occurred against a

background of a developing national American character, which was increasingly embracing capitalist notions of individual responsibility and the pursuit of individual success.

Over the past decade, various segments within public health have begun to recognize the limitations of the over-emphasis on individual-level behavior change, and some new research, policies and programs have begun to adopt a broader perspective to tackle public health issues. Renewed interest in demonstrating population-level benefits from interventions has occurred in certain areas, and many contemporary public health luminaries are emphasizing health initiatives that have collective benefits, rather than for just a privileged few(76, 77). Renewing the spirit of social justice that was an integral component of the original mission of public health, many of these current efforts to return to the initial objectives seem promising.

Unfortunately, however, the area of women's SRH lags far behind these forward-thinking public health sectors, and failure to demonstrate large-scale population-level health improvements related to SRH may be partly due to this narrow perspective(2). The issue of unintended pregnancy (UIP) was highlighted in this manuscript to demonstrate the limitations of research and programs that place the burden of responsibility for controlling sexual behavior and managing the consequences of this behavior entirely on individual women. Increasing knowledge regarding birth control and improving attitudes to using birth control among women are two widely utilized strategies for reducing UIP rates(9), but these efforts are often employed in isolation of the social context of women's lives. Recognition of how these targets are useful and applicable to women in relation to their life circumstances is often not a high priority, and unchanging rates of UIP, especially in the high risk populations of young, minority and low-income women(6), show just how limited and short-sighted these programs are.

Women's SRH research, policy and program planning would do well to integrate the broader perspective that is slowly re-emerging in other areas of public health. Disparities that exist across sub-groups of women, especially as related to UIP and its negative health consequences, can be addressed only through a perspective that recognizes the social context of women's lives. In addition, women's SRH should commit to promoting health initiatives that result in improved collective health for the society rather than the current trend of "population-level" programs that are, in actuality, individual-level behavior change outcomes measured in aggregate. It is hoped that by submitting this manuscript to a broadly read women's health peer-reviewed journal, a conversation will be started among clinicians, public health professionals, policy makers and program planners in the SRH field that reflects these arguments.

5.1.2 Women's prospective pregnancy intentions

The second manuscript presented in this dissertation encompasses the results of the quantitative component of the mixed-methods study. Despite widespread use at the program and policy level of the dichotomous terms planned/unplanned, wanted/unwanted, and intended/unintended as they relate to pregnancy, several studies have demonstrated the limitations of these measures in accurately capturing women's feelings and plans regarding pregnancy(26, 40). An additional weakness of using these terms is that they are almost always measured retrospectively(27, 31, 78), asking women who have already become pregnant or given birth to think back to the time when they became pregnant and classify their intentions and feelings regarding this pregnancy at that time. In an effort to improve these efforts to characterize women's pregnancy intentions, a previously validated 5-question sequence that assessed these intentions(67) was adapted to

measure them prospectively and compare this prospective assessment to a single-item measure of pregnancy intention.

Women who sought pregnancy-testing services at one of four family planning clinics in Pittsburgh, PA completed a survey of their prospective pregnancy intentions and reproductive histories. These research sites serve primarily the target population of women: those at high risk for UIP or young, minority and low-income women. Results of the study indicated that women's classification of pregnancy planning based on the adapted question sequence, the pLMUP, aligned well with their responses to the single-item measure of pregnancy intention. Both of these measures identified a large sub-group of women in this population who were ambivalent about becoming pregnant at the time of receiving a pregnancy test. Incorporating the prospective time point of measuring intentions utilized in this study should aid clinicians and program planners in identification of ambivalent women for targeted interventions to help them meet their unique fertility goals and improve overall healthy pregnancy outcomes.

The second manuscript adds to current SRH literature by reviewing an initial attempt to measure pregnancy intentions prospectively. The study represents the first of its kind to measure pregnancy intentions at this time point and in this population of women, both pregnant and non-pregnant. By utilizing a non-dichotomous measure to assess pregnancy intentions, this study additionally recognizes the multi-dimensional and complex nature of women's intentions. It adds weight to the argument that women's fertility is not a simplistic, easily measured, and unilaterally targeted concept. On the contrary, as demonstrated in the final manuscript, many aspects of women's lives factor into their feelings and plans regarding a possible pregnancy, and attempts to measure these intentions must incorporate this reality.

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5.1.3   Social determinants of UIP

The final manuscript included in this dissertation represents the essence of the overall argument stressed in this dissertation regarding the need for a broadened perspective in women's SRH research. It reviewed the qualitative component of the mixed-methods study, which used an ethnographic approach to exploring how the social context of women's lives influences whether they experience an UIP and, if they do, how they manage it. Despite a plethora of data documenting the vast disparities among sub-groups of women regarding UIPs(6), substantive discussion as to the reasons for these disparities is rare. Interventions that target women at high risk for UIP, specifically young, minority and low-income women, continue to fall short of their goals(2), and this may be partly due to an overemphasis on individual-level behavior change in isolation of women's life circumstances.

Ten in-depth interviews were conducted with women who participated in the quantitative phase of research described in the second manuscript and were categorized as not planning for pregnancy or ambivalent about pregnancy. Women shared their reproductive histories, circumstances in their lives that led them to seek pregnancy-testing services, and how they anticipated managing a pregnancy, if they should be currently pregnant. Several themes emerged from the interviews that have relevance for the overall dissertation goal.

The women's stories revealed life circumstances within which they had difficulty prioritizing pregnancy prevention due to their struggles to become independent, stable and support existing or future children. The concept of stability was central to women's lives, especially as it relates to being a good mother to current and/or future children. Women described their aspirations to become stable, which included being able to manage external factors, such as interpersonal, social structural, environmental and cultural ones. Experiencing

an UIP was perceived to be a significant interruption to their life paths towards becoming stable, and delaying or avoiding pregnancy at the current time was a primary way for them to stay on track. The Social Determinants of Health (SDH) framework(62), which promotes the perspective that individual behavior is shaped by external factors and the interaction among these factors, was expanded by the results of this study. In the case of UIP, not only do external factors impact whether a woman experiences an UIP and how she manages it if she does, but the experience of an UIP reciprocally impacts women's ability to manage the external factors that help or hinder her on her path towards stability.

The findings of the qualitative study have broad implications for the aim of this dissertation. The narratives of the women interviewed provide evidence of the impact that social context has on individual SRH behavior. There is a notable disconnect between the negative health consequences of UIP for babies touted by public health professionals and clinicians(5) and the consequences of life insecurity and threats to stability that women perceive as results of an UIP. It is evident from the data that societal-level interventions and initiatives will have the most impact in addressing fertility needs and goals of this population of women, rather than traditional individually-focused programs and policies that continue to be funded.

5.2   GENERAL DISCUSSION

The three manuscripts presented in this dissertation illustrate the importance of adopting a broad, holistic perspective in women's SRH research. While each one takes a slightly different approach to following this line of reasoning and speaks to a unique component of current SRH

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discourse, there is significant common ground between the manuscripts that is worthy of discussion. Limitations and weaknesses of the study will also be considered.

5.2.1   Common themes

Evidence presented in all three manuscripts supports the argument that women's SRH needs to adopt a broader perspective in conceptualizing UIP in order to begin to address health disparities in this area and make headway in reducing negative health and social consequences associated with UIP.   The quantitative research findings indicate that improving measures to assess pregnancy intentions involves recognizing this concept as being influenced by several dimensions of behavior, feelings and circumstances in women's lives. The qualitative research findings demonstrate that external factors play a significant role in how women situate their fertility in their everyday life decisions.

In addition, as identified in the first manuscript and demonstrated in the other two manuscripts to varying degrees, a significant disconnect exists between the experts who design and implement programs and research focused on reducing UIP and women at highest risk of UIP who are targeted by these research and program efforts. As suggested in the quantitative study component, adoption of a prospective, multi-dimensional pregnancy intention assessment tool would enable public health professionals and clinicians, who attempt to measure this concept, to move closer to women's realities concerning this issue than do current retrospective, dichotomous measures. The perspectives of a small sample of women at high risk for UIP described in the third manuscript highlight the divide regarding the perceived negative consequences of UIP between experts on the one hand and women being studied and targeted for interventions on the other hand.

The importance of integrating an upstream perspective to studying and addressing disparities in women's SRH is highlighted in the literature review presented in the first manuscript and the findings of the qualitative study component reviewed in the third manuscript. It is clear that women's SRH research has a long way to go to catch up to the public health field's renewed interest in collective health promotion and emphasis on social justice issues as important to addressing health disparities. Findings from the qualitative research support this statement, and the experiences of the women participants indicate that initiatives targeting UIP in isolation of the social context of women's lives will miss their mark. Instead, initiatives that acknowledge the influence of external factors on individual behavior and target the societal-level for change to improve women's overall life circumstances should prove most effective in meeting overall improved health targets.

Finally, findings in both the quantitative and qualitative portions of the research study identify an important and often overlooked sub-population of women – those who are ambivalent about becoming or avoiding becoming pregnant. The high rates of ambivalence documented in the quantitative study compounded by the descriptions of "if it happens, it happens" noted in the qualitative study indicate that significant ambivalence among women at high risk for UIP may explain why the rate of UIPs in this population does not decline and why efforts to achieve this goal are unsuccessful. This ambivalence, coupled with the high importance assigned to avoiding pregnancy to achieve upward mobility, highlights an important area of future inquiry. Identifying these ambivalent women, understanding the nature of their ambivalence and adapting interventions and research to incorporate this ambivalence are critical to future efforts aimed not at decreasing UIP rates, necessarily, but at reducing the negative health and social consequences of UIP.

5.2.2 Limitations

The sample of women included in both the quantitative and qualitative components of the mixed-methods study represented women who sought pregnancy-testing services at one of four family planning clinic sites in Pittsburgh, PA. These clinics serve a high proportion of the target population of this study, specifically young, minority and low-income women. Women who seek pregnancy-testing services at healthcare locations different from the family planning clinics reflected in this study may have vastly dissimilar intentions and feelings towards pregnancy and motherhood than "high-risk" women in the study population. Due to the choice of the clinic setting for recruiting participants, a significant limitation of the study is the failure to capture the perspectives of women who do not have any interaction with the medical system and who use at-home pregnancy tests to determine their pregnancy status. These women, who may be at highest risk for UIP due to their non-contact with clinicians and an assumed resulting lack of hormonal birth control, could have shared unique perspectives on their pregnancy intentions and their experiences with and management of UIP. Their absence in the study samples limits the implications of the findings for women who are most at risk for UIP.

Although qualitative methods were especially useful for the exploratory research questions posed in the study, they carry with them some limitations that deserve noting. Due to the small sample size and in-depth focus on these women's life experiences, the findings of this study are not generalizable to any larger population than the ten women who were interviewed. Similarly, only non-Hispanic African American women were included in the sample for Component II, and the relevant themes described for this population may not be indicative of the themes that would arise in interviews with non-African American women. In addition, as is common in qualitative research, the dynamics between the researcher and the participant factor

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prominently in the outcomes of the research. Significant efforts were taken to minimize the hierarchal power relationship that often occurs in any research/participant relationship and to maximize the comfort of participants during the interviews. The extent to which these efforts impacted women's responses is unknown. Qualitative data analysis can never be entirely objective and free of researcher bias; however, efforts were taken to minimize the subjectivity of the analysis, including using several coders working independently to read and code transcripts in multiple passes through the data. Despite these limitations, the findings of the qualitative research contribute to the broader knowledge of social context and women's SRH.

5.3   PUBLIC HEALTH SIGNIFICANCE

The research summarized here has several public health implications. These include promotion of a broadened perspective in women's SRH research, use of a novel approach for assessing women's pregnancy intentions, appreciation for qualitative methods in exploring an area of inquiry that has had limited investigation, and expansion of the SDH framework to understand the relationship between external factors and individual behavior.

5.3.1   Broadened perspective

This dissertation presents evidence for the importance of incorporating a broader perspective into addressing health disparities in women's SRH, specifically as they relate to the experience and management of UIP. The framework adopted in this study integrated lessons from areas of public health that have begun to re-adopt the collective health paradigm that was the original

focus of public health efforts. The usefulness of incorporating this perspective into women's SRH is evident in the findings of the study presented, and future research, policy and health initiatives can learn from these conclusions. Targeting individual behavior as the sole focus of public health efforts, both generally and in the women's SRH area, will continue to result in unsuccessful campaigns and programs that do little to reduce or eliminate existing health disparities.

Certain areas of the public health field have begun to recognize the limits of this narrowly focused perspective; other areas, especially women's SRH, should incorporate a broader perspective that acknowledges social context influences on individual behavior and addresses them through higher-level efforts aimed at collective health improvements. For example, research that specifically investigates the relationship between neighborhood deprivation and women's experience of UIP would begin to move past the traditional approach of using measures of socioeconomic status as controls or confounding variables in research. Broadly focused initiatives to improve housing conditions, increase overall education of the public regarding sexual health and support mothers' return to the workplace may also help women achieve the type of stability that the women in this study describe and have unexpected, additional benefits in widespread, non-health areas such as decreasing crime, impacting rates of sexually transmitted infections and decreasing workplace gender-based discrimination.

5.3.2 Prospective assessment of intention

The time at which pregnancy testing was assessed in the quantitative component of the research study has significance for improving the accuracy of pregnancy intention measurements to better reflect women's true intentions. As the first study to prospectively assess pregnancy intentions

in a population of pregnant and non-pregnant women, this research should encourage other researchers to consider this time point in future assessments of the concept. Furthermore, the prospective question sequence developed and employed in this study could prove useful in clinical settings in order for clinicians to address women's unique needs for contraception, pregnancy planning and/or health pregnancies according to their prospective pregnancy intention classifications.

The use of two interview sessions during Component II of the research study highlighted the importance of assessing pregnancy intentions at an early time point. For women who had received a positive pregnancy test result, descriptions of pregnancy intentions and feelings sometimes changed or became better clarified between the two sessions. Clearly, for the women included in the Component II sample, pregnancy "intention" is a fluid concept that may change throughout and after a pregnancy. This observation supports the need for widespread use of prospective assessments of pregnancy intention, such as the one developed for use in Component I of this study.

5.3.3 Qualitative methods

The qualitative research methods employed in this research study proved invaluable for exploring the social context of women's lives and how it impacts their fertility. These methods offered the ability to delve into women's life experiences and probe for inconsistencies in their stories. They were especially beneficial for this exploratory study because they privileged the voices of women who are at high risk for UIP but whose perspectives are often omitted in large-scale interventions that target their behavior. Qualitative methods revealed important themes that were relevant to this population of women, relationships between external factors and

behavior, and inconsistencies between current program and policy targets and the needs of these women, all of which would have been inaccessible to quantitative research methods. As women's SRH begins to recognize the importance of adopting a broadened perspective to addressing and improving UIP health outcomes, use of qualitative methods will be critical to begin to understand the optimal means by which to accomplish this.

5.3.4   Expanding the SDH framework

Findings from the qualitative research provide support for the SDH framework and suggest a new model for conceptualizing the relationship between external, higher-level factors and individual health behavior and outcomes. Not only do external factors impact women's experience and management of UIP as posited in the traditional SDH framework, but so too does the experience of an UIP reciprocally impact women's ability to manage these external factors. The extent to which this reciprocal relationship between environmental and social structural factors and the experience and outcome of UIP is translatable to other health outcomes is yet unknown, but the research findings presented here indicate that the components of the SDH framework may interact in different and unique ways, depending on the particular outcomes being studied or targeted.

5.4   FUTURE RESEARCH AND APPLICATIONS

Information garnered from the study described in this dissertation can be used to identify important and necessary future areas of inquiry and suggest adaptations for current policy and

program initiatives. The findings indicate that several paths can and should be pursued to build on this dissertation. Proposed directions for potential research include:

- Determining the extent to which the prospective assessment of pregnancy intentions utilized in this research is useful for measuring this concept in other populations and whether it has application for use in clinical settings to identify women for targeted, classification-appropriate counseling and interventions

- Determining the extent to which the reciprocal relationship between external factors and UIP described here holds true for other health outcomes or in other populations of women who are at less risk for UIP than the women included in this sample

- Determining the extent to which the paradoxical relationship between ambivalence and drive towards upward mobility observed in the sample of women in Component II is mirrored by other populations of women, especially those who may not be as "high-risk" (young, African-American and/or low income) as these women

- Conducting multi-level modeling studies in large populations of women regarding the relationship between external factors identified by women in this small study and individual SRH outcomes in order to explore an alternative explanation regarding how these factors interact between the various levels to influence the outcome of UIP and other SRH outcomes

- Conducting a longitudinal study on the sample of women from (or similar to) Component I following them from pregnancy testing through their pregnancies to termination or birth in order to determine the extent to which pregnancy intentions and decisions about pregnancy outcomes measured at the time of pregnancy testing change over time

- Conducting greater in-depth analyses regarding the nature of the ambivalence expressed by women in this study in order to understand the paradox described in this dissertation between women's firm plans regarding the pursuit of life stability, their identification of pregnancy as significantly interfering with this pursuit, and their vague plans and ambivalence regarding how they will achieve their goal of avoiding an UIP

Applications of this dissertation to program and policy include:

- Inspiring program planners and policy makers to recognize the influence of social context on women's SRH behavior and to develop programs and policy to reflect this recognition
- Encouraging researchers, public health professionals, clinicians, program planners and policy makers to acknowledge the mismatch between their terminology, conceptualization and, most of all, targeted negative health consequences related to UIP and women's alternative experiences and perspectives on these concepts and issues

5.5   CONCLUSIONS

Public health has moved away from population-level concentrated efforts aimed at improving overall societal health towards a biomedical and individually focused paradigm. Only a few areas, spurred on by the burgeoning sub-field of social epidemiology, have begun to return to a collective health perspective and to recognize that individual behavior is shaped by external factors. Public health approaches to women's SRH, however, have yet to follow a similar

course. The US government's Healthy People 2010 initiative identifies the explicit goal of "improv[ing] pregnancy planning and spacing and prevent[ing] unintended pregnancies" in order to achieve the broad HP goals of eliminating health disparities and helping individuals increase their quality of life(15). In 2008, we remain far away from this lofty objective, and this dissertation has attempted to explore and describe why this is the case.

The vast disparities that exist with regards to UIP rates and the resulting negative health outcomes associated with UIP are unacceptable in a society that boasts such vast accumulation of wealth and power. It is nonetheless patently obvious why these disparities persist in this same society that places overwhelming emphasis on individual responsibility and control while simultaneously downplaying the poor social conditions and the unsafe community environment that perpetuate these disparities. These societal norms have created an atmosphere within which the women's SRH field develops research, programs and policies that target women's sexual behavior in a vacuum, either oblivious to or outright ignoring the power of external factors to influence and alter individual behavior.

This dissertation provides evidence for the need to adopt a broader perspective in future women's SRH research and initiatives, especially those that focus on the existing disparities in UIP rates and health outcomes. It serves as a model for future SRH research regarding one approach to achieving this goal. Incorporating the SDH framework into research in this area is a initial step to begin the conversation regarding the social context of women's reproductive lives, and the reciprocal relationship described here, unique to pregnancy as a health outcome, may provide additional inspiration to others hoping to integrate a broader perspective into addressing women's SRH disparities. Innovative research models and methods are needed to improve women's reproductive health outcomes and overall life conditions at the population level and

reduce and eventually eliminate the intolerable reproductive health disparities that exist among women; this dissertation represents an endeavor of this kind to move the field of women's SRH one step closer to these objectives.

APPENDIX A

COMPONENT I SURVEY INSTRUMENT

Please fill in the following information about yourself:

1.   Age: _____

2.   Do you consider yourself Hispanic/Latino?   ¹☐ Yes   ²☐ No   ⁹☐ Don't know

3.   What race do you consider yourself to be? (Check all that apply)
     ¹☐ White   ²☐ Black or African American   ³☐ American Indian or Alaskan Native
     ⁴☐ Asian   ⁵☐ Native Hawaiian or Other Pacific Islander ⁶☐ Other (please specify): _____

4.   Are you currently:
     ¹☐ Married   ²☐ Not married but living with sexual partner   ³☐ Separated
     ⁴☐ Divorced   ⁵☐ Widowed   ⁶☐ Never married

5.   What is the highest level of schooling you have completed or degree you have been awarded?
     ¹☐ None   ²☐ Elementary/middle school   ³☐ High school   ⁴☐ Trade/technical school
     ⁵☐ College   ⁶☐ Some graduate school   ⁷☐ Graduate or professional degree

6.   Are you currently employed?   ¹☐ Yes   ²☐ No   ⁹☐ Don't know
        If yes, full-time of part-time?   ¹☐ Full-time   ²☐ Part-time

7.   Do you currently have health insurance?   ¹☐ Yes   ²☐ No   ⁹☐ Don't know

8.   Do you currently receive Medical Assistance?   ¹☐ Yes   ²☐ No   ⁹☐ Don't know

9.   In the last ye ar, how many times have you sought health care in any of the following settings:

Health care setting	Number of times in last year
Primary Care provider, General internist or Family practitioner's office	
Gynecologist's office or clinic	
Planned Parenthood clinic	
Urgent Care clinic	
Emergency room	

10. How many people currently live in your household (including yourself)? _____

11. In the past y ear, what was your approximate total household income?
     ¹☐ Less than $5000   ²☐ $5000-$10,000   ³☐ $10,001-$15,000   ⁴☐ $15,001-$20,000
     ⁵☐ $20,001-$25,000   ⁶☐ $25,001-$30,000   ⁷☐ $30,001-$35,000   ⁸☐ $35,001-$40,000
     ⁹☐ $40,001-$45,000   ¹⁰☐ $45,001-$50,000   ¹¹☐ More than $50,000   ¹²☐ Don't know

12. What is your zip code?_____

Below are some questions about your reproductive history. For each one, please provide a number that represents the total over your lifetime.

13. How many times have you been pregnant? _____

14. How many times have you been pregnant when you would have preferred not to be? _____

13. How many times have you given birth? _____

14. How many times have you had a miscarriage? _____

15. How many times have you had an abortion? _____

16. How many times have you had a sexually transmitted infection? _____

17. How many times have you had an ectopic (tubal) pregnancy? _____

18. How many times have you had an abnormal pap smear? _____

19. When was your last Pap smear?
    [1] in the last year   [2] 1-3 years ago   [3] more than 3 years ago
    [4] I've never had a Pap smear   [9] Don't know

20. What service are you here for today?
    [1] pregnancy test   [2] emergency contraception   [3] other _____

Below are some questions that ask you about your circumstances and feelings. For each one, please check the statement which __most__ applies to you.

23. Which of the following best describes your current situation?
    [1] Trying to get pregnant
    [2] Wouldn't mind getting pregnant
    [3] Wouldn't mind avoiding pregnancy
    [4] Trying to avoid getting pregnant
    [9] Don't know

24. Since my last period:
    [1] I/we have not been using contraception
    [2] I/we have been using contraception, but not on every occasion
    [3] I/we have always used contraception, but I know that the method failed (i.e. broke, moved, came off, came out, not worked, etc.) at least once
    [4] I/we have always used contraception

25. If I am pregnant, in terms of becoming a mother *(first time or again)*, I feel that this p regnancy will have happened at the:
    [1] right time
    [2] ok, but not quite right time
    [3] wrong time

26. If I am pregnant, in terms of becoming pregnant:
    [1] I intended to get pregnant
    [2] my intentions kept changing
    [3] I did not intend to get pregnant 146

In the next question, we ask about your partner – this might be (or have been) your husband, a partner you live with, a boyfriend, or someone you've had sex with once or twice.

25. If I am pregnant, in terms of becoming pregnant:
     [1] My partner and I have agreed that we would like me to be pregnant
     [2] My partner and I have discussed having children together, but haven't agreed for me to get pregnant
     [3] We have never discussed having children together

26. Since your last period, have you done anything to improve your health <u>in preparation for possible pregnancy</u>? *(please check all that apply)*
     [1] took folic acid
     [2] stopped or cut down on smoking
     [3] stopped or cut down drinking alcohol
     [4] ate more healthily
     [5] sought medical/health advice
     [6] took some other action, please describe:_____
               or
     [7] I have not done any of the above <u>since my last period</u>

27. Which of the following methods of birth control have you ever used? *(please check all that apply)*
     [1] male condom
     [2] female condom
     [3] birth control pills
     [4] birth control patch (Ortho Evra)
     [5] birth control ring (Nuva ring)
     [6] birth control shot (Depo Provera)
     [7] emergency contraception/ "morning after pill" (Plan B)
     [8] a contraceptive implant (norplant or implanon)
     [9] IUD (Mirena or Paragard)
     [10] Tubal Ligation, "tubes tied"
     [11] abortion
     [12] other, please describe:_____

28. There are many reasons why a woman might not use birth control. For each of the following please tell us if it has EVER been a reason for you: *(please check all that apply)*
     [1] I didn't think I was going to have sex
     [2] I didn't think I could get pregnant
     [3] I ran out of the birth control method I was using
     [4] I couldn't get an appointment to get birth control when I needed it
     [5] I didn't want to have the side effects that birth control can cause
     [6] I was afraid birth control was bad for my health
     [7] My husband or partner did not want to use birth control
     [8] I couldn't afford to pay for birth control or my insurance wouldn't cover it
     [9] Birth control is against my religion
     [10] Some other reason, please describe:_____

The following questions are about a specific type of birth control, the Intrauterine Device (IUD).

25. How many women do you know who have used an IUD? _____

26. How many women do you know who were happy using an IUD? _____

27. Do you think women using IUDs are more or less likely to have side effects than women using birth control pills?   [1] More   [2] Less   [3] the same   [9] Don't Know

28. Do you think women using IUDs are more or less likely to get sexually transmitted infections than women using birth control pills?   [1] More   [2] Less   [3] the same   [9] Don't Know

29. Do you think women using IUDs are more or less likely to become pregnant than women using birth control pills to prevent pregnancy?   [1] More   [2] Less   [3] the same   [9] Don't Know

30. Do you think IUDs cost more or less than birth control pills, when both are used for 3 years?
     [1] More   [2] Less   [3] the same   [9] Don't Know

31. Have you ever thought about using an IUD?   [1] Yes   [2] No   [9] Don't know

32. Would you like more information about IUDs?   [1] Yes   [2] No   [9] Don't know

33. If you could have an IUD inserted today, would you want to?
     [1] Yes   [2] No   [9] Don't know

34. If you could have an IUD inserted for free today, would you want to?
     [1] Yes   [2] No   [9] Don't know

35. If you find out that you are pregnant today, what do you think you will do?
     [1] have an abortion
     [2] continue the pregnancy, planning for adoption
     [3] continue the pregnancy, planning to parent
     [9] Don't know

If you receive a positive pregnancy test result today, would you be interested in participating in this research study further? If so, a researcher may come to your house to talk to you more in-depth about your ideas, feelings, and experiences regarding this pregnancy, and you would be compensated with a $50 gift card for your time at the completion of these interviews. If you think that you might be interested, please provide your name, address, and a phone number at which you can be reached. This information is private and will only be used for the purposes of contacting you for this study. If you choose to participate or be contacted for the next stage of the research study, you may change your mind at any time and decide not to participate without any consequences.

[] Yes! I am interested about information on possibly participating further in this study.
Name:
Address:
Phone:

[] No. I do not want to participate any further in this study.

Thank you for your time!

For Staff Purposes Only
Test: Pos   Neg

COMPONENT II INTERVIEW GUIDES

Women involved in Component II of the research study participated in two interview sessions with the Principal Investigator. The first session lasted approximately 90 minutes and the second session lasted approximately 30 minutes. During the second session, women were given a diagram related to factors that impact their ability to avoid pregnancy, which they were asked to fill in. Although the interviews were ethnographic and interactive in style, each one was guided by a set on questions included here as the Interview Guides.

B.1   INTERVIEW GUIDE, MEETING #1

Introduction
I am trying to understand more about the circumstances of women's lives that impact whether they become pregnant and, if they do, how they deal with these pregnancies. I am interested in how women decide whether to continue their pregnancies within the context of everything else that is going on in their lives. If you don't mind, I am going to tape this conversation. This is so I can really listen to you, rather than focus on taking notes. If you would like to use a name other than your own to protect your privacy, I would be happy to use only that name from here forward. You are the expert here – I am going to learn from you. I will ask a few general questions, but you can talk about anything that you feel is important, even if I don't ask about it. This is going to be more of a conversation between the two of us than it is a formal interview. If you don't like any of the questions, you don't have to answer it. Please let me know if you would like to say anything that is "off the record", and I will be happy to turn the recorder off. Also, please let me know if you need or want a break at anytime. Do you have any questions? Let's begin.

1. Let's start with you telling me a little bit about yourself. (Probe for occupation, education, family descriptions).

2. I am interested in trying to understand about what is happening in your life. What is a typical day in your life right now?

3. Now I would like to talk a bit about the first moment when you realized you might be pregnant.
       a. What was the first thing that went through your mind?
       b. Who did you talk to about your pregnancy?
       c. How did you decide whether to (continue/terminate) the pregnancy? Can you tell me a little bit about the things that you considered in making your decisions (like your partner, your current family, support, money, health, work, school, religion, laws, etc.)
       d. What were people's reaction to your pregnancy and your decision?

4. Now please think back to your recent pregnancy. Let's talk a little bit about what was happening when you got pregnant (or when you think that it is most likely that you got pregnant.)
       a. Where were you when you had sex?
       b. What else was happening in your life at the time? (Work, family, money, etc.)
       c. Were you using any form of birth control at the time?
       d. Did you think about the possibility of becoming pregnant?
       e. Were you working, going to school, etc. at the time that you got pregnant?

5. Do you know who the father of the pregnancy is? If yes, what was your relationship like with him at the time? What is it like now?
       a. If you are in a relationship with this partner – how did you meet?
       b. What was your relationship like before you found out you were pregnant?
       c. What is it like now?
       d. Has your decision about whether to continue or terminate the pregnancy been influenced by or had an impact on your partner?

6. If you could change anything about the circumstances under which you became pregnant, would you? If so, what would you change? What do you think could not be changed? Why? How has this pregnancy impacted your life?

7. Fertility experiences. Was this your first pregnancy?
       a. If yes, how does this experience impact whether and how you will become pregnant again in the future?
       b. If not, tell me about the other pregnancies that you have experienced. How old were you? Was it "planned." What was the outcome? How did they differ (at all) from this one? What were the circumstances of becoming pregnant in the other cases?

8. How would your life be different now if you had not become pregnant this time?

9. How do your family, neighborhood, community, state, country impact:
     a. The fact that you are (or recently have been) pregnant?
     b. Your decision about the current or most recent pregnancy?
     c. The circumstances of this or past pregnancies?
     d. Whether, and how, you will become pregnant in the future?

10. How do these things (family, neighborhood, community, state, country) affect how you feel about having children and the right number of children for you to have?

11. Do you think that the environment in which you live (people, community, policies, etc.) is supportive of your most recent pregnancy? Are these things supportive of your decision about whether to continue your pregnancy? Tell me a bit about why these things are or are not supportive of you and your decisions.

12. Would you say that you take your decisions about pregnancy into consideration when you make other large life decisions? Please tell me a little bit about the way you think about your own fertility and pregnancy in relation to the other things that you deal with and go through in your life. What is the connection for you (if any) between (1) your feelings and decisions about pregnancy on the one hand and (2) other things that are going on in your life (work, school, money, family, health, living situation, etc.)?

13. Now let's talk about your future.
     a. What were your plans for the future before you found out your most recent pregnancy?
     b. How have your plans changed?

14. What do you think is the right number of children for you to have?
     a. If you have not yet reached this number, what will help you to achieve this number? What will prevent you from reaching this number?
     b. If you have already gone past this number, what has gotten in the way of you only reaching your ideal number?
     c. How do you decide how many children to have?

Now I would like to ask you some general questions about pregnancy and parenting.

15. Thinking about yourself, the women in your family, and your friends, some women plan a pregnancy and others just find themselves pregnant. How are these situations different from each other?

16. Some women who do not plan to get pregnant get pregnant, even though they are using birth control. Some women are happy about becoming pregnant this way and others are not. Why is this do you think?

17. What makes for a good mother?
     a. What kind of mother are you (if you have children), or what kind of mother do you want to be soon or at some point in the future?
     b. Do you know anyone who fits your ideal kind of mother? If so, can you describe this

person?
    c. What about your own mother?
    d. What makes a bad mother? Can you describe someone who fits your idea of a bad mother?
    e. When is the ideal time to become a mother?

18. What makes for a good father?

Is there anything else that you would like to add about pregnancy, kids, families, or life in general?

B.2   INTERVIEW GUIDE, MEETING #2

1. Tell me about anything that has changed since I saw you (last week).

2. Has anything changed in your mind regarding your thoughts and beliefs about this pregnancy? If so, what?

3. Has anything changed regarding your thoughts and beliefs about pregnancy in general? If so, what?

4. What do you think about getting pregnant in the future?

5. Is there a difference between unintended, unwanted, and unplanned pregnancies in your mind?

6. What barriers do women face from all areas of their life in trying to avoid pregnancy?

7. How do you think unintended pregnancies can be avoided in our society as a whole?

8. How could the environment (including your relationships, family, community, and government) become more supportive of women in helping them to plan or to avoid a pregnancy?

9. Overall, how do you feel about this pregnancy?

10. What conditions or circumstances would need to change in order for you to feel the opposite of your answer?

Go over and fill in diagram – either allow participant to do herself or talk through with her.

11. What is the most important factor that influences your decision to become or avoid becoming pregnant?

B.3 FACTORS IMPACTING UIP DIAGRAM, MEETING #2

Examples of possible factors that might impact your ability to prevent pregnancy.

Please fill in the diagram on the next page based on the types of things that exist in your life, which you believe affect your ability to prevent pregnancy.

Social Factors

Interpersonal (relationships, communication, etc.)

Community (resources and supports available, etc.)

Cultural Factors

Social group (values, norms, behaviors, etc.)

Group identity (race, ethnicity, religion, education, etc.)

Environmental Factors

Physical conditions (living, working, health facilities, etc.)

Access issues (transportation, location, etc.)

Structural Factors

Organizational systems (social services, education systems, policies, etc.)

Social inequalities (poverty, sexism, racism, classism, etc.)

Factors Impacting Unintended Pregnancy

Structural Factors

Environmental Factors

Cultural Factors

Social Factors
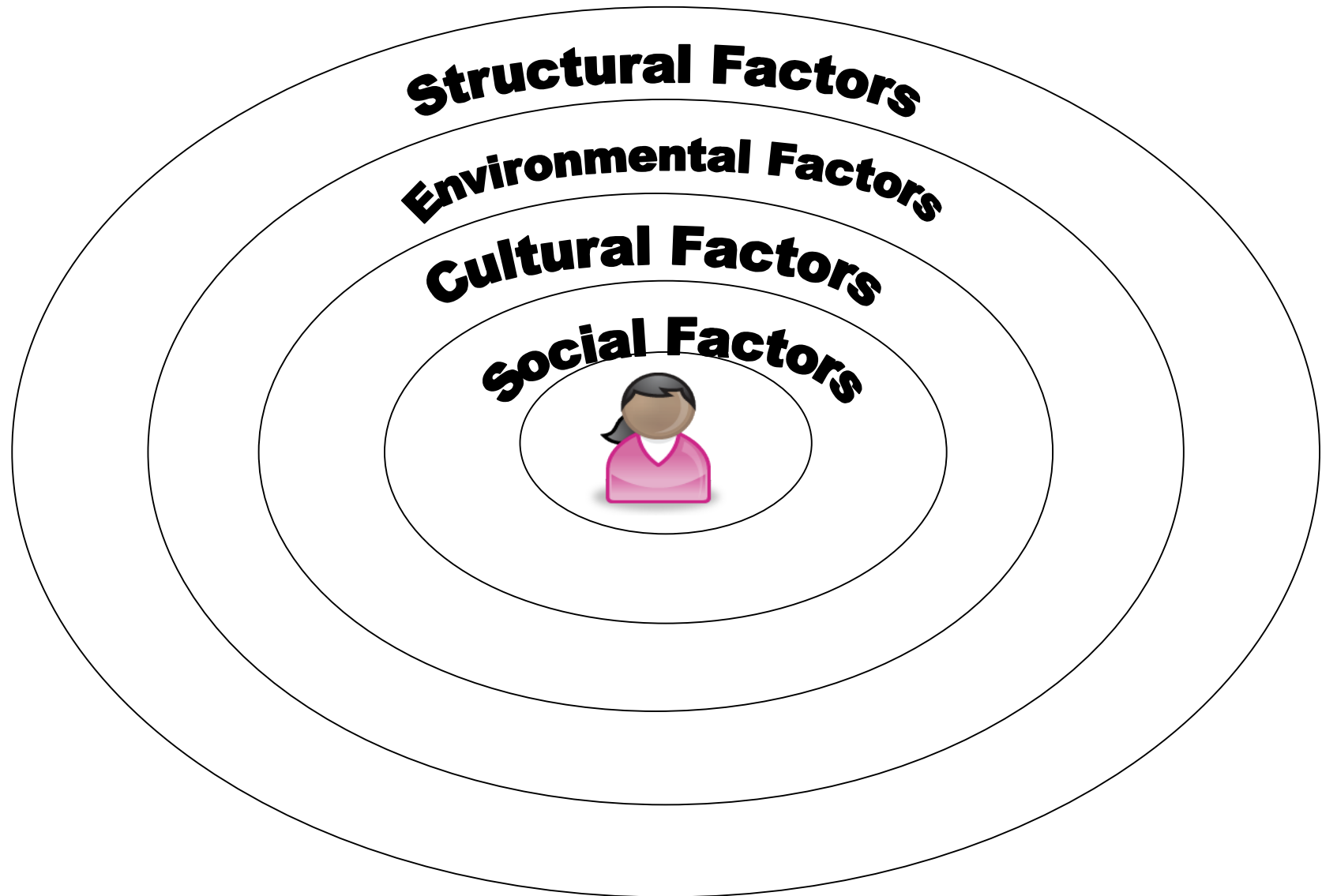
APPENDIX C

COMPONENT II CODEBOOK

Code Family	Code Label	Definition
Sex	Experience	Descriptions of all forms of sexual encounters (genital, oral, anal, etc.) and frequency of these encounters
	Birth control	Use of any form of bc at time of current conception and in the past
	Value	Descriptions of what value she places on her sexual experiences (fun, relationship building, lust fulfilling, etc.)
Pregnancy	History	Past pregnancies, numbers, and outcomes (miscarriages, abortions, etc.)
	Circumstances	Description of current pregnancy conception (where, when, etc.)
	Current plans	Any discussion of plans or intentions towards becoming pregnant this time
	Current feelings	General attitude and outlook about current pregnancy (negative, positive, etc.)
	Current outcome decision	Continue to parent, continue to adoption, or abortion
	Future plans	About becoming/avoiding becoming pregnant, having a family, ideal family size
Parenthood	Children	Number and descriptions of current children
	Motherhood	Herself as a mother (either actual or hypothetical), including being ready or whether/how it influences other life choices
	Parent qualities	Descriptions of what attributes a parent should have, including qualities and behaviors that she sees as important
Life transitions	Childhood	Her own childhood experiences (in family, in school, in community)
	Becoming an adult	Changes from childhood, what it means to her to be an adult
	Responsibilities	Related to becoming an adult, becoming a parent, being a member of a community or other social group

Code Family	Code Label	Definition
	Marriage	If married, description of or whether marriage is important to her
	Social life	Current, types of activities that she participates in for social interactions with others (i.e. going out, movies, parties, etc.)
	School	Current status or description of educational background
	Work	Current or recent past experiences of working at a job
	Career	Future aspirations/goals for work, may or may not be related to current work
Individual factors	Independence	Descriptions of value that woman places on her own independence or whether or not she views herself as being independent
	Feelings about pregnancy	Regarding own pregnancy – past, current or future – as well as descriptions of terms used to describe pregnancy (unintended, unwanted, unplanned e.g.)
	Impressions of others' pregnancies	Characterizations of other women's pregnancies – based on any group characteristics, i.e. young women, old women, poor women, etc.
	Feelings about abortion	Personal values/feelings regarding need for abortion and/or anti-abortion feelings
	STDs	Descriptions of feelings about STDs, fear of STDs, history of STDs, etc.
	I want more for my kids	Sentiment about desire to have children's life be better than hers – environment, housing, money, education, etc.
	Ambivalence	About getting pregnant or preventing pregnancy (if it happens, it happens)
	Stability	Value that women place on having something secure in their life – either currently or in the future "you need to have a secure financial thing" – related to money, job, home, etc.
Social factors	Family structure	Immediate family (parents, siblings, children, extended family)
	Family relationships	Descriptions of family ties, bonds, support, conflicts between members
	Friendships	Nature of friendships (same sex, opposite sex, closeness)
	Romantic/partner relationship	Description of relationship (casual, monogamous, serious, etc.)
	Community resources/support	Centers, activities, programs, etc. in place in her community (however she defines it)
	Alcohol/drug use	History or current use of alcohol, drugs, etc.
	Communication	With partner, with parents, with children. Descriptions of reality of communications or of value placed on communication
	Social pressure	To have sex, to use or not use birth control, etc – from partner, parent, friends, family, etc.
	Sex education	From family, friends, school, community resources
Cultural factors	Group values/norms	For any social group that she identifies with, as related to sex, pregnancy, parenthood, etc.
	Group behaviors	For any social group that she identifies with, as related to sex, pregnancy, parenthood, etc.
	Racial identity	Description of how her race (or others' races) impacts her life, behavior, and decisions
	Ethnic identity	Description of how her ethnicity (or others' ethnicity) impacts her life, behavior, and decisions

Code Family	Code Label	Definition
	Religious identity	Description of how religion (or others' religion) impacts her life, behavior, and decisions
	Going against grain	Desire to be different than those around her (family, friends, race, peer group, etc.)
Environmental factors	Home	Physical aspects of the home environment (condition of housing,
	Work	Physical aspects of work environment
	Health care	Description of where she seeks health care, atmosphere of health care environment
	Transportation	Use of public or personal transportation, access to transportation for work, socializing, health care, etc.
	Crime	Mention or description of neighborhood crime or existence of crime in woman's life
	Jail/incarceration	Description or mention of personal experience or family/friend/partner experience with jail
Structural factors	Social services	Provided by the government or local community, WIC, welfare, etc. - whether she uses them, if they are important to her, etc.
	Education system	Specifically as it prepares children, young adults for sex, pregnancy, parenthood, etc. – sex ed curriculums
	Policies	Local, state, or federal laws that impact her fertility
	Poverty	Financial status as an important factor in her life
	Sexism	Any gender dynamics that influence her identity as a woman or how she feels she plays a role in her family, community, society
	Racism	Any racial dynamics that influence her identity as a person or how she feels she plays a role in her family, community, society
	Classism	Any social class dynamics that influence her identity as a low-income person or how she feels she plays a role in her family, community, society
	Media	Impact of media on woman, descriptions of media portrayal of sex, pregnancy, women, etc.
	Insurance	Any mention or description of absence or presence of health insurance including medical assistance
Barriers	Barrier:age	Mention of age (young or old) as a barrier to having or not having a baby, getting pregnant…
	Barrier:money	Mention of financial barriers to having or not having a baby, getting pregnant, etc.

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