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**CORRELATES OF DESIRE FOR CHILDREN AMONG BLACK WOMEN
WITH AND WITHOUT HIV INFECTION**

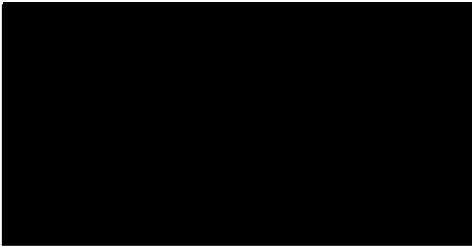
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CHAPTER I

THE PROBLEM

Introduction

Desire to bear children, within the context of human immunodeficiency viral infection, poses a threat to women, children and society in general. The general American public has clearly communicated the belief that childbearing is neither an appropriate nor moral behavior among women infected with the human immunodeficiency virus (HIV) (Levine and Dubler, 1990). Public health officials recommend that women with HIV avoid pregnancy (CDC, 1985). Nevertheless, and in spite of public policy and the general social view that childbearing among HIV infected women is wrong, women may actually have an increased desire for childbearing, risking re-infection for themselves and perinatal transmission of HIV to their children (Sowell and Misener, 1997).

The largest numbers of women infected with HIV in the United States are Black women of childbearing age. Women accounted for 6% of the reported U.S. AIDS cases in 1984 (CDC, 1986) and 21% in 1998 (CDC, 1999). During this same time period, Blacks increased their representation among reported U.S. AIDS cases from 33% to 41% (CDC, 1999). In New

Jersey, in 1986 women represented 18% of reported AIDS cases, and by the end of 1999 women accounted for more than 30% of reported AIDS cases ("New Jersey HIV/AIDS Cases", 2000). Black women constituted 65% of all female AIDS cases in New Jersey as of December, 1999 and for those women between the ages of 25-35, AIDS is the leading cause of death ("New Jersey HIV/AIDS Cases", 2000).

Low income Black women infected with HIV may want a baby who will be a source of unconditional love and joy for them (Wesley, Smelter, Redeker, Walker, Palumbo, and Whipple, 2000). Selwyn, Carter, Schoenbaum, Robertson, Klein, & Rogers, (1989) found that women with HIV chose to continue their pregnancies because of a desire for children, religious beliefs, and/or family pressure. A study of 69 HIV infected and 94 HIV negative women by Johnstone, Brettle, MacCallum, Mok, Peutherer and Burns, (1990) found that the desire to have a baby outweighed all other considerations among infected women. Predominately Black (80%) mothers with HIV infection reported that they want children for the joy that they bring to their lives (Wesley et al., 2000).

In 1990, Arras speculated that, for Black women pregnancy may represent a source of gratification and improved self-esteem. Andrew, Williams and Neil, (1993) reported that children provide a source of self-esteem, while James (1988) claims that children meet unfulfilled expectations

for women with HIV. Jaccard, Wilson, and Radecki, (1995) suggest that childbearing is an expression of self-esteem among HIV infected women. Taylor (1989) posits that HIV-positive women may have very poor self-esteem. Christ, Siegel, and Moynihan, (1988) suggest that many HIV infected women choose to have a child as a source of fulfillment.

Carovano (1991) noted that regardless of HIV status, a woman's sexual identity is often defined by her reproductive capacity. Women who are unable to bear children are seen as lesser women and are rejected by their peers. Based on interactions with the Director of an AIDS support organization, Carovano suggests that women view childbearing as a woman's obligation. Carovano explains that even after a woman finds that she is HIV infected, motherhood still validates her life, and in many cultures, women believe childbearing is their purpose for living. Ultimately, according to Carovano there is no alternative source of personal identity for some women apart from parenting. Therefore, Carovano cautions that as long as there is no other valid role for women, measures that discourage childbearing among HIV positive women will be ineffective. Carovano indicated that women with HIV need to be able to protect themselves without losing the option of childbearing, which may be their source of self-worth. Although, not discussed within the context of HIV infection, other feminist scholars have also described a woman's sense of self as connected to dependence upon or attachment to others (Chodorow, 1978;

Gilligan, 1982).

Arras (1990) asserted that many women with HIV do not have alternative sources of respect and gratification such as job promotion, education, or public service. Many women with HIV belong to a subculture that views childbearing as a source of achievement. Arras promotes the notion that women with HIV need alternative sources of self-efficacy to replace pregnancy and childbearing, a visible accomplishment that is often their only source of self-efficacy. Self-efficacy, the perception of mastering a role and/or successfully executing behaviors that produce outcomes may also be related to desire for children (Bandura, 1977). Gross (1987) and Holman, Berthaud, Sunderland, Moroso, Cancellieri, Mendez, Beller, and Marcel, (1989) claim that desire for children is related to a lack of alternative sources of self-realization. Wyatt (1967) links desire for children to accomplishment. The objective of this study, then, was to determine the relationship among, and the individual effects of self-esteem, and self-efficacy on desire for children in Black women with and without HIV infection.

The Problem

Is there a relationship among self-esteem, self-efficacy, and desire for children among Black women with and without HIV infection?

Definitions

Desire for children is the wish for biological offspring (Wyatt, 1967) and includes the valuing of children, determination to overcome obstacles to have children and importance of children relative to other pursuits. In this study it was measured by a score on the Modified Index of Parenthood Motivation (MIPM) (appendix E) based on Gerson's original Index of Parenthood Motivation (1983) .

Human Immunodeficiency Virus Infection is the presence of a retrovirus carrying genetic information in its RNA that binds to the surface of a target cell through a receptor (McCance and Huether, 1994). For the purpose of this study, HIV infection was determined by self-reporting of positive HIV antibody test results through ELISA and Western Blot (McCance and Huether, 1994).

Self-efficacy is an individual's perception of the ability to accomplish or achieve outcomes (Bandura, 1977). The General Self-Efficacy Subscale (appendix F) was used to measure this concept.

Self-esteem is a personal judgement of self worth or an individual's perception of personal significance (Rosenberg, 1979). The Rosenberg (1965) Self-Esteem Scale (RSE) (appendix G) was used to measure this personality characteristic.

Theoretical Rationale

The conceptual framework for this study was based on the theoretical

and empirical literature on self-esteem, self-efficacy and desire for children among Black women. A systematic view of desire for children was constructed, and questioned whether there are interrelationships between self-esteem and self-efficacy as partial explanation of desire for children.

Although there are varying degrees of explicitness in any conceptual framework, a general proposition from the symbolic interaction model (Wells & Marwell, 1976) is the philosophical underpinning of this study. This model assumes that an individual defines self, as well as others, and selects ways of acting toward and within human interactions (Benoliel, 1977). The proposition used to understand a woman's desire for children is based on what Heiss (1981) refers to as the ability to perform roles according to self-imposed and societal standards which are influenced by self-concept. Heiss notes that an important aspect of self-concept is self-evaluation, or how good a woman believes she is at what she does, and who she is.

Desire for children is an interactive process that includes the need to love and to be loved (Gerson, 1980,1986; Wyatt, 1967), which varies over time as a woman passes through different phases of life. According to Wyatt, self-esteem and self-efficacy influence desire for children. The realization of accomplishment in social roles influences sense of self which is related to desire for children. That is, Wyatt's writings suggest that desire for children is dependent upon self-efficacy and that individuals with low self-efficacy may

have an increased desire for children. Wyatt does not overlook the influence of society and cultural, however he explains that the individual's perceived needs determine the importance of complying with social norms (Wyatt, 1967).

Despite social standards relative to childbearing, trend data among Americans reveal that Black women ages 12-29 remain more likely to conceive children out-of-wedlock than White women (Morgan and Rindfuss, 1999). This data supports Wyatt's claim that societal influence is limited to the individual's internalization and/or valuing of general social norms imposed by the larger society.

Hoffman and Hale-Benson's (1987) study of middle-class Black women found support for Wyatt's (1967) claims that accomplishments in social roles influence sense of self, and that desire for children is governed by the accomplishment of social roles. Hoffman and Hale-Benson concluded that the perceived ability to master a role has considerable importance in the development of self-esteem especially among Black women. Coleman, Antonucci, Adelman, and Crohan's (1987) found that the social role of employee had a positive influence on self-esteem among middle-aged and older Black women.

Johnstone and his associates (Johnstone, et al, 1990), and others (Selwyn et al., 1989; Williams, 1990), found that desire for children was associated with women at risk for or diagnosed with HIV disease. Children were claimed to be both essential for an HIV infected woman's sense of self-

esteem and a major source of strength for these women (Selwyn et al., 1989; Williams, 1990). Christ, Siegel, and Moynihan, (1988) suggest that some women infected with HIV decide to become pregnant and have children as a source of self-fulfillment. Gross, (1987) and Holman, et al (1989) provide evidence that within some subcultures, specifically African-Americans where pregnancy is an integral aspect of a woman's sense of self achievement, abortion is often not an option, while childbearing itself is important.

Levine and Dubler (1990), Jaccard, Wilson, and Radecki (1995), and Sunderland, Minkoff, Handte, Morose, and Landesman (1992) have noted that desire for children which leads to pregnancy and childbirth is an expression of self-esteem. Studies by Gerson (1980, 1986) suggest that her early childhood experiences, self-esteem and basic personality characteristics influence a woman's desire for children. Williams, (1990) found that self-esteem in "at risk" women is associated with a desire for children.

Research Questions

1. Is there a relationship among self-esteem, self-efficacy and desire for children among Black women with and without HIV?
2. After controlling for self-esteem, self-efficacy and relevant covariants [age, education, employment, income, abortions, children at home, how religious, committed relationship, and partners desire for children,]

does desire for children vary as a function of HIV status?

3. Do the following covariants: age, number of previous abortions, and strength of religious belief predict desire for children when holding self-esteem and self-efficacy constant?

Need for the Study

United States trend data reveal that heterosexual HIV transmission is the fastest growing mode of transmission among Black women as compared to any other gender or racial/ethnic group (Ward and Duchin, 1997-98). Among New Jersey's reported adult/adolescent female HIV/AIDS cases as of December 31, 1999, heterosexual contact represented 33% of the mode of transmission. This varied by race/ethnicity with 31% of the HIV/AIDS cases among Black women attributed to heterosexual contact. Injection drug use (51%) was reported most often among Black women as the mode of HIV transmission. Despite the discovery of triple therapy medications, nationally, AIDS has remained the leading cause of death for Black women between the ages of 25-35 in 1994, 1995 and 1996 (Project Inform, 1997). Therefore, studies that illuminate factors that may explain behaviors among this group of women are needed.

Maternal and infant mortality among Black women remains 2-3 times that of White women in the United States (Martin, Smith, Mathews, and Ventura, 1999). As early as 1993, Avery, Bentley, Holmes, Pena, and Thomas

acknowledged the importance of decreasing both morbidity and mortality among the general population of Black mothers and their infants. These authors call for the development of culturally competent social programs for Black American communities which would acknowledge and incorporate the importance of the cultural needs of African Americans. Studies that explain desire for children within this subculture can help with planning for more appropriate services, in particular those related to providing health care.

Public health officials view childbearing among HIV infected women in terms of what is best for society with the objective of reducing the spread of this lethal virus from mother to child (Arras, 1990). They recommend that women with HIV avoid pregnancy (CDC, 1985). Although more is now known about perinatal HIV transmission and that administration of ZDV can reduce perinatal HIV transmission (Connor, et al., 1994), the CDC has not modified the 1985 recommendation despite studies that have shown that pregnancy does not hasten the progression of HIV disease (Brettle, MacCallum & Johnson, 1992; Maynard, Oh, Indacochea & Peter, 1990; Selwyn, et al., 1989). Public health officials continue to recommend that HIV infected women avoid pregnancy due to perinatal HIV transmission rates of 4% to 7% when the mother takes antiretroviral medications (Barlett and Finkbeiner, 1998). These recommendations, directed toward women with HIV, do not appear to consider their needs nor attitudes toward the issue. Data describing the relationship between sense of self, HIV and desire for children within a sample of Black

women could be influential in helping to change the public perception that women with HIV should avoid pregnancy.

According to Pizzi (1992), most HIV infected women are poor and have little or no voice regarding health issues. They frequently receive inferior health and social services. Pizzi notes that most low income Black women who are infected with HIV are also heads of households and have low self-esteem. Understanding some of what motivates HIV-infected women to repeat pregnancy may help health care providers design more appropriate programs. Bradley-Springer's (1994) discussion about the need to examine how women make reproductive decisions becomes more imperative as the number of newly diagnosed HIV/AIDS cases continues to rise (CDC, 1999) particularly among Black women of childbearing age.

Instruments that measure intensity of desire for children have not been tested among HIV infected women. Concepts that are theoretically related to desire for children among subcultures of Black women need to be explored. Assessing reliability of measures for desire for children and self-efficacy among Black women with and without HIV can add important data about these measures. Gerson (1986) has found acceptable alpha levels among non-Black samples for the original Index of Parenthood Motivation, and the pilot study for this study suggested that a modified index of parenthood motivation can reliably measure desire for children among Black women without HIV infection. The present study provides additional reliability data for the MIPM

within a subgroup of Black women.

Measures of general self-efficacy have been found to be reliable, however gender and racial compositions of the samples for many studies have not been reported (Davis-Berman, 1990; Dvir, Eden, & Banjo, 1995; Mallinckrodt, Coble, & Gantt, 1995; Power, Sowers & Stevens, 1995; Sherer, et al., 1982; Tollett, & Thomas, 1995; and Wege & Moller, 1995). This study provides instrument reliability data in regard to Black women which is a priority among investigators that study populations drawn from minority groups.

CHAPTER II

THE RELATED LITERATURE

Desire for Children

Desire for children is a result of inner duality, which Wyatt (1967) describes as the need to be loved and the need to love. An individual who experiences this inner duality is more likely to want to have children. Wyatt notes that pregnancy is a time of psychological bliss; that is, pregnancy quenches the need to love and be loved, creating an incentive to have more children. In support of this position, Wyatt discusses the phenomenon in which the pregnant woman talks to her unborn child in what he defines as the woman in self-absorption.

Wyatt (1967) posits that many factors influence desire for children. Social and indigenous factors are closely interwoven and cannot be separated from the motives for reproduction. Wyatt also explains that men and women have children in order to continue themselves. This notion of lineage is coupled with the individual's needs, and is a part of cultural tradition transmitted from one generation to another.

Indigenous factors such as competence and mastery are related to desire for children. According to Wyatt (1967), the realization of accomplishments in

social roles influences desire for children. Wyatt suggests that mastery of a role has considerable importance when discussing the desire for children. While mindful that identity has different meanings to people in different times and in differing places Wyatt, claims that identity is also related to desire for children

Society and culture play an active role in shaping desire for children.

When society is not worried about overpopulation, desire for children is elementary for survival. However, when society cannot afford the care of a child, desire for a child may be considered immoral. Culture plays an active role in shaping desire for children. When families expect children, then individuals are more likely to have an increased desire for children (Wyatt, 1967). Trends in American childbearing had reflected the norm that people were expected to marry and have two children between 1950-1970, (Ryder, 1973). Recent data has shown however, that childbearing trends have changed, and vary according to race. Morgan and Rindfuss (1999) reported that for the past two decades non-marital childbearing has increased substantially especially among Black women. They attribute this pattern to historical experiences and argue that family and culture may explain racial differences. These authors do not, however provide data to support these claims. Nevertheless there are other authors that cite culture as an important influence on Black women's desire for children with empirical support for their claims. (Sowell and Misener, 1997).

Wyatt (1967) acknowledges that desire for a child varies among women

and within women as they pass through different phases of life. However, he declines to accept affluence and religious affiliation as psychological determinates of the wish for a child. In addition, Wyatt claims that, socio-economic status (SES) and religion seem to influence the number of children a couple may have. He does not, however, cite race or ethnicity specifically as having an influence.

In a sample of 184 predominately White (90%) unmarried, childless, female college undergraduates, Gerson (1980) found the following factors significantly correlated with desire for children: 1) perception of early childhood care--especially memories of loving behavior from the mother, 2) sexual role identity, and 3) feminist notions. Increased memories of good mothering were related to an increased desire for children ($r=.281$, $p<.0001$). The higher the femininity scores on the Bem Sex-Role Inventory (Bem and Watson, 1976), the stronger the desire for children ($r=.338$, $p<.001$). Bem and Watson (1976) defined sexual role identity as the extent to which a woman identified with masculine versus feminine traits. However, as feminism, measured by Dempewolff Feminism II Scale, Form B, (Dempewolff, 1972) increased, desire for children decreased ($r=-.342$, $p<.001$). Based on these findings, Gerson suggests that these women perceive having children as gratifying for both mother and child. She also explains that the inverse correlation of feminism to desire for children may be a result of the women's awareness of the difficulties in balancing career and childcare responsibilities.

In a later study, Gerson (1986) examined the influence of feminism on desire for children, using a convenience sample of 113 women and 75 men recruited from a large metropolitan health center and a large urban university. Ages ranged from 21-42, representing the stage in the life cycle during which childbearing occurs. Only ten percent were from minority groups; approximately half were married. Gerson found no difference in the degree of desire for children as measured by her Index of Parenthood Motivation, between women and men. Psychological variables such as: narcissism ($R^2=.31$, $p=.001$), self-esteem ($R^2=.43$, $p=.001$), and memories of father's love ($R^2=.176$, $p=.001$) accounted for greater variance in the women's desire for children than religious affiliation ($R^2=.36$, $p>.05$), socio-economic status ($R^2=.06$, $p>.05$), and the number of children in the family of origin ($R^2=.06$, $p>.05$). The negative relationship between narcissism and desire for children ($r=.45$, $p=.001$) in the female sample was discussed as a recent event in that women in the late 1980's had greater reproductive freedom than women in the past. Gerson concluded that women with lower in self-esteem, as measured by Rosenberg's 1965 Self-Esteem Scale, see motherhood as a method of compensating for their deficiencies and suggested that these women might believe that motherhood restores self-worth through serving the needs of others.

In summary, Gerson's findings on sexual role and feminist notions among a predominately White sample of undergraduate female college students lends support for Wyatt's (1967) postulate that there is a relationship between

sense of self and desire for children. In fact, findings from Gerson's (1986) study bolsters Wyatt's theoretical position that sense of self and desire for children are related and defines the direction of the relationship. Although not statistically significant, Gerson's (1986) study revealed an inverse relationship (r of -0.132 $p > .05$), between self-esteem and desire for children among the 113 females in the study. Gerson's reminder to family planning counselors that basic personality characteristics play a role in whether a woman will want to have children suggests a need for further research to identify predictors of desire for children.

Ahluwalia (1994) retrospectively examined pregnancy intention in a predominately Black (54%) sample of 1921 women at risk for HIV who participated in a National AIDS longitudinal demonstration and research project. Pregnancy intention was derived from questionnaire items examining intent to become pregnant in the next six months. Women at risk for HIV, who intended to become pregnant, were 3.5 times more likely to be pregnant within six months than those who did not intend to become pregnant. Ahluwalia's findings also indicated that age ($t=9.2$; $p < 0.05$), strength of religious belief ($OR=0.76$; 95% CI $0.62-0.94$), and race ($\chi^2=11.6$; $p < 0.05$) significantly predicted pregnancy intention. Younger, less religious, White women were more likely than older, more religious, Black women to have an intention to become pregnant. Pregnancy intention ($p < 0.05$), together with age ($p < 0.05$) and education ($p < 0.05$) significantly predicted women becoming pregnant

within six months. Older women (mean age ≥ 33) were less likely than younger women (mean age ≤ 29) to be pregnant at follow-up. Educated women (high school) were 1.8 times more likely than less educated women (less than high school) to be pregnant at the time of follow-up. Similar to Wyatt's (1967) postulates, in which culture influences desire for children, Ahluwalia's study demonstrated racial, religious and age differences. Moreover, Ahluwalia's conclusion that pregnancy intention and subsequent pregnancy decisions are influenced by contextual factors such as age and education may provide some information as to the antecedents of desire for children.

Pivnick's (1991) research provides some suggestion of a link between desire for children and drug use among HIV positive women. She examined the occurrence of 17 pregnancies among 14 HIV positive drug using women who knew they were HIV infected and had sufficient time to elect to terminate their pregnancies. Of the 14 women, one woman became pregnant on two occasions and a second was pregnant three times during the study.

Nine of the women terminated their pregnancies by elective abortion, four resulted in live births and the other four women, who were pregnant at the time of the interview, indicated their intention to carry to term. Pivnick found that these HIV infected pregnant women who had lived with at least one of their children for the child's entire life were more likely to terminate their pregnancies than HIV infected women who had been separated from their child. Pivnick noted that many drug-using women do not live with their child

for the entirety of the child's life due to foster care placement when the mother obtains drug treatment.

Analysis of the length of time the woman knew she was HIV positive, and prior abortions relative to each pregnancy, revealed that women who elect to terminate have had more abortions and more time knowing about her HIV status than women who chose to give birth (t test; $p=0.02$). Interview data revealed that many of the informants wanted to have someone of their own, and children were described as the mothers' possession. However, possession of their children was threatened by the authorities removing their children because of the mothers' drug use. Pivnick concluded that HIV infected drug using women become pregnant to replace children lost to foster care may explain some desire for children. Her summary which depicts the relationship between drug use and desire for children as a state of tension for many drug using women seems fair and rational. Moreover, Pivnick's view which rejects pregnancies among drug using women as a result of denial about being HIV infected is consistent with her claims that the repeat pregnancies symbolize the woman's ability to achieve the replacement of children lost to foster care.

Kline, Stickler and Kempf (1995) measured length of time knowing HIV status in years, and found that the likelihood of pregnancy significantly increases with the length of time from positive diagnosis. Kline et al. explained that this is due to time itself, in that as time passes, greater opportunity for pregnancy occurs. Their empirically based discussion noted that a woman

choosing to bear a child rather than just becoming pregnant may decrease with time due to increased clinical symptomatology. Multiple health problems were significantly ($p < .01$) associated with the continuation of pregnancy among their sample of 49 women. In a two-year follow-up on 49 of 55 women who became pregnant after knowing they were HIV positive, the authors discovered that women ($n=64\%$) with good health were more likely to carry a pregnancy to term, than women ($n=31\%$) with more health problems.

Similar to Ahluwalia's (1994) study of pregnancy among 238 predominately Black (54%) women with HIV infection, Kline et al. found that women who became pregnant were younger, less educated and more sexually active than women who were not pregnant. Their data also suggested that women who became pregnant report more previous pregnancies, abortions, used less contraception and their partners were also perceived as having desire for children.

Years since diagnosis also significantly ($p < 0.01$) predicted pregnancy. Finally, similar to Pivnick's (1991) finding that women who elected to carry the pregnancy to term had few previous abortions, women ($n=25$) in Kline and associates' study who had not had a previous abortion were more likely to carry the pregnancy to term. Contrary to Ahluwalia (1994), neither reproductive intention nor partner's desire for children were significant indicators of continuing pregnancy to term. This may be due, in part, to the difference between the ways the investigators obtained the data.

Knowledge of HIV infection does not appear to have a clear impact on a woman's choice to avoid or terminate pregnancy (Barbacci, Chaisson, Anderson, & Horn, 1989). Barbacci and his associates described pregnancy decisions in a study of 89 mostly Black (80%) HIV infected women whose mean age was 25, who were attending a hospital clinic. Of the thirty-six women who discovered they were HIV positive during pregnancy, seven chose to continue the pregnancy while the option of aborting was available. Fourteen women became pregnant while knowing they were HIV positive; none used any form of contraceptive. Barbacci et al. conclusion that knowledge of HIV infection was not associated with pregnancy termination or the prevention of subsequent pregnancies needs further investigation to determine whether desire for children is relative to HIV status.

Sunderland, Moroso, Holman, Berthaud, Mendez, and Landesman (1989) also concluded that HIV does not have a clear impact on reproductive decision making. However, these author did not study desire for children in their sample of 347 pregnant women which was divided into two groups; Group one consisted of women who learned their HIV status either negative or positive while abortion was still an option and Group two consisted of women who knew their HIV status either negative or positive prior to pregnancy. There were 82 HIV positive women in Group one and 80 HIV positive women in Group two. In Group one four or 11% of the sero-positive women chose abortions compared to only one of the sero-negative women. These findings

were not statistically significant ($p=0.2$).

Among the women in Group two, 24 or 27% of the HIV negative women had one or more pregnancies during the study, and 15 or 19% of the HIV positive women were pregnant at least once during the study. There were no statistically significant differences ($p=0.2$) between the HIV negative 27% and HIV positive 19% women in Group-two. Trends in the percentages of women who became pregnant and those who chose not to terminate the pregnancies suggest to the investigators that HIV status is related to pregnancy choice. However, the authors concluded that HIV infection did not have a clear impact on reproductive decisions. The issue of the desire for children and an increased sample size may have lead the authors to different conclusions.

Johnstone et al., (1990) studied women's knowledge of their HIV antibody status and its effect on their decision whether to continue a pregnancy. Similar to studies by Barbacci et al. (1989) and Sunderland et al. (1989), Johnstone et al. (1990) compared decisions about pregnancy between HIV infected versus non HIV infected women and found no statistically significant ($p=0.2$) difference. Although the authors did not specifically measure desire for children, they concluded that the desire to have a baby overrode all other considerations among their sample of 163 pregnancies -- 69 of which were HIV-positive women. This conclusion was drawn from the fact that 38 HIV positive women stated desire to have a child as the reason to continue the pregnancy.

Selwyn et al. (1989) also examined decisions to continue pregnancy among HIV negative and HIV positive injection drug using women who were aware of their HIV status prior to 24 weeks gestation. In their sample of 28 HIV positive and 36 HIV negative women, a structured interview revealed that infected women that aborted the pregnancy cited risk of transmission as the major reason for the termination. Infected women who chose to continue the pregnancy cited desire for the child, religious beliefs and family pressure as the most important factors in their decision. Fourteen (50%) of the 28 HIV infected women and 16 (44%) of the 36 HIV negative women chose to terminate their pregnancies (OR=1.3, $p=.80$). The non-statistically significant 1.3 odds ratio may have been due in part to the sample size, or the authors methodology which mixed qualitative interviews with quantitative data analysis (odds ratios) while the concept desire for children was not well defined and/or measured.

In a summary of qualitative findings, Williams (1990) reported that children are central to a woman's self-image. Content analysis was used to examine the results of 21 semi-structured interviews with women who had a personal history of drug use or who were sexual partners of drug users. Five of the women knew they were HIV infected, 8 knew they were HIV negative and the other 13 had not been tested or chose not to share their HIV test results.

Williams' (1990) findings demonstrate the dilemma some women encounters when they are infected with HIV and the findings radiate some light

on a woman's desire for children. Women in this study voiced strong opposition to women with HIV having children. They felt that abortion was the appropriate and unselfish thing to do, based on their conviction that perinatal HIV transmission was a certainty. However, women in Williams' study described children as central to their lives, giving them strength, and the only people they spend significant time with. Children were their greatest and sometimes only source of strength. Their child provided a reason for them to stay strong.

Williams (1990) concluded that the women in the study had a strong desire for children, took pride in mothering behaviors but felt guilt about the possibility of transmitting HIV to their unborn children. Similar to Gerson's (1983) operational definition of desire for children, Williams equated the valuing of motherhood with desire for children. Williams' informants, however, did not express desire, or intention to become pregnant nor were any of them pregnant at the time they expressed their perception of the childbearing role for women with HIV.

Self esteem

Self-esteem refers to the personal evaluation of self worth (Rosenberg, 1965; Coopersmith, 1967; Rosenberg & Kaplan, 1982 and Wylie, 1968). Self-esteem is influenced by perception of how one is treated by others and the internalization of that treatment (Rosenberg, 1986). Self-esteem develops as a

child grows and interacts with others (Coopersmith, 1967; Rosenberg & Kaplan, 1982). Self-esteem is a major variable that explains and predicts behavior (Rosenberg, 1979; Wells & Marwell, 1976).

The concept of self-esteem is derived from self-theory. Theory of self is based on an Euro-American view that has historically depicted a negative view of Black Americans (Cross, 1971). A basic assumption of self-theory is the need to value oneself and be valued by others, which lead to the common belief in the forties and fifties that Blacks suffered from low self-esteem. By the sixties, it was believed that Blacks had at least as much self-esteem as Whites (Rosenberg, 1986).

Recent literature provides empirical support (Nyamathi, 1991; Belgrave, 1991) for the notion that previous conceptualizations of self-esteem are adequate to measure this phenomenon among Black women in the nineties. The literature also provides findings that suggest that self-esteem is a salient concept among ethnic minority groups, specifically Black women (hooks, 1993; and Villarosa, 1994).

Modern authors have conceptualized self-esteem as the individual's sense of self worth or value. Specifically, hooks (1993) described positive self-esteem as an important factor with a positive influence on Black women' health. She defined self-esteem as a Black woman's positive or negative attitude toward herself.

Villarosa (1994) defined self-esteem as one of two components that

make up self-image. Self-esteem is the valuing of one's self in relationship to others. The second component of self-image according to Villarosa, is self-efficacy or the belief that one can achieve and accomplish.

Villarosa (1994) attaches racial identity to both self-esteem and self-efficacy. Citing studies by Powell (1986) and Spencer, Cole, DuPree, and Glymph (1993), Villarosa asserts that the experience of being Black has an impact upon self-image. Being Black, according to Villarosa, can have either a positive or a negative effect on one's self-image. A Black woman could have high self-esteem, or believe that she is valuable and still have low self-efficacy and believe that she cannot accomplish. The opposite can also occur; a Black woman can have high self-efficacy or believe that she is highly accomplished and successful, and low self-esteem ie have little connection to African or Black pride. However, Villarosa did not report any empirical tests of these assertions.

Villarosa (1994) claims that poor self-image, a combination of low self-esteem and low self-efficacy, leads to depression, substance abuse, unemployment, sexually transmitted diseases, and participants in abusive/non-supportive relationships. Villarosa speculated that social factors such as music, television and movies have a strong influence on how people view Black women and how Black women value themselves. Images that are labeled as beautiful by majority groups in society may discourage Black women from seeing themselves as beautiful, fostering self-hate.

The concept of self-esteem as defined by Rosenberg (1965), Coopersmith (1967), Rosenberg and Kaplan (1982), and Wylie (1968) is congruent with hooks (1993) and Villarosa's (1994) conceptualization of self-esteem. Conceptual definitions of self-esteem appear to be the same for Blacks in the 1990's as they were for Whites in the 1960's. Rosenberg, (1965) conceptualized self-esteem as a persons sense of self-worth, and Villarosa (1994) defined self-esteem as a positive or negative feeling about one self. Self-esteem is a salient concept among Black women today.

Empirical findings have suggested that self-esteem may be related to childbearing. However, findings are contradictory. Gerson's 1986 findings which showed that women with low self-esteem look to motherhood to restore self-worth, seem to conflict with her 1980 findings that not all women need to have children in order to have a positive sense of self. The 1986 study showed that self-esteem accounted for a significant portion of desire for child ($\beta = .10$, $p < .001$) and had a negative correlation with desire for children ($R = -.66$, $p = .001$). Desire for children was measured by the Index of Parenthood Motivation. The 1980 study did not support the hypothesis that women with higher femininity scores would consider childbearing essential to their identity ($r = .04$).

Hutchinson and Kurth's (1991) qualitative study found that motherhood was a source of self-esteem for their participants. Their study provided an understanding of responses to pregnancy among 11 women with HIV who

confirmed their pregnancy and learned their HIV status before 24 weeks gestation. Eight of the women were Black, 2 were White and 1 was Latina. Three terminated their pregnancy, and 8 carried to term.

Hutchinson and Kurth (1991) identified several themes associated with termination of pregnancy, including desire to avoid HIV infection for the child, utilization of directive counseling in the form of being told to abort the pregnancy by a health care provider, and prior experience with waiting for a child to serorevert. The themes associated with carrying the pregnancy to term included desire for children, and religious faith. The authors characterized these women as having an overriding ethical principle to "take care of the child", whereas those women who aborted thought it best to spare the child from HIV infection. Women who gave birth spared the child from suffering during an abortion.

Noteworthy among the findings, was the theme of self. These investigators concluded that HIV infection poses an enormous threat to a woman's sense of self in that motherhood is viewed as a source of self-esteem. They explained that reproductive capability can be empowering and that each woman's perception of herself as a reproducer/mother is shaped by psychology, culture, class and race. Hutchinson and Kurth note that the women who participated in their study felt that they were able to survive their own lives because of their focus on the lives of their children. Motherhood was seen not only as a source of identity, but also as a reason for living.

A study by Nyamathi (1991) provides support for the notion that self-esteem influences behavior. Her study examined the relationship of resources to emotional distress and high-risk behaviors among homeless minority women recovering from drug abuse. Resources were operationalized as self-esteem measured by the Coopersmith's (1967) Self-Esteem Inventory, coherence measured by Antonovsky's (1987) abbreviated 13-item Coherence Questionnaire, and support measured by a Social Support Scale developed by Zich and Temoshok in 1987. Self-esteem was negatively related to emotional distress ($p=0.0001$). Participants with increased self-esteem scores had decreased emotional distress scores. Zero order correlations showed significant inverse relations between self-esteem and self reported high risk behaviors such as drug use, unprotected sex, and sex with an IV drug user ($r=-.24$, $p<.001$).

Hoffman and Hale-Benson (1987) examined the relationship between self-esteem and the choice to be a housewife or work outside the home. In a random sample of 101 married, college educated Black women who were married to professional men and had at least one child, Hoffman and Hale-Benson found that the respondents scored high on Rosenberg's (1965) Self-Esteem Scale. Statistical analysis of the scores using a one-tailed t test showed a significant difference in self-esteem among the respondents. Women who had chosen to stay at home possessed lower self-esteem than women employed outside the home ($p = .035$). The authors discussed the point that both groups of women had high scores on the RSE, $M=8.8$ for homemakers and $M=9.4$ for

women employed outside the home. The difference between scores may have been due in part to a "ceiling effect" of the scale, which was the scales inability to detect differences at that level. Their recommendation for further research may produce clearer understanding of the relationship between self-esteem and employment for Black women.

Coleman, et al. (1987) found that employment and family income were significant predictors of self-esteem among a sample of 451 Black women. A significant regression accounted for approximately 10% of variance in self-esteem among the age groups, middle aged (age 40-64) ($F[6,443]=6.96$, $p<.001$) and older women (age 65-101) ($F[6,207]=3.29$, $p<.001$). Working for money at least 20 hours per week was a predictor of higher self-esteem for the sub-set of 215 older Black women.

Self-efficacy

According to Bandura (1989), a person must believe in their own ability to carry out a behavior in order to maintain the behaviors in their repertoire. In other words, a woman must have a sense that she has the ability to practice behaviors that will produce expected outcomes.

From a social learning perspective, Bandura (1977) describes how performance accomplishments, vicarious experiences, verbal persuasion and physiological states unite to form sources of self-efficacy. Performance accomplishments, based on personal mastery, are especially influential.

Success raises levels of mastery. After numerous successes, the negative impact of occasional failures is reduced (Bandura, 1977). Once established, enhanced self-efficacy generalizes to other situations. Thus, Bandura remarks that increased self-efficacy gained via mastery of a specific area can increase perception of ability to succeed in other areas. Simply stated, people attempt to do what they believe they can do.

Bandura (1977) explains that individuals process diverse sources of information regarding their capabilities, and therefore regulate their choice of behavior accordingly. Thus, Bandura claims that expectations concerning mastery influence choice and goal-directed actions. The perceived ability to achieve certain outcomes is essential to behavior.

Maddux (1995) also conceptualized the "I can do" phenomenon similar to that described by Wyatt (1967). He theorized that beliefs about mastery and personal effectiveness are important aspects of self-esteem. However, Maddux did not equate self-esteem with self-efficacy. In fact he makes the distinction that unlike self-esteem, self-efficacy is not a personality trait, but is relative to a specific behavior in a specific situation. Notwithstanding the difference in self-esteem and self-efficacy, Maddux posits that if one's sense of "I can do" is high, then the person will have increased self-esteem. According to Maddux, judgements of low self-efficacy will yield low self-esteem however, in order for self-efficacy to influence self-esteem, self-efficacy must be valued. Maddux did not cite any empirical findings for these postulates.

Falck, Siegal, Wang, and Carlson (1995) found that perceived self-efficacy as measured by two items used to operationalize a dimension of the health belief model was significantly ($r=.28$, $p,<0.01$) related to safer injection practices in a sample of 118 active intravenous drug users (72% Black, and 33% White). Conceptualized as one of the dimensions within Rosenstock's (1966) health belief model, perceived self-efficacy regarding needle sharing was measured using two items. Although the Cronbach alpha was .51 for the two items, the significant positive correlation ($r=.28$, $p,<.01$) lends support for the idea that self-efficacy is related to behavior.

Compatible with Bandura's theory that perceived ability influences actions, the intravenous drug using study participants with high self-efficacy scores engaged in safer injection practices. Falck et al's (1995) findings highlight the salience of self-efficacy relative to HIV risk behaviors among Blacks.

Sikkema and his associates (1995) obtained significant ($p<.001$) differences in perceived self-efficacy as measured by seven items designed to elicit confidence levels in implementing behaviors in a largely (78%) Black sample of 148 low income women at either high or low risk for HIV infection. The low risk group reported more efficacious beliefs about their ability to refuse sex with men who would not use condoms. They were also more likely to use condoms, and had stronger intention to insist on condom use regardless of their partner's resistance than those in the high-risk group. Sikkema et al.

concluded that whether one will act on a desire may be related to perception of self-efficacy.

Morrison, Gillmore and Baker's (1995) longitudinal study examined self-efficacy, type of sexual partner (casual or steady) and intention to use condoms in a sample of 561 heterosexual Black (45%) and White (55%) males (n=266) and females (n=295). Self-efficacy which was measured by rating their ability to use condoms in 10 specific situations, i.e. "if condoms were handy when we had sex", on a 7-point scale predicted intention to use condoms with steady partners. The stepwise regression revealed that self-efficacy, in the 3rd step, increased R to .680 of R² change (1,269)=8.39, p<.05. Morrison and colleagues concluded that for those with steady sexual partners, prediction of condom used is improved with self-efficacy.

In summary, this chapter provides a foundation for the research questions which were developed using a postulate from the symbolic interaction model. That is, sense of self, has an impact upon a woman's ability to perform roles according to social and self-imposed standards, which in turn influence her desire for children. Essentially, a frame of reference for understanding how humans view themselves relative to others, the symbolic interaction model provides a theoretical explanation of how these relationships influence behavior. According to Wyatt (1967) desire for children is an interactive process which stems, in part, from cultural and social standards, and as shown in most recent American childbearing data trends, Black women are

more likely than White women to have children regardless of their marital status (Morgan and Rindfuss, 1999). Black women also represent a large segment of New Jersey's HIV infected population; within this subculture, a woman is not complete until she is a mother (Sunderland, 1990; Sowell and Misener, 1997). Moreover, investigators have noted that motherhood is a source of self-esteem for HIV infected Black women (Williams, 1990) and childbearing represents a sense of accomplishment (Christ, Siegel and Moynihan, 1988).

CHAPTER III

METHOD

Design

This investigation utilized a comparative analysis design to examine the relations among self-esteem, self-efficacy, and desire for children among Black women with HIV infection and without HIV infection.

Sample

The initial sample consisted of 108 Black women of whom, 58 were HIV positive and 50 were HIV negative. Data for 10 of the original participants (6 positive, and 4 negative) was removed because of a response bias in which they marked 'strongly agreed' to all of the items for all of the instruments. Therefore, data from 98 of the participants were analyzed.

Tabachnick and Fidell (1989) advocate 20 participants for each independent variable per group, warning that studies with less than 100 participants have low power. In addition, power analysis procedures described by Polit and Hungler, (1995) suggest forty-four participants are adequate to detect a significant difference between two group means. Cohen (1988) notes

that power analysis reduces the risk of Type II errors, and/or estimating their occurrence, that is wrongly accepting a false null hypothesis. According to Cohen the following must be specified to determine the sample size: (1) the level of significance, (2) the population effect size and (3) probability of obtaining a significant result. Based on Cohen's, description of the relationship between power, effect size and level of significance, the following limits were set to determine a sample size needed to conduct correlational and regression analyses: a power of .80, a moderate to large effect size of .65, and a level of significance at .05. Specifically, using preliminary data (the first 26 cases) from this study, the effect size was calculated by determining the difference between the group means -- HIV positive and HIV negative -- , then dividing the differences by their pooled standard deviations. Given the following scores on the three instruments: desire for children (DFC) mean score difference 51-45 divided by 10 =.60, general self-efficacy (GSE) 70-60 divided by 14 =.70, and self-esteem (RSE) 33-29 divided by 6 =.66 the sample size chart for two groups (Polit and Hungler, 1995) indicated an N of 44 was needed per group for a two-tailed test of differences of two means with an effect size of .65, an alpha at .05 and a power of .80.

Data Collection Procedure

Participants were recruited from one inner city community-based health care center starting the second week in July, 1999. A letter (Appendix A) was sent to the President/CEO of the Health Center asking that the recruitment flyer (Appendix B) be posted in the waiting room of the clinic. The CEO/President was also asked to mention the study during staff meetings thereby alerting the clinicians to the study. A copy of the letter was shared with the Director of Nursing and the Medical Director. These persons in turn notified Head Nurses, and Medical Section Chairs who notified the staff members of the study.

Both HIV infected and uninfected women were informed about the study via posters and by the health center staff. Persons interested in the study were directed to speak with specific staff members regarding study participation. Eligibility criteria were based on self reporting of HIV tests results whether negative or positive. Adult women of childbearing age were considered eligible due to the expected desire for children during this developmental phase of adulthood (Murray and Zentner, 1985). Given the high incidence of HIV among Black women in New Jersey, women of African descent were recruited for this study (New Jersey HIV/AIDS Cases, 2000). To ensure that the participants were willing to participate, and that they understood what was being asked of them, the ability to provide informed consent, speak

and read English, and willingness to complete 4 questionnaires were also part of eligibility criteria (see Appendix C).

Once approached, health center staff asked eligible women to sign a human subjects review committee approved consent form (see Appendix D). Upon completing all four self-administered questionnaires participants received a \$5.00 incentive to cover the cost of transportation to and from the clinic. When several women approached a staff member simultaneously they were taken, one at a time, to a private office to obtain written informed consent, and when and if they agreed, they were directed to complete the questionnaires at the conference room table located in the clinic. Those women not interested in completing the questionnaire at the conference room table, were given access to a private setting.

All participants joined the study voluntarily. Approximately 130 women expressed interest in participating by the end of October 1999, however 22 were excluded because they did not meet age and race/ethnicity inclusion criteria. The volunteer convenience sample for the present study consisted of 108 women.

Because of the possibility of selection bias, 20 charts (11 HIV positive and 9 HIV negative) were reviewed by health center staff for women who did not express an interest in participation. The investigator did not have access to

any individual patient data. Blinded aggregate data was shared with the investigator and are displayed in table 1.

The data revealed that mean age, education and employment were similar for those that expressed interest and those who did not participate. Comparable to that of study participants, the HIV infected non-study participants were older, and far less likely to be employed.

Table 1
Comparison Between Study Participants and Non-participants attending clinic by employment, age and education

	Study Participants		Non-Study Participants	
	HIV+	HIV-	HIV+	HIV-
mean age	34	31	35	33
mean education	12	13	12	12
percent employed	31%	72%	30%	65%

Instruments

Index of Parenthood Motivation

Gerson (1983) developed the Index of Parenthood Motivation (IPM) to measure intensity of desire to have children. The IPM consists of six components of desire to have children (82-items) as put forth by Wyatt (1967).

Those components are: (1) eagerness to have children, (2) childbearing/childrearing relative to other adult activities, (3) allure of various childrearing stages, (4) motivation in consideration of difficulties of pregnancy and childrearing, (5) parenthood role conflict, and (6) the cost/benefit of having children. Form a list of adult activities such as travel, child raising, business and art, participants are also asked to rank which activities are most valuable.

Convergent validity was reported for two predominately White samples: Ss 1= 184 unmarried female undergraduate students, Ss 2 = 113 women and 75 men whose mean age was 29 and mean income level was \$30,000 (Gerson, 1983). Gerson reported significant positive correlations between IPM scores and the memory of father as nurturing in early childhood among sample one ($r=.16$; $p<.05$) and sample two ($r=.17$; $p<.05$).

Perceived happiness during early family life was significantly correlated with desire for children as measured by the IPM in both samples (Ss 1: $r=.20$, $p<.01$; Ss 2: $r=.16$, $p<.05$). These items, nurturing father and happiness during early family life, were chosen based on theoretical speculations that positive nurturing in early childhood development is important relative to desire for children.

Reliability of the instrument was determined by Cronbach's alpha to be .85 in these early studies. The average intercorrelation between the six components was .49 (Gerson, 1980), indicating similarity of the components.

Total score was determined by summing scores on components 3, 4, 5, and 6 plus the individual ranking of components 1 and 2. The higher the total scores the greater the desire for children.

The participants within Gerson's (1980, 1983, and 1986) studies differ from those in this current research. Gerson studied predominately White female college students while this study focused on Black women some of whom had less than a high school education. Therefore, the instrument was modified to more accurately reflect the group to be studied.

Modified Index of Parenthood Motivation

The Modified Index of Parenthood Motivation (MIPM) was derived from Gerson's (1983) Index of Parenthood Motivation (IPM) to create a summated rating index that would produce good psychometric qualities among Black women. According to Spector (1992) a vital step in the development of an index or scale is the conceptual task of defining the construct. Gerson's (1983) IPM, based on inductive reasoning, clearly defines the construct desire for children and guided the development of the subsequent MIPM. This 14-item self-report pencil and paper instrument was designed to assess the intensity of desire to have children among Black women in a straightforward and inexpensive manner. Items which are easy to read and comprehend are set in a 5-point Likert type scale, (see Appendix E) and can be completed quickly.

The items were chosen from the six components of Gerson's original index that indicates the intensity of desire to have a child. However, not all six components are represented on the MIPM. The component that ranks the comparison of childbearing/childrearing to other adult activities was omitted from the MIPM for two reasons. First, the 10 adult activities listed in the original IPM are not salient among low-income Black women, some of the items listed were foreign travel, research, political activities and business. Second, Gerson's method of scoring this component only included the rank given to child raising in terms of the participants personal interest in pursuing it. This component asked participants to rank 10 adult activities from 1 (the highest) to 10 (the lowest) in terms of A) their value to society, B) their requiring individual creativity, and C) the participants personal interest in pursuing them.

According to Babbie (1990), criteria for selecting items for an index should be logically valid. Therefore, face validity was established by selecting items from the IPM that on face value indicate the respondent's desire to have children. An example of one such item follows: *I want children more than anything*. Next, the creation of a composite measure was considered, consequently, the MIPM represents a unidimensional index. In selecting items from the IPM, the amount of variance provided by each item was considered. Extreme items which indicate that no one or everyone had desire for children

were not selected from the IPM. According to Babbie, extreme items are not very useful in the creation of an index. However, to assure that some degree of variance was maintained, items were created that divided respondents equally, for example, items one (1) and two (2) on the MIPM are antithetical to one another (Appendix E). Moreover, half of the items on the MIPM express desire for children, while the other half convey a lack of desire for children.

Scores to specific responses were created to produce a single composite index out of the fourteen (14) items. According to Babbie (1990), Likert scaling represents a systematic method of index construction in which individual responses are scored and then summed. Because identical response categories were used for all the items, each item was scored in a uniform manner. The MIPM utilizes a five response category, scores 1 to 5, taking into account the direction of the item (for example, assign a score of 5 for both strongly agree, for affirmative items, and strongly disagree for negative items).

Scores on the modified index range from 14 - 70; the higher the score, the greater the desire for children. Based on the Gerson's original index, reverse scoring was used for the seven items indicating lack of desire for children (i.e.; strongly disagree = 1 for the statement "I don't want children at all" and 5 for the statements indicating lack of desire for children).

Since the MIPM was developed for this study, reliability estimates among minority women have not been reported prior, therefore they were

calculated in the present study. An alpha of .70 or greater indicates that the items are internally consistent at an acceptable level (Frankfort-Nachmias & Nachmias, 1992).

The MIPM had a reliability alpha coefficient of .765 among the pilot study of 31 participants. The MIPM had a normal distribution with a skewness of -.609 for the present study. Within the data analysis of the 98 women the alpha coefficient was .792, among the HIV infected women the alpha coefficient was .827 and among the HIV negative women the alpha was .721.

Gerson (1983) reported an .85 alpha coefficient for the original IPM in a sample of predominantly White college educated middle class women who had no children, indicating the extent to which the instrument yields the same results on repeated measures.

Content validity of the MIPM was determined by a panel of three judges who were employed at a large University Hospital. The panel of judges had experience providing health care for Black women from an inner city environment. According to members of the panel, the MIPM items are representative of the intended content domain. All three judges agreed that the scope of items reflect the concept under consideration. Thirty-one participants, all of whom were Black women with at least one child, were recruited from an inner-city health care center for pilot study agreed that items on the MIPM are salient concepts within the Black community, and comprise the domain of

desire for children. Gerson reviewed the revised instrument and no further revisions were recommended (Telephone conversation, 1996).

Self-Efficacy

The Self-Efficacy Scale was designed to measure general expectations of self in task-related and social domains (Sherer, et al., 1982). The Self-Efficacy Scale consists of two subscales: General Self-Efficacy (GSE: Appendix F) and Social Self-Efficacy. Respondents indicate how certain they are about their ability on each of 23 items, by rating each item on a 5-point Likert scale from strongly disagree to strongly agree. Factor analysis indicated 17 items accounted for 26.5% of the total variance in Factor 1 among 376 students (Sherer, et al., 1982). Since the focus of this current study was to measure the participants perception of their ability to achieve, and not a woman's efficacy expectancies in social situations, only the 17 items of the GSE Subscale were used. Items on the GSE Subscale focus on three areas: willingness to initiate behavior, willingness to put forth effort to complete a task, and persistence in the face of adversity.

Scores of the GSE subscale were used to assess construct validity. Sherer, et al., (1982) found GSE scores to be significantly ($p < .0001$) correlated with measures on six other personality scales in a sample of 376 students. The following observed variables were used as indicators of general self-efficacy:

the Marlowe-Crowne Social Desirability Scale ($r=.43$) (Crowne & Marlowe, 1964), the Ego Strength Scale ($r=.20$) (Barron, 1953), the Interpersonal Competency Scale ($r=.45$) (Holland & Baird, 1968), the Internal-External Control Scale ($r=-.28$) (Rotter, 1966), and the Personal Control Subscale of the I-ES ($r=-.35$) (Gurin, Gurin, Lao, & Beattie, 1969). Moderate predictive correlations in the appropriate direction were obtained between these instruments and both Self-Efficacy subscales. A moderate positive correlation between the Marlowe-Crowne Social Desirability Scale and the Self-efficacy Scale, was expected because belief in one's ability to perform tasks is likely to be seen by others as a positive characteristic. Persons who are determined, persistent, and effective socially, score high on the Ego Strength Scale, therefore a positive correlation was expected between the Ego Strength Scale and the Self-Efficacy Scale. The Interpersonal Competency Scale (ICS) measures personal effectiveness, which is the person's ability to deal with others. The ICS also tabs into global positive mental health and therefore a positive correlation was expected between this and the Self-Efficacy scale (Sherer, et al., 1982).

The extent to which one believes that one controls one's life was measured by the Internal-External Control Scale (I-ES) and the Personal Control Subscale of the I-ES. Since low scores on these scales represent internal orientation, which according to Bandura (1989), persons with internal

locus of control have high self-efficacy, it was expected that both scales would have moderate negative correlations with the Self-Efficacy Scale.

Woodruff and Cashman (1993) reported construct validity by comparing the Rosenberg Self-Esteem Scale ($r = -.539$), and the Mastery Scale ($r = .540$) with the General Self-Efficacy Subscale. They also reported evidence of criterion validity by using data on employment and military rank for 150 subjects in a VA hospital. Participants with significantly higher self-efficacy scores set higher goals for themselves in vocational and military areas.

A Cronbach's alpha reliability coefficient of .86 was obtained for the General Self-Efficacy (Sherer, et al., 1982). Acceptable levels of reliability have also been reported in other studies; .85 (Niles and Sowa, 1992), .86 (Ferrari, and Parker, 1992), .84 (Woodruff and Cashman, 1993), .89 (Eden and Aviram, 1993), .86 (May and Sowa, 1994).

Studies using the GSE have reported neither racial composition nor gender of their samples (Davis-Berman, 1990; Dvir, Eden, & Banjo, 1995; Mallinckrodt, Coble, & Gantt, 1995; Power, Sowers & Stevens, 1995; Sherer, et al., 1982; Tollett, & Thomas, 1995; and Wege & Moller, 1995). Studies in which the majority (>50%) of subjects were women include those by Davis-Berman, 1990; Dvir, Eden, & Banjo, 1995; Mallinckrodt, Coble, & Gantt, 1995; and Power, Sowers & Stevens, 1995.

In the pilot study for this current investigation a reliability alpha coefficient of .89 was found among the scores of 31 Black women. Scores for the GSE range from 17 to 85, with low scores indicating low perceived self-efficacy.

The GSE Subscale was normally distributed with a skewness of -.726 for the present study. Within the analysis of the 98 women the alpha coefficient was .891; among the HIV infected it was .888 and the HIV negative women had results with an alpha of .878.

Self-Esteem

The Rosenberg Self-Esteem Scale (RSE) is a Guttman-type scale designed to measure global self-esteem which is conceptualized as an aspect of self-concept (Rosenberg, 1965). The 10 items are written and scaled for: 1) ease of administration, 2) economy, 3) unidimensionality, and 4) face validity; the items reflect an attitude toward oneself in an open, direct manner on a continuum from favorable to unfavorable (see Appendix G).

Rosenberg (1965) evaluated the items as logically congruent with the conceptual definition and so established face validity. In a sample of 929 urban Canadian students, grades nine to 12, Byrne (1983) found that the RSE was intercorrelated with the General Self Subscale (Coopersmith, 1967), the School-Academic Subscale (Coopersmith, 1967) and the Self-Concept of

Ability Scale (Brookover, 1962). Among this group of students, in each matrix, the discriminant validity coefficient for self-esteem exceeded all the other correlations in the matrix. In the first matrix, the discriminant validity coefficient was .58, while the other validity coefficients in the matrix ranged from .35 to .46. In the second matrix, the discriminant validity coefficient was .60, while other coefficients ranged from .37 to .42. Evidence of discriminant validity exists when the correlations between two measures of the same construct are greater than the correlation between measures of different constructs (Pedhazur & Schmelkin, 1991). Bryne and Shavelson (1986) also found a convergent validity coefficient of .79 for the RSE with the General Self-Concept of Self Descriptive Questionnaire III, and a convergent validity coefficient of .64 with the Self-Concept subscale of the Affective Perception Inventory in a sample of 991 urban Canadian mostly male 11th and 12th graders. Demo (1985) reported convergent validity coefficients of .55 and .65 for the RSE with Coopersmith's Self-Esteem Inventory in a Caucasian sample of male and female adolescents. O'Brien (1985) reported a convergent validity coefficient of .82 for the RSE with Eagly's version of the Janis-Field Feeling of Inadequacy scale in a sample of female undergraduate students. Race was not reported in any of the above cited studies.

A Cronbach's alpha reliability coefficient of .77 was reported in a study of 5024 New York State high school students which found the RSE to be

unidimensional (Rosenberg, 1965). Schmitt and Bedeian (1982) reported an alpha coefficient of .83 in a sample of 873 (14% non-White) civil servants; Orme, Reis and Herz (1986) reported an alpha coefficient of .80 in a sample of 116 parents (89% women, 46% Black). Two-week interval test-retest reliability was .85 in a sample of 28 college students, race not reported, (Silber and Tippett, 1965).

Studies in which the participants were predominately Black women have reported alpha reliability coefficients greater than .70 (Belgrave, 1991; Coleman, et al., 1987; Jacques, 1976; Reis and Herz, 1986; Tashakkori and Thompson, 1992). The pilot study of this present investigation found a Cronbach alpha of .63 within a sample of 31 low income Black women. The RSE had a normal distribution with a skewness of -.605 for the present study. Analysis within the sample of 98 women revealed an alpha coefficient of .848, among the HIV infected women, it was .860 and the HIV negative women had scores in which the alpha was .791.

Using four response categories, the scores for the RSE range from 10 - 40. Items 2, 5, 6, 8, and 9 are reverse scored. Scoring interpretation is based on the higher the score, the higher self-esteem.

Pertinent Demographic Information

A demographic information inventory (see Appendix H) was utilized to collect demographic information from the participants and also selected relevant data based on reported findings from the literature. Included in the questionnaire were Ahluwalia (1994), and Kline et al. (1995) report that women who intended to become pregnant were younger and less educated than women who did not intend pregnancy. Consequently, age and education were added to the information sheet. Hoffman and Hale-Benson (1987) found that employment was associated with improved self-esteem, therefore employment was deemed relevant. Wyatt (1967) posited that income and religious affiliation influence desire for children, hence data about income and religious affiliation are among the demographic items. Length of time knowing HIV status and the partners' desire for children were added to the sheet since Kline and his associates (1995) reported that they predict pregnancy. Pivnick's (1991) study revealed that the number of children living with a woman influences her desire for children, ergo the item 'how many of your children live with you at home?'.

CHAPTER IV

RESULTS

Data Analysis

Data analysis was conducted using SPSS for Windows Version 8.0 (SPSS Inc., 1997). Frequency distributions examined the data for outliers and evidence of normal distribution. Descriptive statistics, including means, standard deviations, and skewness were computed for all variables (Weinberg and Goldberg, 1990). Zero-order correlations were run to determine relations between variables and comparisons between groups. Cronbach's alpha coefficients were calculated for all psychometric instruments by group.

Multiple regression analysis was performed to determine the unique and collective contributions of self-esteem and self-efficacy to the variance in desire for children. Because the research questions do not indicate a direction, two-tailed tests were performed. The .05 level of significance was used throughout all statistical procedures. In addition to testing the three research questions, independent group *t* tests were performed to understand the relationship between predictor and criterion variables within the group of women living with HIV infection.

The terminology predictor and criterion is used in place of dependent and independent variable in order to clarify that hypotheses are not being tested.

According to Pedhazur and Schmelkin (1991), the terms predictor and criterion suggest predictive studies, while independent and dependent are used in explanatory studies.

The present study examined the relationship between desire for children, self-esteem, and self-efficacy among Black women with and without HIV infection. A total of one hundred and eight women (108) completed the instruments. However, a response set bias among 10 of the participants limited data analysis to 98 of the 108 women. The 10 participants whose data was excluded from analysis marked the first box on each of the items for one or all of the instruments. Of these 10 participants, 4 were HIV negative and 6 were HIV positive. The final sample of 98 women, (52 HIV positive and 46 HIV negative) was sufficient to test the research questions with a power of .80 to detect a medium to larger effect size at a .05 level of significance (Cohen, 1988).

Participant Demographics

Independent group *t*-tests revealed a significant difference between HIV infected and uninfected women on age [$t=-1.99$, $p=0.050$], education [$t=2.2$, $p=0.025$], employment [$t=4.30$, $p=0.000$], income [$t=2.73$, $p=0.007$], and number of abortions [$t=-2.05$, $p=0.043$]. Uninfected women were significantly younger, had more education, and were more likely to be employed with higher incomes than the HIV infected women (Table 2). In addition, the uninfected

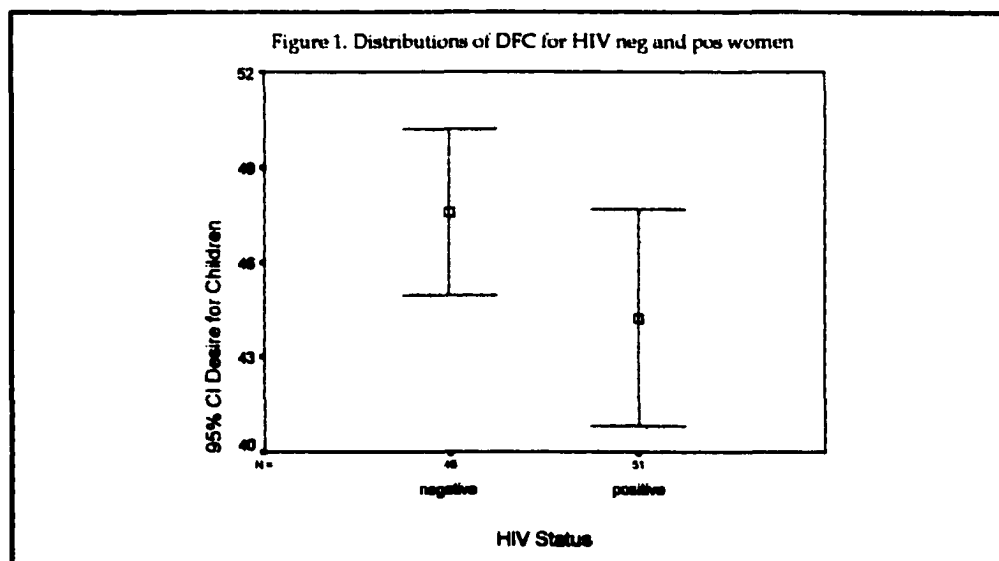
women reported fewer abortions. The uninfected women ranged in age from 20 to 45, compared to the infected women who ranged from 23 to 45 years old. Despite the significant difference in education and income, neither of the groups, on average, had a two-year college degree nor incomes greater than \$2000 per month. In fact, only 16% of the uninfected women and 12% of the infected women had incomes greater than \$2000 per month. It should also be noted that the women were similar with respect to the number of children they had at home, their religious denomination, how religious they were, whether they were in a committed relationship and whether their partner wanted children. Variables such as *length of time knowing your HIV status* and *do you take HIV medications* were eliminated from the analysis shown in table 2, as many of the HIV negative women did not answer the length of time knowing your HIV status question, and the HIV medication question was not applicable to the uninfected women.

Table 2
Demographics/Information Summary Sheet

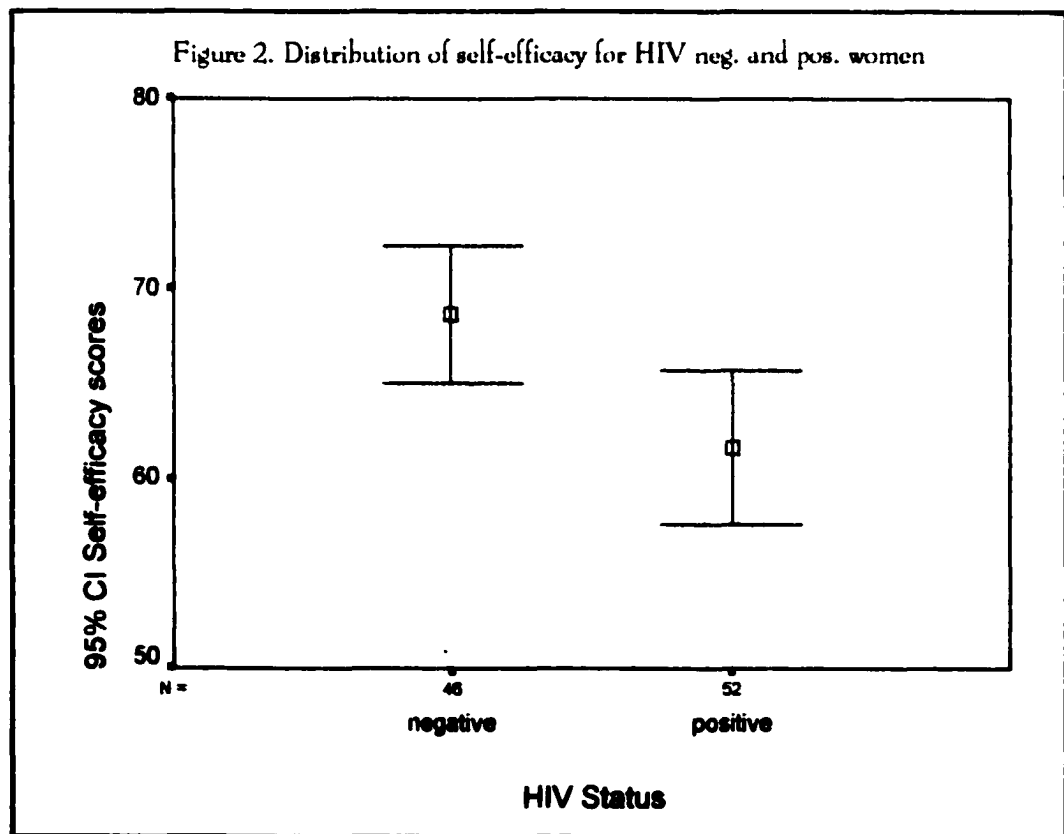
Variable	HIV+ 52(53%)	HIV- 46(47%)	p
Age	M=34	M=31	0.050
Education	M=12	M=13	0.025
Employed:			
Yes	16(31)	33(72)	0.000
No	35(69)	13(28)	
Monthly Income:			0.007
<\$500	22(43)	10(22)	
\$500-1000	18(35)	11(24)	
\$1000-2000	5(10)	17(38)	
>\$2000	6(12)	7(16)	
Abortions:			0.043
None	18(37)	23(50)	
1-3	28(54)	22(48)	
>3	6(12)	1(2)	
Children at home:			0.341
None	25(50)	16(36)	
1-3	23(46)	29(64)	
>3	6(12)	0	
Religion:			0.448
Baptist	32(63)	27(60)	
Catholic	7(14)	5(11)	
Muslim	5(10)	2(4)	
Other	7(14)	11(24)	
How Religious:			0.422
1 Not at all	6(12)	4(9)	
2	5(10)	2(4)	
3	9(18)	6(13)	
4	13(26)	18(40)	
5	10(20)	8(18)	
6	5(10)	2(4)	
7 Very Religious	3(6)	5(11)	
Committed Relation:			0.256
Yes	28(54)	30(65)	
No	24(46)	16(35)	
Partner wants children:			0.161
Yes	17(35)	26(62)	
No	20(41)	7(17)	
Don't Know	12(25)	9(21)	

Comparison of Criterion and Predictor Variables

Desire for children, the criterion variable, was measured by the Modified Index of Parenthood Motivation (MIPM). Scores on the index range from 14 to 70, with higher scores indicating higher levels of desire of children. According to Weinberg and Goldberg, (1990) the manner in which a score is evaluated as either high or low depends on the score and the mean. These authors suggest that scores greater than the mean be considered high and those less than the mean low. With this in mind, scores in this study were designated as high, moderate or low, by dividing the range of scores (56 points) into three parts and distributing them among the three labels. By grouping the scores into three categories, a greater degree of variance was maintained. Low scores ranged from 14-32, moderate between 33-51, and high were those greater than 51. The method of grouping showed that 11.8% of the HIV positive women

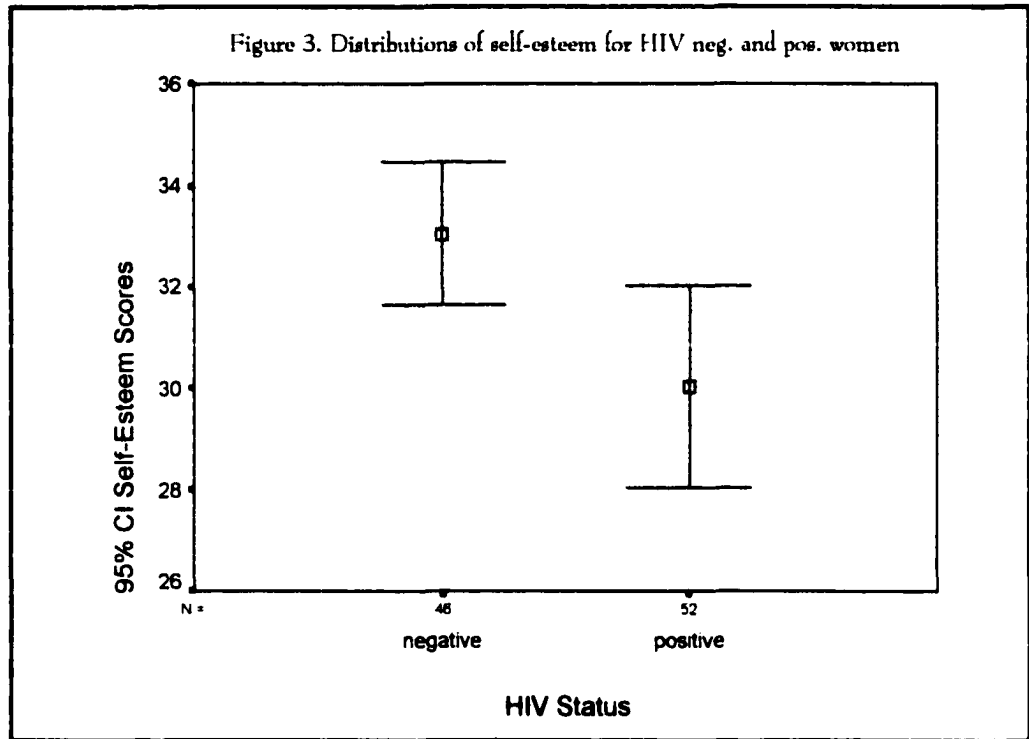


had low DFC, 58.8% had moderate DFC and 29.4% had high DFC, compared to the women without HIV who had 8.7% low, 52.2% moderate and 39.1% high DFC. Moreover, when examining the individual scores relative to categories high, low and moderate, it was found that among the HIV infected women, scores ranged from 14 to 68 and on average the women had moderate DFC ($M = 44.21$, $SD = 12.1$). Individual scores of the HIV negative women ranged from 24 to 62 and they too had a moderate DFC ($M = 47.56$, $SD = 8.8$). Independent group t-test results on the individual scores [$t(90.99) = 1.56$, $p = .122$] indicate no significant difference between the HIV infected and uninfected women on DFC. Figure 1 shows the distributions of the individual scores for the two groups.



The independent predictor variables were self-efficacy and self-esteem. Self-efficacy was measured using the General Self-Efficacy (GSE) subscale which yields one total score ranging from 17 to 85, with higher scores indicating increased self-efficacy. Given the possible range of 68 score points, scores were designated as high, moderate or low if they fell within the following ranges: low ranged from 17-38, moderate between 39-61, and high were above 61. Using this method to examine the data, most (51.9%) of the infected women had high GSE, while 42.3% had moderate GSE and 5.8% had low GSE. The individuals scores on GSE among the HIV infected participants were high ($M = 61.63$, $SD = 14.5$) and ranged from 18 to 85. The uninfected participants had even higher self-efficacy scores that ranged from 38 to 84 with a mean of 68.60, ($SD = 12.2$). Seventy-four percent of the women had high GSE, 23.9% were moderate and 2.2% were low. Independent group t-test on the individual scores indicate that the uninfected women had significantly greater self-efficacy ($t = 2.57$, $p = .012$) than the HIV infected women. Figure 2 depicts the distributions of self-efficacy individual scores for both groups of women.

Self-esteem was measured using the Rosenberg Self-Esteem Scale which yields one total score ranging from 10 to 40. Self-esteem scores were also high for both groups. The HIV positive group had a mean score of 30.01, ($SD = 7.1$) with a range from 13 to 40, and the uninfected group had a mean score of 33.04, ($SD = 4.7$) with a range from 20 to 40. The range of 30 points



was divided into three parts and distributed to each of the three designated high, moderate and low. Low ranged from 10-19, moderate between 20-29, and high was above 29. None of the women without HIV infection fell into the low RSE category while 9.6% of the HIV infected women had low RSE. Most (78.3%) of the uninfected women had high RSE, while only 57.7% of the infected women had high RSE, and 21.7% of the uninfected women fell into the moderate RSE category compared to 32.7% of the infected women.

Independent group t-test results $t(89.18) = 2.50, p = .014$ indicate that the uninfected women had significantly greater self-esteem than the HIV infected women. Figure 3 portrays the distributions of self-esteem scores for the two groups of women.

The Research Questions

The first research question asked whether there was a relationship between self-esteem, self-efficacy and desire for children. Using the Bonferroni approach to control for type I error across the 32 correlations, a p-value of less than .05 was required for statistical significance (Pedhazur and Schmelkin, 1991). Correlations among the total sample of women revealed that increased desire for children (DFC) was correlated with increased self-efficacy (GSE) and self-esteem (RSE). As shown in table 3, regarding the first research question, the strongest correlations were between GSE with RSE. The .343 correlation between DFC and GSE was significant at 0.01, and the .357 correlation between DFC and RSE was significant at the 0.05 level.

Table 3
Correlation Matrix of Desire for Children, Self-Efficacy, Self-Esteem and
Descriptive Information within the Total Sample

	AGE	EDU	JOB	INC	HST	HL	HIM	ABS	CAH	REL	HREL	CR	PWC	GSE	RSE
AGE															
EDU	.113														
JOB	-.054	.423**													
INC	.039	.513**	.659**												
HST	.204*	-.233*	-.403**	-.272*											
HL	.486**	.022	-.036	.284*	.090										
HIM	.258*	.012	-.058	.019	.434**	.308*									
ABS	.020	-.164	-.129	-.137	.203*	.014	.057								
CAH	-.035	.052	.120	.223*	-.098	.165	.125	.111							
REL	.001	.282**	.137	.295**	-.079	.104	-.005	-.038	-.103						
HREL	.277*	.240*	.216*	.187	-.083	.389**	.066	-.191	.100	.081					
CR	-.087	.072	.282**	.296**	-.115	.106	.089	-.132	.137	-.065	.128				
PWC	-.071	.282**	.141	.208	-.145	-.011	-.088	-.107	.229*	.076	.153	-.037			
GSE	.020	.392**	.399**	.372**	-.251*	-.056	.012	-.288*	.180	.089	.265**	.107	.148		
RSE	.069	.327**	.385**	.440**	-.242*	.088	.146	-.343**	.270*	.068	.356**	.222*	.069	.662**	
DFC	.040	.022	.022	.059	-.156	.094	-.139	-.401**	.112	-.032	.322**	.047	.104	.343**	.357*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Abbreviation Key:

AGE = age

EDU = education

JOB = employment

INC = income

HST = HIV status

HL = How long HIV status was known

HIM = HIV medications taken

ABS = abortions, number of

CAH = children at home, number of

REL = religion

HREL = how religious

CR = committed relationship

PWC = partner wants children

GSE = general self-efficacy

RSE = Rosenberg self-esteem

DFC = desire for children

The positive .304 correlation statistics between desire for children and self-efficacy within the group of HIV infected participants is shown in table 4 is

significant at the 0.05 level. Increased scores in self-efficacy were associated

with increased desire for children. However, the strongest correlation ($r=.634$, $p=0.01$) remained between GSE and RSE, which was in a positive direction.

Table 4
Correlation Matrix among HIV Positive Women

	AGE	EDU	JOB	INC	HL	HM	ABS	CAH	HREL	CR	GSE	RSE	DFC
AGE	1												
EDU	.182	1											
JOB	.193	.386**	1										
INC	.127	.337*	.614**	1									
HL	.446**	-.078	-.017	.333*	1								
HM	.368**	.128	.077	.153	.304*	1							
ABS	.078	-.073	-.212	-.158	.000	-.127	1						
CAH	-.028	-.013	-.020	.268	.242	.128	.187	1					
HREL	.253	.281*	.285*	.137	.345*	.186	-.406**	.147	1				
CR	.042	.133	.188	.307*	.167	.144	-.274*	.062	.200	1			
GSE	.050	.264	.267	.306*	.047	.194	-.329*	.143	.345*	.033	1		
RSE	.119	.266	.388**	.441**	.200	.378**	-.290*	.332*	.423**	.260	.634**	1	
DFC	-.130	-.141	-.014	-.023	.044	-.096	-.347*	.193	.348*	.046	.304*	.275	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Correlations among the HIV negative women are shown in Table 5.

Similar to that of the HIV infected women, there was a statistical significant ($p<0.01$) strong positive correlation of .665 between RSE and GSE. Increased scores in self-esteem were associated with increased self-efficacy scores.

Unlike the HIV infected women, there was a moderate positive correlation between desire for children with self-esteem $r = .463$ at the 0.01 level and self-efficacy $r = .344$ at the 0.05 level. Increased scores in self-esteem and self-efficacy were associated with increased desire for children.

Table 5
Correlation Matrix among HIV negative Women

	AGE	EDU	JOB	INC	ABS	CAH	HREL	CR	PWC	GSE	RSE	DFC
AGE												
EDU	.171											
JOB	-.099	.370*										
INC	.077	.617**	.639**									
ABS	-.129	-.182	.159	.011								
CAH	-.011	.068	.244	.123	.046							
HREL	.351*	.187	.107	.209	-.142	.024						
CR	-.0167	-.025	.353*	.253	-.114	.224	.023					
PWC	.201	.276	.222	.161	-.213	.222	.1179	-.122				
GSE	.113	.465**	.429**	.355*	-.124	.193	.125	.149	.169			
RSE	.160	.359*	.224	.347*	-.354*	.106	.226	.105	.165	.665**		
DFC	.326*	.135	-.103	.082	-.444**	-.073	.268	.000	.001	.344*	.463**	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The second research question examined whether desire for children varied in HIV infected and un-infected women after controlling for self-esteem, self-efficacy and the co-variables: age, education, employment, income, number of abortions, number of children at home, how religious, committed relationship, partner wants children, self-efficacy, self-esteem, as depicted in table 6. ANCOVA was used to assess differences among groups while controlling for extraneous continuous variables (Pedhazur & Schmelkin, 1991). These authors also note that partial correlation is another analytic approach to exercise statistical control.

Before conducting the ANCOVA, the homogeneity-of-slopes assumption was tested. This test evaluates the interaction between the co-variables and the fixed factor (HIV status) in the prediction of desire for

children. A significant interaction between the co-variates and the fixed factor would suggest that the differences in desire for children are a function of the co-variates (Green, Salkind and Akey, 2000). Note in table 6 that there were no statistically significant interactions with the co-variates and the fixed factor. Therefore, the results from an ANCOVA are considered meaningful, that is, there are differences in desire for children within the two groups, the differences are not a function of the co-variates.

Table 6
Test for the assumption of homogeneity-of-slope

Interaction Source	F(df)	p
HIVstat*Age	1.83(1,57)	.174
HIVstat*Edu	1.88(1,57)	.182
HIVstat*Job	.339(1,57)	.563
HIVstat*Inc	.706(1,57)	.404
HIVstat*Abs	.203(1,57)	.654
HIVstat*Cah	1.136(1,57)	.291
HIVstat*Hrel	.851(1,57)	.360
HIVstat*CR	.007(1,57)	.935
HIVstat*PWC	2.439(1,57)	.124
HIVstat*GSE	.023(1,57)	.897
HIVstat*RSE	.361(1,57)	.550

ANCOVA results indicate that the null hypothesis – the adjusted population means on desire for children are equal – should be accepted,

because there was no significant difference in the mean DFC scores within this sample $F(1,68) = .553, p = .460$. In fact, according to Weinberg and Goldberg, (1990), being so close to 0, an eta squared of .008 suggests an extremely weak linear relationship between HIV status and desire for children when controlling for the co-variants: age, education, employment, income, abortions, children at home, how religious, committed relationship, partners desire for children, self-esteem and self-efficacy. That is, desire for children does not vary as a function of HIV status.

The third research question examined whether the following covariants: age, number of previous abortions, and strength of religious belief are predictors of desire for children when holding self-esteem and self-efficacy constant. Using regression analysis, self-esteem and self-efficacy were entered in block 1, and age, number of abortions, and strength of religious belief were entered in block 2. This determines whether the incremental change in R^2 -- due to the set of variables: age, number of abortions, and strength of religious belief -- is statistically significant. That is, the change in R^2 when age, number of abortions, and strength of religious belief entered the equation while self-esteem and self-efficacy were already in the equation indicates that self-esteem and self-efficacy together account for 14.8% of DFC variance, and age, number of abortions, and strength of religious belief together account for 26.2%.

As shown in table 7 the change (CHA) statistic revealed 11.5% of

DFC was accounted for due to the variable set: age, number of abortions, and strength of religion $F(3, 89) = 4.60$, which was significant at $p = .005$ level. Therefore age, number of abortions, and strength of religion, as a set are significant predictors of desire for children in this study.

Table 7
Hierarchical Regression of Select Variables
Over and Above Self-esteem and Self-efficacy

Predictors	Multiple R	R Square	R Square Change	F Change	Sig. F Change
RSE, GSE	0.384	0.148	0.148	7.979	.001
Age, ABS, Hrel	0.512	0.262	0.115	4.609	.005

Ancillary Analysis

Correlation coefficients were computed among 16 variables for the total sample. The results of the correlational analyses presented in table 3 show that 17 out of the 32 correlations were statistically significant and were greater than or equal to .35. In general, the results suggest that GSE and RSE have a strong positive correlation, which may indicate that they overlap. GSE and RSE were also associated with increased education, employment, income and strength of religious belief. In addition, moderate to strong negative correlations appeared between the number of reported abortions with DFC, RSE and GSE. Decreased scores in DFC, RSE and GSE were associated with increased number of abortions.

In addition to the answer provided for the first research question,

table 4 highlights the following statistically significant positive correlations within the HIV infected group of women: DFC with strength of religious belief; RSE with employment, income, taking HIV medications, and children at home; and GSE with income, and strength of religious belief . The only significant negative correlation was noted between number of reported abortions and DFC.

Compared to the women living with HIV, the HIV negative women had fewer statistically significant correlations. However, self-efficacy and self-esteem maintained a strong association with income and employment. Although the strength of the positive correlation between self-esteem and desire for children did not reach statistical significance among the HIV infected women, a strong statistically significant correlation appeared among the uninfected women. Similar to the HIV infected women, desire for children among the HIV negative women had a moderate, but significant negative correlation with number of prior abortions. The more abortions reported, the lower the scores on the DFC measure.

Multiple regression analysis within the total sample indicated that 14.8% of the variance in desire for children is explained by the combined variables self-efficacy and self-esteem [$R = .385$, $R^2 = .148$, $F(2,94) = 8.18$, $p = .001$]. Although as a set, these variables predict DFC scores, neither self-efficacy alone [$\beta = .149$, $p = .132$], nor self-esteem alone [$\beta = .400$, $p = .071$] were significant predictors of desire for children. Among the HIV

infected women, regression analysis revealed that desire for children is not explained by a combination of self-efficacy and self-esteem [$R = .323$, $R^2 = .104$, $F(2, 48) = 2.80$, $p = .071$], and neither self-efficacy [$\beta = .217$, $p = .219$], nor self-esteem [$\beta = .140$, $p = .424$] individually predicts desire for children. However, among the HIV negative women the variable set self-esteem and self-efficacy explained 22% [$F(2, 43) = 5.93$, $p = .005$] of the variance in desire for children; only self-esteem ($\beta = .787$, $p = .025$) was a significant predictor of desire for children.

General information relating to desire for children was collected using self-report items on the demographic information sheet. To discover additional relationships between the criterion and predictor variables in this sample, independent samples tests were computed. The .05 level of statistical significance of a *t*-test was determined using a two-tailed test. Based on the literature, the following were transformed into dichotomous variables: age, length of time knowing HIV status, and children living at home. Age was dichotomized as <32 and ≥ 32 ; 32 was chosen based on both the mean age of the sample in this study and the mean ages within the Kline et al, (1995), and Ahluwalia (1994) studies. Length of time knowing HIV status was dichotomized as <3 years and ≥ 3 years; 3 years was the mean number of years since positive diagnosis of this study's participants as well as in Kline et al, (1995) sample. Children living at home was dichotomized as yes and no. Possible responses for partners desire for

children were yes, no and don't know; those who indicated that they did not know whether their partner wanted children were treated as missing data and excluded from the analysis.

Among the HIV infected women, the only statistically significant difference was between the women with children at home and those without children at home on the variable self-esteem. Those women with children at home had higher RSE scores ($M=32.44$, $SD=6.3$) than women without children at home ($M=28.04$, $SD=7.3$) as demonstrated in table 8.

To better understand self-esteem within this sample of low-income Black women, multiple regression analysis was conducted. All variables shown in table 3 that correlated with self-esteem at $p \leq .05$ were entered in the regression equation as predictors of self-esteem. Self-efficacy was the only variable that explained a statistically significant (50%) portion of self-esteem ($\beta=.49$, $p=.000$).

In summary, this study found that within this sample, the scales had reliable psychometric features, and desire for children is related to self-esteem and self-efficacy among the uninfected women, while among the women with HIV infection desire for children is related to self-efficacy. ANCOVA results indicate that there is no significant difference in desire for children between infected and uninfected women. Finally, the set of covariants; age, number of abortions and strength of religious belief are better predictors of desire for children than self-esteem and self-efficacy

within this sample of 98 low income Black women.

Table 8
Independent Samples Test Among Participants with HIV Infection

Variable	Mean		SD		t Score	Sig. (2 tail)
	<32	>32	<32	>32		
Age						
DFC	46.16	43.15	12.12	12.23	.846	.403
GSE	61.78	61.54	11.80	16.08	.063	.950
RSE	29.21	30.48	6.68	7.40	-.636	.528
	<3yr	>3yr	<3yr	>3yr		
Length of time knowing						
DFC	44.48	43.48	11.79	12.90	.178	.861
GSE	60.23	63.54	13.60	15.86	-.798	.435
RSE	28.66	31.86	6.87	7.17	-1.61	.113
	Yes	No	Yes	No		
Children at home						
DFC	46.88	41.68	10.77	13.12	-1.50	.139
GSE	63.48	60.80	14.59	14.69	-.647	.521
RSE	32.44	28.04	6.37	7.35	-2.26	.028
	Yes	No	Yes	No		
Partners desire for children						
DFC						
GSE	41.80	46.75	8.93	13.43	-1.26	.217
RSE	58.75	63.29	10.02	15.85	-1.02	.317
	29.15	31.88	6.93	5.95	-1.28	.206

CHAPTER V

DISCUSSION OF THE FINDINGS

The purpose of this study was to determine whether a relationship exists among, and the individual effects of self-esteem, and self-efficacy on desire for children in Black women with and without HIV infection. The theoretical foundation for this investigation included a proposition from the symbolic interaction model (Wells & Marwell, 1976) which postulates that perception of self and role are important in choosing ways to act.

Desire for children was conceptualized as motivation to become a biological parent (Wyatt, 1967, Gerson, 1980). It encompasses determination to overcome obstacles to have children, the valuing of children, and the importance of children relative to other pursuits. The Modified Index of Parenthood Motivation was used to assess desire for children. Adapted from Gerson's (1983) six component/82-item Index of Parenthood Motivation the modified index contains 14-items designed to assess the intensity of desire to have children among Black women.

Self-Esteem was conceptualized as a perception of self worth (Rosenberg, 1965; Coopersmith, 1967; Rosenberg & Kaplan, 1982 and Wylie, 1968). It is, according to Rosenberg, a concept that explains and predicts

human behavior. Self-esteem was measured using Rosenberg's Self-Esteem 10-item Scale, (1965) which reflects attitude toward self.

Self-efficacy was conceptualized as the belief that one can achieve or accomplish. This perceived ability to achieve certain outcomes is related to one's sense of self worth (Bandura, 1977). Self-efficacy was measured by Sherer, et al., (1982) 17-item General Self-Efficacy subscale.

Once referred to as "the motherhood mandate", feminist writers have criticized the social force that pressures women into motherhood (Walsh, 1987). However, from a psycho-analytic perspective, childhood and social experiences set the stage for self-worth to be related to motherhood in women (Jordan, Kaplan, Miller, Stiver, and Surrey, (1991). Moreover, according to Coleman, Antonucci, Adelman and Crohan, (1987), Black women, in part due to historical experiences, are more likely to participate in traditional social roles such as motherhood than their White counterparts. James (1998) reported that even women living with HIV infection seek children as a fulfillment of self.

Thus the relationships among, and the individual effects of predictor variables such as self-esteem, and self-efficacy, and the covariants: age, employment, strength of religious belief, cohabitation with children, previous abortions, partners desire for children, length of time knowing HIV status, and HIV status were examined in relation to the criterion variable desire for children, in this cross-sectional, convenience sample of 98 Black women.

The results of this study indicate that self-esteem and self-efficacy have a positive relationship with desire for children among Black women with and without HIV infection. It was also observed that regardless of HIV status, this sample of Black women have a moderate desire for children, and of the co-variables examined: age, number of abortions and strength of religious belief were the best predictors of increased desire for children.

Participants

The sample consisted of 98 Black women recruited from one inner city community health center. Fifty-three percent (n=52) of the sample were HIV infected and the comparison group consisted of 46 uninfected women. Similar to New Jersey State cumulative data, in which 48% of the 11,086 HIV infected women living in New Jersey are between the ages of 30-39, women in this study were from the same age group with a mean age of 34 years ("New Jersey, HIV/AIDS Cases", 2000). The New Jersey HIV/AIDS Cases report also illustrates that Essex County where these data were collected, is ranked number one with the highest percentage of reported HIV/AIDS cases as of December, 1999 among the 21 counties in New Jersey. Nonpublished State cumulative data highlights that within Essex County, the City of Newark has the highest percentage of reported HIV/AIDS cases with more than 5000 cases and is ranked first among cities of that county as of December 31, 1999 (Conversation with New Jersey State Assistant Commissioner, March, 2000).

The recruitment strategy which involved enlisting study participants from a Newark-based health center that has provided care for more than 1000 HIV infected individuals, 40% of whom are women, over the past five years, strengthens the possibility of the findings representing the total population of HIV infected Black women residing in Newark, given the high number of reported HIV/AIDS cases within the City of Newark relative to other cities in New Jersey.

However, caution should be taken when generalizing the findings to populations of middle and upper income Black women with HIV. In fact, findings from this study should not be generalized, given the low income status of the participants. National data indicate that Black women in general earned on average \$22,764 in 1997, (Hornor, 1999) whereas earnings for women of this study, regardless of their HIV status, were on average, below the federal poverty level of income.

The percentage of unemployment among Black women nationally was 9.9% in 1997 (Hornor, 1999), while the total sample in this study reported an unemployment rate of 49.5%. Although these findings varied by group, with only 28% of the uninfected women reporting unemployment, and 69% of the HIV infected women reporting themselves unemployed, both groups reported a rate of unemployment at least twice that of the national average for Black women.

The sampling procedure of this study yielded a sample that reflects low

income Black women with and without HIV infection which limits the findings to similar individuals. It was reassuring to find that persons who did not participate in the study were similar with respect to age, education and employment (table 1.) to those who participated in the study. Moreover, this nonprobable sample is representative of the population of Black women with and without HIV infection who receive health care in a federally funded health center. Finally, given the considerations to feasibility, economy and accuracy, the sampling method used in this study provides the reader with valid inferences and generalizations to groups of low income Black women regardless of their HIV status.

Instruments

Measures used in this study had acceptable reliability coefficients within this group of low-income Black women with and without HIV infection. Thus, results of this analysis provide meaningful information on predictor variables and their relationship to desire for children within this population. Although the sample was relatively small, a moderate to large effect size of .65 or greater for each of the three main concepts under investigation produced statistically significant findings that are applicable to the general population of low-income Black women with and without HIV infection.

Modified Index of Parenthood Motivation

The development of a summated rating scale can provide reliability, precision and scope (Spector, 1992). The MIPM had acceptable internal-consistency reliability and because of the 5-point Likert feature, the scale allowed the investigator to distinguish responses among individuals in each group. In addition, as defined by Wyatt (1967) and operationalized by Gerson (1983) desire for children is complex, and not easily assessed with a single question. However, the multi-faceted nature of the six components in the original IPM were perceived by the investigator and a panel of judges as difficult to understand, especially for the intended sample in this study. Therefore, the 14 items in the MIPM were written to be clear, and contain a single idea. The items avoid ambiguity, unnecessary jargon, and/or colloquial expressions.

Items on the MIPM were selected from five of the six components of the original IPM. The first two items on the MIPM tab into component I of the IPM which dealt with eagerness to have children. Item one (1) on the MIPM is stated in the positive, and persons with increased desire for children would strongly agree with the item, which yields an increased score. Item two (2) is a negative statement and persons that lack desire for children would strongly agree with the statement, however reverse scoring on this item yields a decreased score. Component II was omitted as it was deemed, by the panel of judges as irrelevant to the population under investigation in this study and the

scoring procedure used by Gerson (1983) only considered the rank given to child raising item in this component.

Another aspect of the MIPM, is that it is appropriate to the population of people in this study, low income Black women. Although the mean education level for the total sample was 12th grade, reading level was considered while revising the original IPM. The word processing software used to create this document provides readability statistics. The MIPM was found to have a Flesch-Kincaid Grade Level score of 5.6 (Microsoft Word 97). This rate is based on a U.S. grade-school level. For example, a score of 8.0 means that an eighth grader can understand the document. According to the documentation provided in the software, most standard documents aim for a score of approximately 7.0 to 8.0. The items on the MIPM were kept short and the language simple and straightforward. The pilot study for this current investigation found that participants were not confused by the intended meanings of the items.

Finally, feedback from the panel of judges, and results of the pilot study support confidence that the MIPM measures the intended construct, desire for children. Further, the strong inverse correlation between desire for children and the number of reported abortions among both women with HIV ($r = -.347$, $p < 0.05$) and women without HIV ($r = -.444$, $p < 0.01$) of this study suggests that the scale behaves as predicted (see tables 4 & 5). Inferences based on the MIPM scores appear to be valid in this study for low-income Black women.

Items three (3) and four (4) cover component III of the IPM that express the appeal of having a child. Item three is stated in the affirmative, while item four is a negative statement. Based on reverse scoring of item 4, these items produce an increased score for increased desire for children. The fourth component, motivation to have a child despite difficulty, is addressed in items five (5) through eight (8), and reverse scoring was applied to items six (6) and eight (8). Items nine (9) and ten (10) address the sixth component that embodies parenthood role conflict as it relates to being a woman, i.e., "motherhood severely limits a woman's chances for achievement and self-expression". Reverse scoring on item ten maintains the theme that increased scores on the MIPM interpret as increased desire for children.

The MIPM might be useful among non-minority and/or middle and upper-income samples because the items on the MIPM were drawn from the original IPM. Items on both the original and MIPM are based on theoretical postulates from Wyatt (1967).

Self-Esteem and Self- Efficacy

The strong positive correlations between self-esteem and self-efficacy ($r = .662$ among the total sample, $r = .634$ among the infected women, and $r = .665$ among the uninfected women) may indicate that the two concepts, as measured in this study, are very similar and may overlap. According to Shelly (1984) correlation statements describe the amount of overlap between two

variables. Shelly notes that the square of the reported correlation indicates the percentage of overlap, therefore, findings of this study indicate a 39% to 43% overlap between self-esteem and self-efficacy. Shelly suggests that the researcher test for causal relationships between the variables when an overlap of 9% or greater exist. Therefore a regression analysis that examined the predictors of self-esteem found that self-efficacy explained 50% of the variance in self-esteem.

Pedhazur and Schmelkin (1991) explain that the squared multiple correlation (R^2), the variance attributed to each of the predictor-independent variables is equal to the square of its correlation with the criterion-dependent variable, when and only if the two predictor variables are not related. Although the concepts, self-esteem and self-efficacy were operationalized to tap into different theoretical aspects of self, the measures provided in this study indicate that the two are very similar. As shown in tables 3, 4 and 5, the zero-order correlations between self-esteem and self-efficacy are significant at both the 0.05 and 0.01 alpha levels. Therefore, according to Pedhazur and Schmelkin exclusive reliance and interpretation of zero-correlations between desire for children and sense of self, as measured by RSE and GSE, is to say the least, imprudent. Consequently, regression analysis was helpful, in that, when a regression coefficient is calculated for a given variable, an adjustment is made for the correlation between self-esteem and self-efficacy. In other words,

according to Pedhazur and Schmelkin, unlike zero-correlation, the regression equation partials out the other variable.

Research Questions

As noted in chapter one, the following research questions were addressed in this study:

1. Is there a relationship among self-esteem, self-efficacy and desire for children among Black women with and without HIV?
2. After controlling for self-esteem, self-efficacy and relevant covariants [age, education, employment, income, abortions, children at home, how religious, committed relationship, and partners desire for children,] does desire for children vary as a function of HIV status?
3. Do the following covariants: age, number of previous abortions, and strength of religious belief predict desire for children when holding self-esteem and self-efficacy constant?

Question #1

Correlation among the HIV infected and uninfected women revealed that increased desire for children correlated with increased GSE, and RSE in women without HIV infection and only GSE among the women with HIV infection. These findings do not lend support for Wyatt's (1967) claim that an

inverse relationship exists between desire for children and self-esteem or self-efficacy. Wyatt felt that individuals with a low sense of mastery would have an increased desire to have children, and it is reasonable to expect that women perceive having children as a sense of personal accomplishment. However, the notion that desire for children stems from low self-esteem and/or low self-efficacy may not be logical. In-fact, findings by Hutchinson and Kurth (1991) note that children are a source of self-esteem, placing children as the antecedents to self-esteem, rather than self-esteem as the predictor. Pivnick (1991) also theorizes that repeat pregnancies are symbolic of a drug-using woman's ability to replace children she has lost to foster care. Hutchinson, and Kurth (1991) and Pivnick's (1991) writings can be interpreted that children are the predictors of a woman's sense of self-worth, rather than low self-esteem predicting desire for a child.

The positive correlation between self-esteem and desire for children in this study were also in contradiction to Gerson's (1986) finding of an inverse relationship between self-esteem and desire for children among a sample of predominately White female college students. The difference in findings could be relative to income and/or race, given the positive relationship between DFC and RSE that remained in this sample of low-income Black women regardless of HIV status.

Question #2

A one-way analysis of covariance (ANCOVA) was conducted to determine whether desire for children varied as a function of HIV status, after controlling for self-esteem, self-efficacy and the co-variates. The independent variable was HIV status and the dependent variable desire for children with the covariants being age, education, employment, income, abortions, children at home, how religious, committed relationship, partners desire for children, self-esteem and self-efficacy. As shown in table 6, an analysis evaluating the homogeneity-of-slopes assumption indicated that the relationship between the covariants and the independent variable did not differ significantly as a function of the dependent variable $F(1, 68) = .553, p = .460$. Consequently the results are meaningful. In other words, the difference in desire for children was not a function of the covariants listed in table 6. Therefore, there was no significant difference in the mean desire for children scores between the HIV infected and uninfected women. Independent group t-test results also supported the findings; there was no significant difference between the mean scores of the HIV infected and uninfected women's desire for children ($t = 1.56, p = .122$). Figure 1, also depicts the similarity in scores for the two groups. These findings are similar to those of Barbacci et al, (1989); and Johnstone et al., (1990) who reported that knowledge of HIV infection was not associated with pregnancy termination or the prevention of subsequent pregnancies. Although, neither pregnancy termination nor the prevention of subsequent pregnancies

was the focus of this study, these concepts can serve as surrogate markers of desire for children. As reported by Johnstone et al. (1990) and Selywn et al. (1989), HIV infected women declined pregnancy termination because of desire for children. This study further substantiates that the wish for biological offspring remains despite health risks to both the mother and her child.

Question #3.

Hierarchical multiple regression analysis was used to determine whether the selected covariants: age, number of prior abortions and strength of religious belief are predictors of desire for children when holding self-esteem and self-efficacy constant. This analysis found that age, number of prior abortions and strength of religious belief as a set are significant predictors of desire for children. In fact, this set of variables accounted for 11.5% over and above the contribution of the variable set "self-esteem and self-efficacy" for the variance in desire for children (see table 7). These findings indicate that age, number of prior abortions and strength of religious belief were better predictors of desire for children than self-esteem and self-efficacy among this sample of women. Although the measure of strength of religious belief was a one item measure in this study, the findings were similar to Ahluwalia's (1994) finding that older, more religious Black women had a greater intention to become pregnant than younger, less religious White women. Therefore, this study supports the claim that age and strength of religious belief are predictors of desire for children. As

noted in tables 4, and 5 number of abortions had the strongest but negative correlation with desire for children among both groups of women. Similar to Pivnick's (1991) finding that women who elect to carry a pregnancy to term have fewer previous abortions, this study's findings seem logical, in that women with increased numbers of abortions had decreased desire for children. Kline and associates (1995) also found that women who had not had previous abortions were more likely to carry a pregnancy to term. Although not discussed by Kline, et al., carrying a pregnancy to term may be a function of religious belief particularly in this population. McCormick (1975) found that White women were less likely to consider religion important in their lives, and were more willing to consider an abortion in the future than Black women in a sample of 200 women, 98 of whom were Black.

When comparing the strengths of the correlations between desire for children and number of prior abortions across the groups of HIV infected and uninfected women, it was interesting to note that the correlation was strongest among the women without HIV infection. This also suggests that being HIV infected was not a predictor of the number of prior abortions. The literature has shown that decisions to continue or terminate a pregnancy appear independent of HIV status (Selwyn, et al., 1989; Ahluwalia et al., 1998).

A proposition from the symbolic interaction model served as the theoretic basis for this study. Given the multitude of authors -- Wyatt (1967); Gerson, 1980, 1983, and 1986); Kline, et al., (1995); Johnstone et al., (1990);

Selwyn et al., (1989); Christ, Siegel and Mohnihan, (1988); Gross, (1987); Holman, et al., (1989); Pivnick, (1991); Ahluwalia, DeVellis, and Thomas, (1998) – that have described sense of self and its impact on a woman's ability to perform roles according to social and self-imposed standards, the model served as an essential frame of reference for examining whether relationships existed between the criterion, predictor and co-variates.

Ancillary Findings

Several investigators have suggested that age, length of time knowing that one is HIV positive, children living at home and partner's desire for children are either related to or a predictor of desire for children (Kline, et al., 1995; Pivnick, 1991; Ahluwalia, DeVellis, and Thomas, 1998). Based on the literature, the relations among those phenomena were examined. Age, length of time knowing HIV status, children at home and partners desire for children were dichotomized and independent t-tests were conducted among the women with HIV infection. Table 8 indicates that self-esteem was significantly higher among women with children at home than those without children at home. This finding suggests that children contribute to an HIV infected woman's sense of self, and according to Andrew, Williams and Neil, (1993) children are a source of self-esteem. It was also noted in table 8 that desire for children did not vary by the length of time that the woman knew she was HIV infected. The findings of Kline et al (1995) were not supported, in that there was no

statistically significant difference in mean desire for children scores among the HIV infected women knowing for ≥ 3 years when compared to those knowing < 3 years. Unlike the findings of Kline et al., increased time knowing HIV status was not associated with increased desire for children. The difference in findings may be due in part to the fact that pregnancy intention and/or subsequent pregnancies are not appropriate surrogate markers for desire for children.

Contrary to the reports of Pizzi (1992), Avery et al. (1993) and Bradley-Springer (1994), mean scores for both self-esteem and self-efficacy were high within this sample of low-income Black women. This finding is antithetical to the reflected appraisal principle (Rosenberg, 1979), which indicates that a person's self-esteem is a product of how that person believes others see them, which suggests that persons belonging to low-socioeconomic status groups will internalize that as a negative social evaluation and as a result have low self-esteem. Rosenberg and Pearlin (1978) explain that the following erroneous assumptions may have been used to posit low self-esteem among low-income Black women: 1) that the larger society rather than family and friends contribute to the reflected appraisals, 2) that lower socioeconomic status is a function of self rather than racial discrimination. Certainly the women of this study had neither low self-esteem nor low self-efficacy. However, the uninfected women had significantly greater self-esteem and self-efficacy than those who were infected.

Unlike findings by Hughes and Demo, (1989) self-esteem and self-efficacy among this study's participants produced strong positive correlations with one another in both groups of HIV infected and uninfected women. Hughes and Demo found an inverse correlation between these variables in data they obtained from the National Survey of Black Americans (NSBA) conducted by Jackson and Gurin, (1987). Hughes and Demo explain that these data were collected in 1979 and 1980, and the processes contributing to achievement among Blacks change over time. However, the investigators did not question whether the measures on self-efficacy and self-esteem may have contributed to inverse relationships noted in the findings. The NSBA used six items to measure self-esteem, which were gathered from several different measurements of self-esteem, two of which came from Rosenberg's Self-esteem Scale. Their measure on self-efficacy was composed of four questions measuring the respondents feelings of self-control and confidence in managing their own lives.

Women in this study had high self-efficacy despite their low income, education and lack of employment. The literature lacks an empirical explanation for this finding, however it is reasonable to postulate that strength of religious belief plays a role in self-efficacy among the HIV infected women. Belief in God, or the Biblical text which states "all things are possible to him who believes" may serve as a source of "I can do". Within the Black community women account for 50% of the general population, but 75% to 90%

of the church congregation (Anderson-Scott, 1997). The church has been noted to serve as a surrogate family that provides empathy, moral support, and a sense of belonging. Roles within the church such as Sunday School teacher, musician, nurse and usher have been observed to contribute to higher levels of self-esteem for low to moderate income Black women (Taylor, 1988).

According to Staples and Johnson (1993) the Black church provides women with a positive sense of self worth and group identity. Although church membership and/or involvement were not measured in this study, strength of religious belief is a reasonable surrogate marker. However, strength of religious belief was a one-item measure in this study, therefore, further research is needed to explain the contribution of religious belief to the high levels self-esteem and self-efficacy within this sample of low-income Black women.

Also noteworthy among the findings was the fact that the uninfected women have significantly greater self-esteem than the HIV infected women. This finding becomes more profound when coupled with the finding that the HIV infected women with children at home have significantly greater self-esteem than infected women without children at home. HIV/AIDS represents markers for stigmatization that involves discrimination and prejudice.

According to Jaccard, Wilson and Radecki (1995) stigma is a perceived symbol by segments of society that connotes disgrace on those who bear the symbol. HIV/AIDS involves fears associated with the disease itself, and those related to drug use and sexuality. Jaccard, Wilson and Radecki explain that there is a

common perception by society that persons with HIV/AIDS are dangerous, anti-social, promiscuous and are people out of control. Based on the theoretical underpinning of this study which assumes that an individual will define themselves according to societal standards, it is not surprising to discover the significant difference in self-esteem between infected and uninfected women of this study.

Unfortunately, persons with HIV experience the negative feeling of loneliness, isolation, stress and loss of familial support far too often. According to Bennett (1990) persons with HIV/AIDS report feelings of marginalization from society. Jaccard, Wilson and Radecki (1995) suggest that practitioners help infected persons deal with the inevitable encounters of prejudice. These efforts should focus on individual and group counseling sessions that increase social support and encourage coping skills. Beyond patient support, Jaccard, Wilson and Radecki suggest that providers working with HIV infected persons spend time educating other providers and patients to decrease negative attitudes in society relative to persons with HIV/AIDS.

The difference in self-esteem among the HIV infected women with and without children at home, also carries practice and policy implications. Given the qualitative findings by Hutchinson and Kurth (1991), and Williams (1990), the finding of this study that motherhood was a source of self-esteem for Black women with HIV it is evident that childbearing is an expression of self-esteem. In addition, Selwyn et al. (1989) suggests that pregnancy and childbearing are a

symbolic process that signify affirmative life changes. As symbols of life, children give HIV infected women a reason for living (Williams, 1990). Similar to a general proposition from the symbolic interaction model, this study highlights the relationship between sense of self and ways of acting toward and within society. The perceptions of self among HIV infected women of this study reflect meanings, and determine how they behave in a given situation. When faced with a chronic, but life-threatening disease, HIV infected women do not waver in their desire for children relative to women without HIV infection. As shown in this study for those HIV infected women with children, self-esteem is increased.

CHAPTER VI

CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

This study was designed to investigate whether there was a relationship among self-esteem, self-efficacy, and desire for children among Black women with and without HIV infection. A sample of 108 women, 54% of whom were HIV infected, were recruited from an inner-city health center. Participants completed the Modified Index of Parenthood Motivation, Rosenberg Self-Esteem Scale (Rosenberg, 1969), the General Self-Efficacy Subscale (Sherer, et al., 1982), and a background questionnaire.

Conclusions drawn from this comparative study, constituting an effort to measure and compare desire for children among Black women with and without HIV infection, should be considered limited with regard to generalizability, in light of the limitations of research resulting from non-random, convenience sampling. However, the findings may help direct the path of future research, gradually adding to understanding regarding desire for children among women of any race/ethnicity and/or with any chronic, life-threatening communicable disease. Moreover, this study provides empirical data concerning self-esteem and self-efficacy among a sample of low income

Black women both uninfected and infected with HIV.

Conclusions

Desire for children is related to self-esteem and self-efficacy among Black women. However, the strong positive correlation between self-esteem and self-efficacy may indicate that the two concepts, as measured in this study, are very similar and may overlap. Therefore, sense of self defined as esteem and efficacy, are related to desire for children among low-income Black women regardless of HIV infection.

HIV status is not a statistically significant predictor of desire for children among the women in the study. Women in this study had similar desire for children despite their HIV status. Moreover, within the group of HIV infected women, there was no statistically significant difference in desire for children as a function of their length of time knowing that they were sero-positive.

The strongest set of predictors of desire for children among the participants of this study were age, number of prior abortions and strength of religious belief. However, the strong positive correlation between the number of prior abortions and strength of religious belief raises the question of their redundancy and whether one serves as a marker of the other. It should also be noted that since strength of religious belief was measured with a single item, caution needs to be exercised in interpreting this data. Nevertheless, this study

revealed that although sense of self is related to desire for children, the variable set: age, strength of religious belief and number of prior abortions are better predictors of desire for children while HIV status does not predict desire for children.

Future Research Recommendations

The concept, desire for children needs further investigation to identify its precursors and/or consequences. Wyatt, (1967) and Gerson, (1980, 1983, & 1986) have begun distinguishing desire for children by defining its attributes. Gerson (1980, 1983, 1986) has developed operational definitions and designed a research instrument. This study utilized Gerson's list of defining attributes and antecedents within the Index of Parenthood Motivation to create a revised instrument that is reliable within a sample of low-income Black women. However, this study was not designed to identify the consequences of desire for children. Does desire for children predict the occurrence of pregnancy? Longitudinal studies are needed to understand whether desire for children is a predictor of subsequent pregnancies. What is the relationship between pregnancy intention and desire for children? Cross cultural studies should be conducted which investigate whether desire for children has constant or differing meanings among various subcultures.

The MIPM needs further work to develop confidence in its reliability and validity. Studies which contain approximately 100 to 200 participants, as

suggested by Spector (1992), are needed to conduct thorough item analysis and support internal consistency of the MIPM. Internal consistency reflects the extent to which items intercorrelate with one another, and suggests that they represent a common underlying construct. It is important within the field of minority and women's health to develop measures salient among such groups. Moreover, a crucial part of development for the MIPM is validation. Several different approaches to establishing validity should be undertaken. Criterion-related validity for the MIPM is needed which involves comparing scores on the index with scores on other variables. Referred to by Spector (1992) as predictive validity, these comparisons include correlating MIPM scores with scores on other criteria. In other words, predictive validity is needed to establish correlation coefficients between the scores on the MIPM and measures similar to or in opposition to the MIPM. Construct validity is also needed which provides data on how well the MIPM relates to a general theoretical framework. A proposition from the symbolic interaction model served as an essential frame of reference for examining whether relationships existed between the criterion, predictor and co-variates in this study. However, construct validity was not tested in this study. Consequently, studies are needed that determine whether the MIPM measures a certain property that is present in a theory, and/or can the MIPM empirically confirm or reject a predicted relationship?

Studies that examine the effects of religion and/or church involvement

on desire for children within the population of low to moderate income Black women are needed as U.S. data trends show that despite economic hardships childbearing among unmarried Black women continues to increase (Rendall, 1999). Does the socio-religious-cultural experience of Black women explain their desire for children despite economic and health barriers? What are the socio-religious-cultural effects on desire for children among diverse cultural groups?

Studies are needed that illuminate the health care needs and values of low to moderate income Black women. This study shows that despite health risks to the child and even the mother, there was no difference in desire for children among HIV infected and uninfected women. However, public health officials continue to recommend that HIV infected women avoid pregnancy (Barlett and Finkbeiner, 1998). These recommendations, directed toward women with HIV, do not appear to consider their needs nor attitudes toward the issue. Studies are needed that include but are not limited to psycho-social concepts that relate to and have impact on health behaviors among Black women. What health factors influence childbearing among Black women?

Finally, further research is needed to understand levels of and relationship between self-esteem and self-efficacy in Black women. What are the predictors of increased self-esteem and self-efficacy among Black women of varied socio-economic levels? Results in this study vary from that of Gerson (1986). Consequently studies are needed that determine whether the predictors

of self-esteem and self-efficacy vary as a function of race, education and/or income.

Nursing Implications

Empirical data is imperative as nursing scientists continue to develop and refine that body of knowledge which is unique to and for nursing. Studies that investigate health behaviors are essential to nursing knowledge. Moreover, rigorous endeavors that expose and clarify health practices among minorities become more important as U.S. census estimates predict an increase within this segment of the population (Avery, et al., 1993).

This study revealed that despite HIV infection, Black women maintain desire for children and when compared to uninfected women, HIV positive Black women have decreased self-esteem. However, among the HIV positive women, those with children at home have significantly higher levels of self-esteem than those without children at home. As noted by Hutchinson and Kurth (1991), and Andrew, Williams and Neil, (1993) children are a source of self-esteem for women. Therefore nurses should note the importance of childbearing to Black women with HIV infection and support their clients despite public health policy that instructs HIV infected women to avoid pregnancy. As patient advocates and public health officials, nurses should make an effort to secure changes in public health recommendations that do not reflect empirical findings.

Viewed by Berer and Ray (1993) as a positive lifestyle, caution should be exercised when discouraging childbearing, among clients with HIV infection. In fact, the aim to reduce perinatal HIV transmission must go beyond that of avoiding pregnancy. Nurses providing HIV counseling and/or family planning for HIV infected women should:

- ◆ make an effort to understand the importance of motherhood to their clients,**
- ◆ provide information about perinatal HIV transmission rates and antiretroviral therapy,**
- ◆ support their client's decision to become pregnant, maintain or abort a pregnancy.**

The desire to bear children within the context of HIV may pose a threat to the woman, her child and society at large, however, advice against childbearing can conflict with women's deeply held personal and cultural reproductive goals. For Black women with HIV, pregnancy may represent a source of improved self-esteem. Therefore, public health policies should consider the culture of the persons they intend to service and/or protect.

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Appendix A

Dear Health Care Administrator:

The incidence of HIV among women continues to rise throughout New Jersey. Unfortunately, Black women are over represented among the cases of HIV/AIDS in New Jersey. Your agency is located in a geographic area that has more than 30 cases of HIV/AIDS per 1000 persons.

As a doctoral candidate in New York University's (NYU) nursing program, I plan to examine the relationship between self-esteem, self-efficacy, and desire for children among Black women. Enclosed, you will find New York University's Committee on Activities Involving Human Subjects approved consent form along with a flyer advertising the study.

Please advertise my research among your clinicians and practitioners. I will meet privately with women who self identify as HIV positive and want their information to be kept confidential. If participants agree, several women will be asked to complete the questionnaires in a group setting. Each woman will be given \$5.00 for participation in the study.

Participants for this study can call me at [REDACTED], or send me a note using the attached self addressed stamped envelopes. Thank you in advance for your anticipated support.

Sincerely yours,

**Yvonne Wesley RN MS
Ph.D. Candidate N.Y.U.**

[REDACTED]

Appendix B

**Black Women
with HIV and without HIV
English speaking
Ages 18-45**

*** * ***

Complete four questionnaires about

- 1. your self-esteem**
- 2. your ability to achieve**
- 3. your desire for children**
- 4. your background information**
and
receive \$5.00

Call Yvonne Wesley RN for details

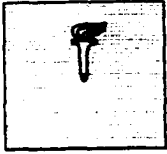
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Appendix C**DESIRE FOR CHILDREN STUDY**
ELIGIBILITY CRITERIA**Inclusion Criteria for Women**

- ▶ Self report of HIV negative ELISA
- ▶ Self report of HIV infection
- ▶ Age 18 to 45 years old
- ▶ Self identified as Black, African American, Negro, or Colored
- ▶ Willingness to complete 4 questionnaires
- ▶ Ability to provide informed consent
- ▶ Ability to communicate (verbal & written) in English

Appendix D



New York University
A private university in the public service
 School of Education
 Division of Nursing

Shimkin Hall, Room 429
 [REDACTED]

INFORMED CONSENT
Desire for Children Project Summary

INTRODUCTION

You are invited to participate in a study to learn more about desire for children. In order to decide whether you want to be in this study, you should understand the risks and benefits of the study. This process is known as informed consent. This form will give you detailed information about the study. Once you understand the study, you will be asked to sign this form if you wish to participate. You will also be given a copy of the consent.

THE PURPOSE OF THE STUDY

The purpose of this study is to find out whether your sense of self and your feelings of being able to achieve are related to desire for children. If you choose to be in the study, you will be asked to complete 4 questionnaires. One questionnaire will ask you about wanting to have children. Another will ask about your sense of self and another asks about your feelings of being able to achieve. There will also be a basic questionnaire about your age, education, marital status, income and the length of time you have known your HIV status. Both HIV infected and uninfected women are asked to complete the same questions. Completing the questionnaires will take about 1 hour of your time. This study is a part of the dissertation requirements in New York University's Nursing program.

RISK

There are no physical risks involved with the study. You may feel uncomfortable or sad concerning some of the questions. If you experience any of these emotions please inform the investigator.

BENEFITS

You will have an opportunity to think about your feelings. The clinic social worker may be contacted at [REDACTED]

DISCLOSURE/CONFIDENTIALITY

Participation in this study is completely voluntary. Refusal to participate will not result in a loss of health care. You may discontinue participation at any time. Your rights to privacy will be strictly respected and the questionnaires will be kept in a locked cabinet in the investigator's office. Only the investigator will have access to your identity and questionnaires. Final reports of the study will be of group data and no participant will be individually identified.

The principal investigator responsible for this study is: Yvonne Wesley, RN, a doctoral student in New York University's Nursing Program. Day time phone number [REDACTED] or Evening phone number [REDACTED]. Dr Joanne Griffin is the faculty advisor for this study and can be reached at New York University [REDACTED]. For questions about your right as a research participant, you may contact the University Committee on Activities Involving Human Subjects, Office of Sponsored Programs, New York University, [REDACTED].

PATIENT'S STATEMENT

I understand that I will be asked to complete 4 questionnaires which will require approximately 1 hour. I will be given \$5.00 upon completion of the study. I have read the entire consent form. My questions have been answered to my satisfaction. I understand what is being asked of me and agree that I will be a part of this study.

Name _____ Signature _____
 Date _____ Code # _____

New York University

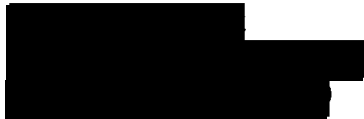


A private university in the public service

School of Education

Division of Nursing

Shimkin Hall, Room 429



Please complete this form if you would like to receive a summary of the final report.

Name _____
Address _____

Thank you for taking part in a study on desire for children.

Appendix E ***Modified Index of Parenthood Motivation***

Put an X in the box that indicates your feelings

		STRONGLY DISAGREE 1	SOMEWHAT DISAGREE 2	NEITHER AGREE NOR DISAGREE 3	SOMEWHAT AGREE 4	STRONGLY AGREE 5
1	I want children more than anything.					
2	I don't want children at all.					
3	Having a baby is very appealing to me.					
4	Having a baby is quite unappealing to me.					
5	Assuming all would go well, I want children.					
6	Knowing the Doctor said not to have children, I would not want children					
7	Knowing the child may be ill, I would take the risk if I got pregnant.					
8	Knowing the child may be ill, I would have an abortion if I got pregnant.					
9	If a woman fails to have children, she violates her true nature.					
10	Motherhood limits a woman's chances for achievement and self-expression.					
11	A reason for having children is to feel useful and needed.					
12	A reason for having children is to have someone to love and someone to love me.					
13	A problem with having children is that they stop you from getting a job.					
14	A problem with having children is that there are too many responsibilities.					

Appendix F

General Self-Efficacy Subscale

Listed below are seventeen statements that measure your beliefs in your capability to achieve. Please indicate the extent to which you agree or disagree with each statement by putting an X in the box which corresponds with your answer.

		STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEITHER AGREE OR DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE
1.	When I make plans, I am certain I can make them work.					
2.	One of my problems is that I cannot get down to work when I should.					
3.	If I can't do a job the first time, I keep trying until I can.					
4.	When I set important goals for myself, I rarely achieve them.					
5.	I give up on things before completing them.					
6.	I avoid facing difficulties.					
7.	If something looks too complicated, I will not even bother to try it.					
8.	When I have something unpleasant to do, I stick to it until I finish it.					
9.	When I decide to do something, I go right to work on it.					
10.	When trying to learn something new, I soon give up if I am not initially successful.					
11.	When unexpected problems occur, I don't handle them very well.					
12.	I avoid trying to learn new things when they look difficult to me.					
13.	Failure just makes me try harder.					
14.	I feel secure about my ability to do things.					
15.	I am a self-reliant person.					
16.	I give up easily.					
17.	I do not seem capable of dealing with most problems that come up in my life.					

Appendix G

Rosenberg Self-Esteem Scale

Indicate whether you strongly agree, agree, disagree, or strongly disagree with the following items by putting an X in the box:

		strongly disagree	disagree	agree	strongly agree
1	On the whole, I am satisfied with myself.				
2	At times I think I am no good at all.				
3	I feel that I have a number of good qualities.				
4	I am able to do things as well as most other people.				
5	I feel I do not have much to be proud of.				
6	I certainly feel useless at times.				
7	I feel that I am a person of worth, at least on an equal plane with others.				
8	I wish I could have more respect for myself.				
9	All in all, I am inclined to feel that I am a failure.				
10	I take a positive attitude toward myself.				

Demographic Information SheetPlace an **X** on the line next to your answer.

- 1) Age
 18-22 33-37
 23-27 38-42
 28-32 >42
- 2) Highest Grade Completed
 Less than 5th
 6-8
 9-12
 Some College
 College Graduate
- 3) Are you employed?
 Yes _____ position?
 No
- 4) What is your average monthly income?
 less than \$500
 \$500-1000
 \$1000-\$2000
 more than \$2000
- 5) What is your HIV Status?
 Positive
 Negative
- 6) How long have you known your HIV Status?
 less than 1 year
 1-3 years
 3-5 years
 more than 5 years
- 7) Do you take HIV medications?
 Yes
 if yes list which medications

 No
- 8) How many abortions have you had?
 none
 1-3
 more than 3
- 9) How many of your children live with you at home?
 none
 1-3
 more than 3
- 10) What is your religion? (check one)
 Baptist
 Catholic
 Muslim
 Other _____ (specify)
- 11) How religious are you? (circle the number)
 1 2 3 4 5 6 7
 not at all very religious
- 12) Are you in a committed relationship?
 yes
 no
- 13) Does your partner want children?
 Yes
 No
 Don't Know