

UNPROTECTED INTERCOURSE: THE VALUE OF MOTHERHOOD,
AMBIVALENCE, MASCULINITY, AND FEMININITY

by

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LIST OF ABBREVIATIONS

Abbreviation	Description
DV.....	Dependent Variable
F.....	Femininity
M.....	Masculinity
UI.....	Unprotected Intercourse

ABSTRACT

In the past 20 years, the rate of unintended pregnancies has remained unchanged, despite the fact that birth control has become more accessible. This research project investigated potential predictors for unintended pregnancies other than the accessibility of birth control. The hypotheses of this study were: greater motherhood value, higher levels of ambivalence, and high femininity and low masculinity would be correlated with higher frequency of Unprotected Intercourse (UI). An online survey was administered to sexually active women at Texas State University, who were not intending to become pregnant within the next three months. The instruments used were a 60-item Bem Sex Role Inventory (BSRI), a 6-item Ambivalence Scale, a 17-item Motherhood Value Scale, and other combined scales. Exploratory factor analysis indicated that Motherhood had two components: Benefits of Motherhood and Costs of Motherhood. In a multiple logistic regression Benefits of Motherhood was found to be a significant predictor for UI. Exploratory analyses found that Benefits of Motherhood significantly correlated with Certainty of wanting children. Also, Ambivalence² significantly correlated with UI and Ambivalence.

CHAPTER I

LITERATURE REVIEW

Introduction

Nationally 35% to 41% of all births are unintended (Afable-Munsuz, Speizer, Magnus, & Kendall, 2006; Khajehpour, Simbar, Jannesari, Ramezani-Tehrani, & Majd, 2013). Of the unintentional pregnancies, many women did not use contraceptives, a necessity in preventing pregnancies. More than 1.5 million pregnancies each year are experienced by women who did not use any method of contraception in the month before conception and were not intending to become pregnant (Foster, Higgins, Karasek, Ma, & Grossman, 2012). In fact, a national survey reports that one out of six women are at risk for unintended pregnancies, but are not currently using contraceptives, and that one out of four of the women had unprotected sex during one or more of the previous 12 months (Frost & Darroch, 2008).

Unintended pregnancies often have negative consequences for both the mother and child such as poor health and less fortunate lifestyles. The costs include mother's lost work and missed educational opportunities. The necessary amount of time that could have been used to invest in education or work opportunities is now replaced by the amount of time the mother needs to rear a baby. Health problems included delayed and low attendance for prenatal visits, prenatal and postpartum depression, physical and sexual abuse, suicide, anxiety, and less attention to pregnancy-related complications (Khajehpour et al., 2013). Moreover, if the mother does not know she is pregnant, she could unintentionally cause harm to the baby by delaying prenatal care, drinking alcohol, and/or using tobacco (Coles, Makino, Stanwood, Dozier, & Klein, 2010). Infants of

unintended pregnancies are also more likely to be born underweight, requiring neonatal hospitalization. Moreover, the babies are at an increased risk for child abuse and developmental delay (Coles et al., 2010; Townsend, 2008). Studies that have followed these kids over a course of a life span show that they are more likely to engage in a higher rate of high-risk behaviors later in life and to have unintended pregnancies themselves (Coles et al., Khajehpour et al., 2013; Townsend, 2008). The previously listed consequences of unintentional pregnancies can be prevented with higher rates of contraceptive use.

The unintended pregnancy risks are higher for women in the U.S compared to some other nations because the lack of contraceptive use has a higher prevalence in the United States in comparison to other industrial nations. According to Westoff (1988), young American women are just as likely as European contemporaries to engage in intercourse as youths; however, American women are less likely than their European counterparts to use contraceptives. Westoff (1988) attributes Americans' low level of contraceptive use to birth control being a taboo subject. For example, the media generally excludes responsible, sexual behavior such as using contraceptives, even though sex is saturated in movies, television programs, and advertising (Westoff, 1988).

There are many predictors of unprotected intercourse. Studies have shown that women have reported the following reasons for engaging in unprotected intercourse: trouble accessing or using birth control, experiencing undesirable effects of birth control, maintaining infertility beliefs, planning on not having sex, lack of knowledge about when a woman can get pregnant, ambivalence toward becoming pregnant, placing a high value on motherhood and having partners that prevent contraceptive use (Biggs, Karasek, &

Foster, 2012; Foster et al., 2012; Nettleman, Chung, Brewer, Ayoola, & Reed, 2007). Previous research had focused on a lack of sex education and the lack of access to women's health services as predictors of unintended pregnancies (Biggs et al., 2012). While access to birth control services has expanded in the last 20 years, the rates of unintended pregnancies have remained at a high level (Biggs et al., 2012). Also, according to Greene, Kremer, Walter, Rubin, & Hale (2000), sex education knowledge has neither controlled nor predicted safe sexual behaviors.

Sex education and greater access to women's health services have provided better resources and knowledge about unintended pregnancies and their consequences, but these alone have not moderated or lessened the rates of unintended pregnancies (Biggs et al., 2012; Greene et al., 2000). Thus, I focus on other predictors that may be of greater use. According to Bruckner, Martin and Bearman (2004) attitudes toward becoming pregnant is an important cause of teenage pregnancies and needs to be incorporated in teenage pregnancy prevention programs. Also, attitudes are a seldom explored explanation of unintended pregnancies (Bruckner et al., 2004). Investigating rarely explored predictors will help researchers have a more complete explanation of unintended pregnancies. The information gained from studies of attitudes can benefit professionals who design prevention strategies. Specifically, this project will focus on attitudes related to motherhood values, ambivalence, and traditional feminine gender attributes.

Motherhood

Motherhood values can be described as to what degree a woman desires to become a mother. The literature only has a few studies that have used motherhood values as a predictor of unintended pregnancies (Bell, Bancroft, & Philip, 1985; McQuillan,

Greil, Scheffler, & Tichenor, 2008; O’Laughlin & Anderson, 2001). These three studies measure both the benefits and costs of motherhood. Benefits of motherhood from previous research includes ideas such as giving and receiving warmth and affection, and to having a sense of accomplishment, while the costs of motherhood included a significant loss of freedom and financial strain, (O’Laughlin & Anderson, 2001). One of the studies compared “early deciders,” women who decided to have children before they got married, to “postponers,” women who delayed having children due to age or other life events. Both the “early deciders” and the “postponers” perceived motherhood as beneficial. However, the postponers expressed higher concerns for the costs of motherhood (O’Laughlin & Anderson, 2001). The other two articles also addressed the importance of the costs and benefits of motherhood, and reported that costs was a stronger predictor than the benefits (Bell et al., 1985; McQuillan et al., 2008). Contrary to the previous articles, Afable-Munsuz, A., Speizer, I., Magnus, J., & Kendall, C. had found significant results for the benefits of motherhood, however the age range for their sample was younger (teenage) than the college population that was used for this study, (2006).

Ambivalence

Ambivalence can be described as having a lack of preference towards becoming or not becoming pregnant. Women who are ambivalent are not intending to become pregnant, but they are also not opposed to becoming pregnant. Literature on ambivalence is limited, although three different studies addressed ambivalence, and all three studies showed promising results. For example, previous research found that 13% to 30% of women attributed their lack of contraceptive usage during sex to their ambivalence

toward becoming pregnant (Nettleman, et. al., 2007; Biggs et al., 2012; Foster et al., 2012). In the Biggs' et al. study, women who engaged in three or more episodes of Unprotected Intercourse (UI) in the previous three months were significantly more likely to report being ambivalent toward becoming pregnant in comparison to women who engaged in fewer than 3 episodes of UI (Biggs' et al., 2012).

Masculinity and Femininity

Janet T. Spence (1973) defines masculinity and femininity based on attributes that are social acceptable for each gender. A key example of a masculine attribute is being self-assertive, while examples of feminine attributes are being interpersonally oriented or conforming. Measuring assertiveness or conforming personalities could be a good indicator of whether a woman will have an unintended pregnancy. For instance, 19% of women agreed with the statement "my partner did not want to use birth control" as a reason for engaging in unprotected intercourse (Biggs et al, 2012). One could infer that these women did not use contraceptive because they were conforming to their partner's decision to not use contraceptives or were unable to assert their choice to use contraceptives. Also, if women score high on femininity, this indicates they are more likely to follow their socialized gender role. For women, traditional gender roles negatively correlate with contraceptive use, (Whitley, 1988). The socialized gender role includes the expectation for women to be disinterested in sex, which could discourage contraceptive use. If a woman uses contraceptives, it implies a clear intent on her part to be sexually active (Whitley, 1988). In order to reduce the guilt of violating the traditional feminine social role, these women may not use contraceptive to rationalize that sexual activity is unintentional. Perhaps if women were less influenced by gender socialization

rules and were more assertive in contraceptive decision making, the frequency of contraceptive use would increase resulting in less unplanned pregnancy.

Unprotected Intercourse

As previously mentioned many of the women who have unintended pregnancies use contraceptives inconsistently. In one study, women who were inconsistent users and non-users were 2.8 and 11.4 times, respectively, more likely to become pregnant than consistent contraceptive users (Bruckner et al., 2004). Contraceptive use is a strong predictor for unintended pregnancies as indicated from previous research. However, only measuring contraceptive use fails to account for the number of times women had sex without using contraceptives, another key indicator of risk. Therefore a better predictor for the probability of becoming pregnant is to determine the number of Unprotected Intercourse (UI) by multiplying the frequency of intercourse by the percentage of times the women do not use c contraceptives. In a study using UI, the average frequency of UI in the previous 3 months for women who had abortions was 18, while women who did not become pregnant with in the past three months had an average UI frequency of 7, (Biggs, et al., 2012). Since UI significantly predicts unintended pregnancies the criterion variable for this research project was Unprotected Intercourse (UI) to determine women who are at risk for unintended pregnancies.

Hypotheses

The purpose of this study was to find predictors for unprotected intercourse. This study investigated motherhood values, ambivalence, and traditional gender attributes and their links to contraceptive use.

I proposed the following hypotheses based on my research questions and on the review of the literature:

Hypothesis 1: Higher ambivalence will be significantly positively correlated with higher frequency of UI.

Hypothesis 2: Higher value of motherhood will be significantly positively correlated with higher frequency of UI.

Hypothesis 3: Higher level of femininity will be significantly positively correlated with higher frequency of UI.

Hypothesis 4: Higher levels of masculinity will be significantly negatively correlated with higher frequency of UI.

Hypothesis 5: There will be an interaction between masculinity and femininity in which high feminine attributes accompanied with low masculine attributes will predict higher frequency of UI.

Hypothesis 6: Ambivalence, Motherhood, Femininity, Masculinity, and the interaction of Femininity and Masculinity combined will explain more of the criterion measure variance than each independent variable alone.

CHAPTER II

METHODS

Participants

During the fall semester of 2014, women who attended Texas State University and who were registered in a psychology class were given the opportunity to complete this survey. Three hundred and ninety women decided to participate. All women had to meet the following criteria to participate in the study: be registered for a psychology course at Texas State University, be at least 18 years old, not married, heterosexual, sexually active, be fertile to their knowledge, were not previously pregnant, and were not trying to become pregnant within the next three months. The women who chose to participate and who were eligible for this study, gave electronic consent before completing the survey on the website Qualtrics (See Appendix A). Upon completing the survey, participants received 1 hour credit necessary to complete the PSY 1300 course or received extra credit for their psychology course as compensation. Once the data were collected, any missing data were excluded.

Design and Variables

A non-causal correlational design was used to explore the relationships of the dependent measure (UI) with multiple independent variables (see Figure 1).

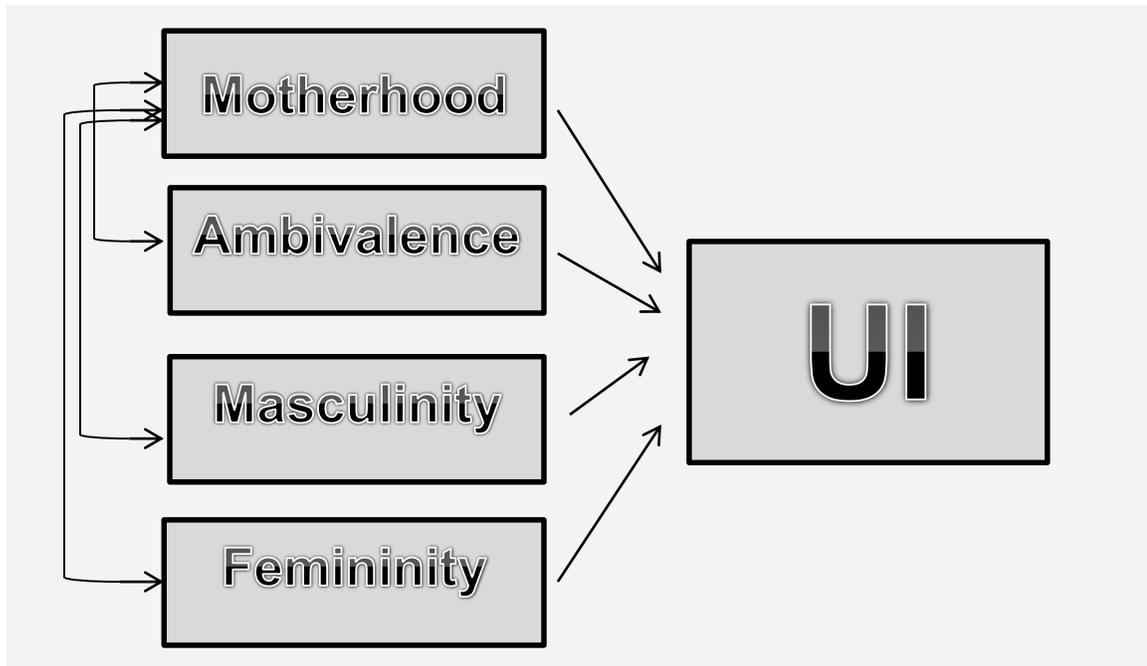


Figure 1. Correlation variable design. Double head arrows indicate that the two connecting variables will correlate with one another. Single head arrows indicate the variables will affect the variable at the end of the arrow.

Instruments, Reliability, and Construct Validity

The criterion variable was a measure of the frequency of unintended intercourse (UI). Women were asked to report the frequency of how often they had sexual intercourse in the previous 3 months and how often they used contraception (Foster et al., 2012) (Please find the two criterion variables in the Appendix A, questions 104 and 105). As Foster et al. (2012) did in previous research, I estimated the number of UI by multiplying the percent of times women did not use contraceptives with the number of times they had sexual intercourse in the previous 3 months. For example if a participant reported having sex 10 times and used contraceptives 80% of the time we can conclude she had engaged in two UIs by multiplying the percentage of times she did *not* use contraceptives by the number of times she had sexual intercourse.

The motherhood value, defined as how much women value being a mother, was measured by adapting items from three different sources. From the first source, four items were obtained from a study that used a five-item scale to measure *importance of motherhood*, i.e. “I think my life will be more fulfilling with children,” (McQuillan, et al., 2008). The items were measured on a Likert scales from “strongly agree” to “strongly disagree” (See Appendix A section B). In the McQuillan et al. study the combined five items had a Cronbach’s alpha of 0.86. The other two sources of items came from two studies, each having items that included both advantages and disadvantages of having children, (Bell et al., 1985; O’Laughlin & Anderson, 2001). Examples of these items include: “Having children is a way to give and receive warmth and affection” and “Having children can lead to financial strain and long term debts.” All of the items were Likert scaled on five points ranging from strongly agree to strongly disagree. Also I added the following statement, “If I were to discover I was infertile, I would be devastated.” These items can be found in the Appendix A, items 12 to 30.

Ambivalence is operationally defined as having no preference as to whether one becomes pregnant or not. Five items that measured *Attitudes toward pregnancy* (Bruckner et al, 2004) were used to help determine ambivalence (See the Appendix A section C). This scale had a Cronbach’s alpha of 0.72. However, four items were added to this scale from two other sources, (Frost, Singh, & Finer, 2007; Higgins, Popkins, & Santelli, 2012). Additional items included statements such as: “if I were to get pregnant, I would be pleased” and “thinking about my life right now, it is very important to avoid becoming pregnant,” (Frost et al., 2007; Higgins et al., 2012). An additional original item was added, “I feel as though the advantages of becoming pregnant, right now, are much

higher than the disadvantages.” All 10 items were scored on a three point agreement Likert scale with the choices of agree, disagree, and neutral/neither. Ambivalence was measured by the frequency of “neutral/neither” chosen as the women’s degree of agreement.

The Bem Sex Role Inventory (BSRI) created by Sandra Bem (1974) measures femininity and masculinity. The questionnaire consists of 60 items total; 20 items which are socially desired for females (F) (strong need for security, feelings easily hurt), 20 items which are socially desired for males (M) (aggressiveness and dominance) and 20 neutral items (See Appendix A section D). Each of the items is Likert scaled from 1 (never or almost never true) to 7 (almost always true). These answer choices were changed to a 5 point Likert scale to keep consistency across the whole survey. This may compress variability. Once the data was collected the women had both a Masculinity (M) and a Femininity (F) score, as well as classified into 4 different categories; masculine (high M and low F), feminine (low M and high F), androgynous (high in both M and F), and undifferentiated (low in both M and F). In previous research the masculinity subscale had a Cronbach’s alpha of 0.87 while the femininity subscale had a Cronbach’s alpha of 0.78.

Data Collection Procedures

Five interviews were conducted to established face validity before conducting the survey. Necessary changes were made to the survey before the survey was available to participants. As previously stated, students who were interested and met the requirements were emailed a link to the survey on the Qualtrics website. Before taking this survey, each participant gave electronic consent. Once the participants had completed the online

survey, they were debriefed on the survey and had an opportunity to answer open-ended feedback questions. After the students had completed this part of the survey, they were directed to another link, in which they were able to provide their names and class in order to receive the extra credit. By creating a separate link for the names and course for extra credit, all participants' responses were confidential. After about 390 participants participated in the survey, the raw data was collected from Qualtrics. As mentioned earlier, to ensure better face validity fellow students were interviewed, inquiring what they believed the questions were asking. Reverse scaling was used to ensure the internal validity of the survey.

CHAPTER III

RESULTS

Participants

There were originally 390 participants in this study. Participants were eliminated for not meeting the criteria, for not completing the survey, for having completed the survey a second time and for providing contradictory information. Specifically, the criteria required that participants be women, non-married, who were not trying to become pregnant, predominately heterosexual, sexually active, and fertile. A total of 171 participants were eliminated for not meeting these criteria. Another 38 were eliminated for not completing the survey or completing their survey twice. Additionally, participants with contradicting information, who reported having used contraceptive 100% of the time and reasons for why they were unable to use contraceptives were eliminated. The data for 142 women participants were left to analyze in this study.

The women's ages ranged from 18 to 26 years old, with a median age of 20. The make-up of classification was freshman 27.5%, sophomore 16.2%, junior 35.2%, and senior 21.1%. The ethnicities were White 55.2%, Hispanic/Latina 32.9%, Black 8.4%, and other ethnicity 3.5%. Participants reported their family socioeconomic status to be 1.4% from lower class, 20.3% from lower-middle class, 49% from middle class, 28.0% from upper-middle class, and 1.4% upper class. The largest religious group was a non-denominational Christianity 36.1%, followed by Catholic 30.9%, Agnostic/Atheist 17.3%, other Christian Religion 13.5%, and lastly non-Christian religions 2.3%. The relationship status was comprised of 53.1% who were in a committed relationship, 30.8% who were causally dating, and 16.1% who were not dating.

Contraceptive Types and Reasons for Previous UI

Women were asked to select their contraceptive method and were allowed to select multiple answers. They were also asked to select any non-contraceptive methods they used to avoid becoming pregnant. They were allowed to select multiple answers. The most common contraceptive type was condoms (63%), followed by oral contraceptives or “the pill” (49%), then other hormonal contraceptives: implant, shots, patches, IUD, and nuvarings (13%), and lastly no contraceptives (12%). None of the women selected cervical cap, diaphragm, female condom, vasectomy (partner’s), ligation, and hysterectomy as methods of contraceptives. The most common non-contraceptive method was withdraw or “pull out” (61%), followed by doing other sexual activity to avoid intercourse (17%), then avoiding having sex while ovulating (13%), and lastly no contraceptives or non-contraceptive methods (2%).

For the women that had some UI, they were asked to report reasons for not using contraceptives. The women were allowed to select multiple reasons for not using contraceptives. Fifty and eight percent of women reported they were not planning on having sex, 34.9% reported it felt better to not use contraceptives, and 17.5% reported their partner did not want them to use contraceptives. A small percentage of women also reported not using contraceptives because they were ambivalent, a lucky person, not having enough sex, worried about or had side effects, had barriers accessing birth control, too costly, forgetful, infertile beliefs, it made them closer to their partner, and for religious reasons.

Preliminary Analysis

The dependent variable was the number of reported instances of Unprotected Intercourse (UI). To obtain UI, I calculated the percentage of times the participants did *not* use contraceptives by subtracting the percentage of times they did use contraceptives from 100%. This percentage was then multiplied by the number of times they had sex during the last three months, giving us the number of times they had Unprotect Intercourse (UI). A histogram of the variable showed an extremely positively skewed distribution, with 55% of the population having zero instances of reported UI. In order to accommodate for the lack of the variability that was provided by the dependent variable, the variable was dichotomized into 2 groups: women with zero UI and women with some UI.

Ambivalence was measured on a three point Likert scale, with the choices agree, disagree, and neutral/neither. Since ambivalence represented neither agreement nor disagreement and was the construct of interest the variable was dummy coded so that neutral/neither was coded as a one, while agree and disagree were coded as zeroes. Reliability analyses were then conducted on Ambivalence and the other three predictors: Motherhood Value, Femininity, and Masculinity. Items with low correlations with the total scores for each measure were deleted in order to raise the alpha reliability for the measurements (See Appendix B for items that were kept in the construct for each measurement and Appendix C for deleted items). After four items were deleted, Ambivalence was a six item measurement with a reliability alpha of 0.567. The Ambivalence composite score was obtained by adding the number of times the women selected a neutral/neither, giving the possible range of 0 to 6. Motherhood Value was

comprised of 17 items and had a reliability alpha of 0.901 once two items were deleted. Femininity's 14-items measurement had a reliability alpha of 0.879 when 6 items were deleted. Lastly, Masculinity included 15 items with an alpha of 0.850 once 5 items were deleted. The average composites were obtained for each of these measurements.

Motherhood value had two factors in previous literature, however the combined construct had a high reliability of .901. A factor analysis was conducted on the scale to determine what, if any, underlying structures existed for measurements on Motherhood Value. Principal axis factoring analysis was conducted utilizing a promax rotation. The analysis produced a two component solution which was evaluated using eigenvalues greater than one, factor loadings of .5 and above, variance, and a scree plot. Criteria indicated a two factor component solution was appropriate with two variables excluded from the model (see Table 3). Factor 1 consisted of 10 items, which had positive loadings and addressed *Benefits of Motherhood*. The second factor consisted of 7 items, which addressed *Costs of Motherhood*. (See Table 3.) Both components accounted for 47.45% of the total variance in the original variables.

Table 1*Component Loadings for Motherhood Values*

	Component	
	Benefit s	Costs
Having children is important to me in order to feel complete as a woman. (Completemen)	.825	
It is important for me to have children. (important)	.792	
I think my life would be more fulfilling with children. (fulfilling)	.774	
I would like to have a child to establish my own family. (establishfamily)	.765	
I believe that having children is the right thing to do. (rightthing)	.760	
Having children would enrich my life. (enrichlife)	.724	
I always thought I would be a mother. (espectedrole)	.712	
Having children is a way to give and receive warmth and affection. (warmthattention)	.594	
If I were to discover I was infertile, I would be devastated. (infertiledevastated)	.577	
I want children to have someone to love. (someoneelove)	.541	
Having children can lead to financial strain and long term debts. (financialstrain)		.846
Children are a source of worry and stress. (worry)		.795
Having children may interfere with my employment opportunities and/or career advancements. (interferecareer)		.682
Having children results in a significant loss of freedom. (freedomloss)		.677
I can see that the strains of having children may weaken rather than strengthen a marriage. (weakenmarriage)		.635
If I had children I would be restricted from pursuing my interests and hobbies. (interferehobbies)		.596
If I had children my leisure time would be restricted. (interfereleisuretime)		.520
I believe it is selfish to decide not to have children. (selfishwochild)		
I would prefer not to bring children into such a troubled world. (troubledworld)		

Note. Table illustrates factor loading of items on each component with factor loadings greater than .5.

Reliability analyses were then conducted on the two motherhood factors:

Benefits of Motherhood and Costs of Motherhood. Benefits of Motherhood Value was comprised of 10 item construct with a reliability alpha of 0.88. Costs of Motherhood

Value was comprised of 7 item construct with a reliability alpha of 0.85. The average composites were obtained for each of these measurements.

Tests of Hypothesis

The original hypothesis assumed that the dependent variable would be a continuous variable. A multiple regression was the planned statistical analysis. However, the choice to dichotomize the dependent variable required a different regression approach. Thus, the statistical analysis was changed from a multiple regression to a multiple logistic regression. Also originally the hypothesis include Motherhood value as a whole construct; however since motherhood has two factor, these factors were used as predictor variables in place of Motherhood value. The new hypothesis for this project is as follows:

Hypothesis: Ambivalence, Benefits of Motherhood, Costs of Motherhood, Femininity, Masculinity, and the interaction of Femininity and Masculinity will be statistically significant predictors independently and combined for UI status (i.e. no unprotected intercourse or some unprotected intercourse).

I first conducted a few descriptive statistics (sample size, mean, and standard deviation) on all the predictor variables between women with zero UI and women with some UI (see table 2). By comparing the means by UI status, the greatest mean difference between the two variables is Benefits of Motherhood; women with No UI had an average score of 3.2, while women with some UI had an average score of 3.45 (see table 2).

Table 2

Sample Sizes, Means, and Standard Deviation for each predictor variable by Unprotected Intercourse status (zero UI or some UI).

Variable by UI	<i>n</i>	<i>M</i>	<i>SD</i>
Benefits of Motherhood			
No UI	79	3.2	0.7
Some UI	60	3.45	0.68
Costs of Motherhood Value			
No UI	79	2.81	0.7
Some UI	61	2.91	0.68
Ambivalence			
No UI	79	1.1	1.37
Some UI	64	1	1.2
Femininity			
No UI	78	4.25	0.48
Some UI	63	4.22	0.48
Masculinity			
No UI	79	3.82	0.46
Some UI	60	3.82	0.44

A pairwise correlation matrix was produced to show each predictor variable's independent correlation with the dependent variable, UI. Only Benefits of Motherhood significantly correlated with the DV, $r(139)=.176$, $p<.05$, $R^2= 3.1\%$ (See table 3).

Table 3

Intercorrelations Between UI and Predictor Variables

Variable	UI	Benefits	Costs	Amb	Femininity	Masculinity	InteractionFM
UI	1	.176*	NS	NS	NS	NS	NS
Benefits		1	.442***	NS	.249**	NS	NS
Costs			1	.191*	.190*	NS	NS
Amb				1	NS	NS	NS
Femininity					1	.442***	.829***
Masculinity						1	.864***
InteractionFM							1

Note. Not Significant (NS) * $p<.05$, ** $p<.01$, *** $p<.001$

A backward multiple logistic regression analysis was conducted to determine the degree to which Benefits of Motherhood and Costs of Motherhood predicted unprotected intercourse (zero unprotected intercourse or some unprotected intercourse). Based on Tolerance and VIF there is no multicollinearity between the predictor variables. Multiple logistic regression results indicated that Benefits of Motherhood was the only significant predictor of unprotected intercourse, $X^2(1) = 5.279, p=.022$. Women who had a perceived higher Benefits of Motherhood were more likely to have had some unprotected intercourse. The model correctly classified 60.6% of the cases. Regression coefficients are presented in Table 4.

Table 4
Regression Coefficients

	<i>B</i>	<i>S.E.</i>	Wald	<i>df</i>	<i>p</i>	Odds Ratio
Benefits of Motherhood	0.065	0.028	5.279	1	0.022	1.067
Constant	-2.529	0.967	6.841	1	0.009	0.08

Note. Cox & Snell $R^2 = 0.042$, Nagelkerke $R^2 = 0.057$

Exploratory Analyses

Exploratory analyses was conducted in order to explore reasons the original model and variables failed to be predictive. A multiple regression with the same original IVs and with percentage of times not using contraceptives as the DV was conducted. This exploratory analysis was conducted because the original DV lacked variance and by increasing the variance, there may have been a better chance of detecting a significant predictor.

The first measure of Ambivalence had a low internal reliability, so exploring a second measure of Ambivalence could provide more information as a predictor variable; the second measure of Ambivalence will be defined later in this section. The second

measure of Ambivalence was used in a point biserial correlation with UI to further explore Ambivalence. Also a correlation for between both measures of Ambivalence was conducted to test if they are measuring the same construct. Lastly a correlation of Benefits of Motherhood and certainty of wanting children was conducted to support the validity of Benefits of Motherhood with convergent evidence. A correlation matrix with the five variable (UI, Ambivalence2, Ambivalence, Benefits of Motherhood, and certainty of wanting children) was used to illustrate the 3 correlations of interest.

As noted earlier, the original dependent variable Unprotect Intercourse (UI), was comprised of values determined by the percentage of times the participants did *not* use contraceptives multiplied by the number of times they had sex. I analyzed the distribution of the percentage of times women did not use contraceptives to see if this variable had more variability than frequency of UI. Non-contraceptive use had greater variability than the UI dependent variable, however the percentage of non-contraceptive use was not normally distributed and still lacked in variability (see Figure 2). Nevertheless, a forward multiple regression analysis was conducted to determine if the independent variables (Benefits of Motherhood, Costs of Motherhood, Ambivalence, Masculinity, and Femininity) in combination were predictors for the percentage of times women did not use contraceptives. Regression results showed that only one predictor, Motherhood value, significantly predicted percentage of non-contraceptive use, $F(1,130) = 5.152, p = .025, R^2 = .038$. Women who had a higher motherhood value were more likely to have a higher percentage of non-contraceptive use. Motherhood value accounted for 3.8% of the variance in percentage of non-contraceptive use.

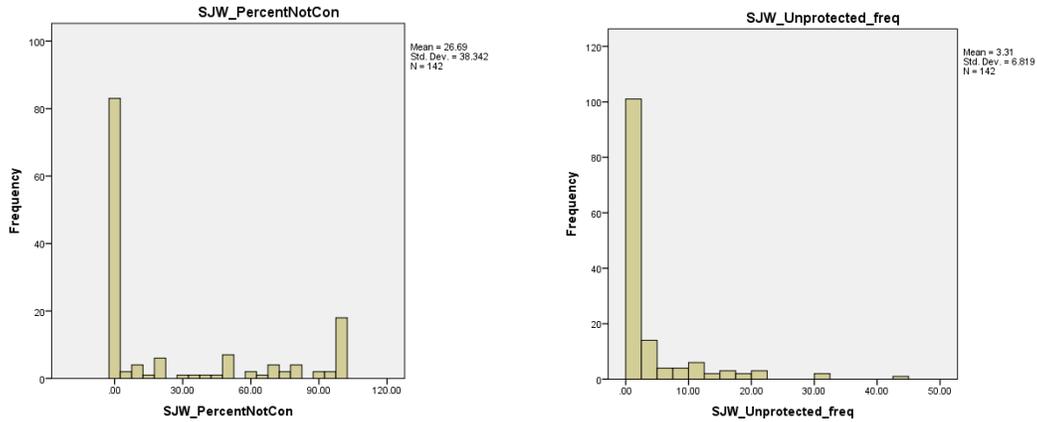


Figure 2. Non-contraceptive use histogram vs. frequency of UI histogram.

Although this study included a scale measurement of Ambivalence, an additional question about Ambivalence was included in the study, since the Ambivalence scale was newly created and previous studies have used this question. The question, “If I got pregnant I would be fine either way,” was measured on a 5 point Likert scale ranging from “strong agree” to “strongly disagree” and was labeled as “Ambivalnece2.” The participants were asked to indicate how certain they were that they wanted children. The question, “Do you eventually want to have children?” was measure with 5 answer choices: Yes; Unsure, but leaning toward yes; I have no idea; Unsure, but leaning toward no; and No, and was labeled as “Want_Child.”

Finally, a correlation matrix was conducted including the three correlations: UI and Ambivalence2, the two Ambivalence scales, and Benefits of Motherhood and the Certainty of wanting children in the future. There was a positive weak significant point biserial correlation between UI and Ambivalence2, $r(142)=.177, p < .05, R^2=3.1\%$. There was a positive weak significant correlation between the two Ambivalence scales, $r(137)=.239, p=.005, R^2= 5.7\%$. There was a positive moderate significant correlation between Benefits of Motherhood value and Certainty of wanting children, $r(135)=.664, p<.001, R^2 = 44.1\%$ (see Table 5).

Table 5*Intercorrelations between Exploratory Variables*

Variable	UI	Amb	Amb2	Benefits	Want_Child
UI	1	NS	.177*	.176*	NS
Amb		1	.239**	NS	NS
Amb2			1	.263**	.229**
Benefits				1	.664***
Want_Child					1

Note. Not Significant (NS) * $p < .05$, ** $p < .01$, *** $p < .001$

CHAPTER IV

DISCUSSION

Summary

Previous studies had found that Motherhood, Ambivalence, Masculinity, and Femininity were significant predictors for engaging in Unprotected Intercourse. However, in this study only Benefits of Motherhood significantly predicted for UI. Additional exploratory analyses found that Benefits of Motherhood significantly correlated with Certainty of wanting children. Finally Ambivalence² significantly correlated with UI and Ambivalence.

Motherhood and Previous Literature

This study found the Benefits of Motherhood and not the Costs of Motherhood to be a significant predictor. This is in contrast to O’Laughlin & Anderson (2001) who found the opposite; the Costs of motherhood, and not the Benefits of Motherhood was a significant predictor. Similar to this study, though Afable-Munsuz et al (2006) found that the Benefits of motherhood was a significant predictor for having unintended pregnancies (Afable-Munsuz et al, 2006). This study was expected to have similar results to O’Laughlin & Anderson’s sample since both samples used college students, whereas Afable-Munsuz et al’s sample was comprised of teenagers. However, O’Laughlin & Anderson (2001) used a slighter older demographic with an average age of 23 years old compared to this sample’s average age of 20 years old. Perhaps for samples with a younger demographic (such as mine and Afable-Munsuz et al.’s), the Benefits of Motherhood is a stronger predictor for UI. Although for an older demographic such as O’Laughlin & Anderson’s sample, the Costs of Motherhood may be a stronger predictor

for UI. This speculation should be conformed with more research on these predictors for UI, Benefits of Motherhood and Cost of Motherhood, as well as how demographics affect these predictors.

Ambivalence and Motherhood

If a women has a high benefits of motherhood value, one would expect that she would be more certain that she would want children in the future. In the exploratory section, I found that Benefits of Motherhood significantly correlated with Certainty of wanting a child. Since Certainty of wanting children correlated with Benefits of Motherhood, as expected, Benefits of Motherhood has convergent validity.

The original variable of Ambivalence was not a significant predictor for UI, however Ambivalence2 significantly correlated with UI. This may indicate that Ambivalence may be a significant predictor for UI, and the reason the first measurement of Ambivalence was not a significant predictor was due to lack of reliability. Furthermore, the two measurements of ambivalence significantly correlated with each other. This indicates that the two measurements had similar constructs and also suggests that the first Ambivalence was not significant due to the lack of reliability.

Strengths

The strengths of this study was Benefits of Motherhood had a high reliability, had convergent validity, and was a significant predictor for UI. The reliability alpha for Benefits of motherhood was in the high eighties at .88. Benefits of Motherhood and Certainty of wanting children significantly correlated with each other, giving Benefits of Motherhood convergent validity. Lastly Benefits of Motherhood was a significant predictor for UI. Since this finding is contrary to previous studies, hopefully this

discovery will inspire researchers to do more research on Benefits of Motherhood.

Limitations

There were a number of limitations for several of the measures used and these are addressed below.

The scale for Ambivalence was not a significant predictor for UI status, but the single item measure of ambivalence was significant. It is likely that the scale for ambivalence did not produce significant results because the measurement had a low alpha reliability of 0.567. The Ambivalence scale also lack variability. Most women were not ambivalent about becoming pregnant. Given a measurement with greater variance and a stronger reliability for ambivalence, ambivalence could be a promising predictor, especially since Ambivalence2 was a significant predictor.

Another limitation of this study was the theoretical issues that BSRI may have had for predicting UI status. The BSRI has a broad concept for both masculinity and femininity. Femininity included concepts such as warm and affectionate, while masculinity included concepts such as independent, leadership abilities, and forcefulness. If there was a narrower concept of gender roles, femininity only measuring passivity/conformity and masculinity only independence perhaps the concepts would have been significant predictors. Another alternative would be to measure for how comfortable participants feel about negotiating contraceptive decisions with their partner instead of measuring gender roles. Specific questions such as “which partner is responsible for using contraceptives” or “I feel as though I can convince my partner to use contraceptives if I wanted” may be better at tapping into the traditional gender role that could affect using contraceptives. Seventeen and a half percent of the women who

engaged in some UI reported not using contraceptives because their partner did not want them to use any contraception. This suggests that women either do not feel it is their responsibility to make a decision about contraceptive use or do not feel empowered to compromise with their partner on contraceptive choices. Lack of using contraceptives because their partner decides against them, suggests they may have a traditional feminine characteristic that the BSRI was not able to detect.

Another limitation is the lack of variability in the sample. This lack of variability may have affected femininity and masculinity as significant predictors. Most women reported being high in both Masculinity and Femininity. If there had been more women who were higher in femininity and lower in masculinity, perhaps there may have been enough variability for traditional gender roles to produce significant results.

A key limitation in this study is a lack of variance in the DV, unprotected intercourse (UI). Over 50% of the population never engaged in UI. Foster et al. (2012) found more significant results for UI; however, the demographics were different: their sample was collected from an abortion clinic whereas this study collected data from a college population. Given a larger variability it would have been more likely to find significant results. Also, using a one item criterion variable may have limited reliability and validity, especially if memory is inaccurate or if participants are untruthful.

Future Direction

Future studies should focus on creating an ambivalent measurement with a higher reliability alpha and a measurement that could more accurately capture why women are influenced by men for their decision on using contraceptives.

This study operationalized a measure of motherhood and found that the Benefits

of Motherhood was a significant predictor for UI status. However previous research contradicts these findings. Future studies should further investigate Benefits of Motherhood and Cost of Motherhood, and how other variables may affect these predictors.

Conclusion

Investigating predictors for unprotected intercourse is crucial in helping prevent the negative effects the mother and baby experience. When unplanned pregnancies occur, the mother loses work and educational opportunities, while the baby tends to be underweight and experience other unintentional harm such as delayed prenatal care, and effects from the mother drinking alcohol and/or using tobacco. Although this research project had some limitations, this project also had some strengths. The Benefits of Motherhood had a reliability alpha of .88, had convergent validity, and was a significant predictors for UI status. To continue to have a better understanding of the reasons why women engage in UI, future studies should focus on creating an ambivalent measurement with a higher reliability alpha, and creating a measurement that could more accurately capture why women are influence by men for their decision on using contraceptives. The health care system can focus on more accurate strategies for preventing unintended pregnancies once we have a more complete understanding of the reasons for unprotected intercourse.

APPENDIX SECTION

APPENDIX A

Introduction: This study explores individual reasons for engaging in unprotected intercourse. You are being asked to answer sets of questions about motherhood values, the ambivalence women may experience about becoming pregnant, and how much women have a traditional feminine personality. The survey will take about 45 minutes to complete. There are no right or wrong answers. You may choose to not answer any question(s) for any reason. Please read the questions carefully and answer the questions as honestly as you can. The results of this study may provide a better understanding of unintentional pregnancies.

Survey Questions

A.) Demographics

1. What is your sex?
 - a. Female
 - b. Male
 - c. Other
2. How old are you?
 - a. 18
 - b. 19
 - c. 20
 - d. 21
 - e. 22
 - f. 23
 - g. 24
 - h. 25 or older, please indicate how old you are? Numerical value_____
3. What ethnicity do you most identify with?
 - a. Asian
 - b. Arabic
 - c. Black
 - d. Latina or Hispanic
 - e. White

- f. Native American
 - g. Pacific Islander
 - h. Other
4. What was your family's socioeconomic status when you were growing up?
- a. Upper class
 - b. Upper-middle class
 - c. Middle- class
 - d. Lower-middle class
 - e. Lower class
5. What is your religious affiliation?
- a. Muslim
 - b. Jewish
 - c. Protestant
 - d. Mormon
 - e. Catholic
 - f. Christian scientist
 - g. Non-denominational Christianity
 - h. Hinduism
 - i. Buddhism
 - j. Agnostic (Do not know if God or Gods exist)
 - k. Atheism (Do not believe God or Gods exist)
 - l. Other _____
 - m. Prefer not to say
6. What is your classification?
- a. Freshmen (less than 30 hours of college credit)
 - b. Sophomore (30 to 60 hours of college credit)
 - c. Junior (60 to 90 hours of college credit)
 - d. Senior (above 90 hours of college credit)
7. What is your relationship status?
- a. Single or divorced, not dating
 - b. Single or divorced, causally dating
 - c. In a committed relationship
 - d. Married
8. From a scale 0 to 7, 0 being exclusively heterosexual and 7 being exclusively homosexual, how would you rate your sexual orientation?
Circle one.
- Exclusively heterosexual 0__1__2__3__4__5__6 Exclusively homosexual
9. Have you ever been pregnant before?
- a. Yes

- b. No
- 10. Are you trying to become pregnant within the next 3 months?
 - a. Yes
 - b. No
 - c. Unsure
- 11. Do you eventually want to have children?
 - a. Yes
 - b. Unsure, but leaning toward yes
 - c. I have no idea
 - d. Unsure, but leaning toward no
 - e. No

B.) Section 2- In the following section indicate how much you agree with each of the following statements. Please note the extent to which you agree or disagree with each statement on the scale provided. Strongly disagree (1), Disagree (2), Neither disagree or agree (3), Agree (4), Strongly agree (5) Circle one.

- 12. Having children would enrich my life.
 - a. 1____2____3____4____5
- 13. If I had children my leisure time would be restricted.
 - a. 1____2____3____4____5
- 14. I want children to have someone to love.
 - a. 1____2____3____4____5
- 15. I would like to have a child to establish my own family.
 - a. 1____2____3____4____5
- 16. If I were to discover I was infertile, I would be devastated.
 - a. 1____2____3____4____5
- 17. I believe that having children is the right thing to do.
 - a. 1____2____3____4____5
- 18. Having children is important to me in order to feel complete as a woman.
 - a. 1____2____3____4____5
- 19. I always thought I would be a mother.
 - a. 1____2____3____4____5
- 20. I would prefer not to bring children into such a troubled world.
 - a. 1____2____3____4____5
- 21. I believe it is selfish to decide not to have children.
 - a. 1____2____3____4____5
- 22. Children are a source of worry and stress.
 - a. 1____2____3____4____5
- 23. Having children can lead to financial strain and long term debts.
 - a. 1____2____3____4____5
- 24. Having children is a way to give and receive warmth and affection.

- a. 1____2____3____4____5
25. Having children may interfere with my employment opportunities and/or career advancements.
- a. 1____2____3____4____5
26. I can see that the strains of having children may weaken rather than strengthen a marriage.
- a. 1____2____3____4____5
27. If I had children I would be restricted from pursuing my interests and hobbies.
- a. 1____2____3____4____5
28. I think my life would be more fulfilling with children.
- a. 1____2____3____4____5
29. It is important for me to have children.
- a. 1____2____3____4____5
30. Having children results in a significant loss of freedom.
- a. 1____2____3____4____5

C.) Section 3 For this section, assume that you would be getting pregnant within the next 3 months. For each item, please mark the extent to which you would agree or disagree with the statement. Disagree (1), Agree (2), Neutral/neither (3). Circle one.

31. If I got pregnant, it would be embarrassing for my family.
- a. 1____2____3
32. If I got pregnant, it would be embarrassing for me.
- a. 1____2____3
33. If I got pregnant, I would be pleased.
- a. 1____2____3
34. If I got pregnant, deciding whether or not to have the baby would be stressful.
- a. 1____2____3
35. If I got pregnant, I would be forced to grow up too fast.
- a. 1____2____3
36. Getting pregnant at this time is one of the worst things that could happen to me.
- a. 1____2____3
37. If I were to get pregnant, I would look forward to telling my loved ones about a baby.
- a. 1____2____3
38. If I were to get pregnant, I would feel very upset.
- a. 1____2____3
39. Thinking about my life right now, it is very important to avoid becoming pregnant.

a. 1 ___ 2 ___ 3

40. I feel as though the advantages of becoming pregnant, within the next 3 months, are much higher than the disadvantages.

a. 1 ___ 2 ___ 3

D.) Section 4 For each of the items below, please select the appropriate number to rate how well each characteristic describes you: Never or almost never true (1), somewhat untrue(2), Neutral(3), somewhat true (4), Always or almost always true (5) Circle one.

41. Self-reliant

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

42. Yielding

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

43. Helpful

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

44. Defends own beliefs

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

45. Cheerful

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

46. Moody

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

47. Independent

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

48. Shy

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

49. Conscientious

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

50. Athletic

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

51. Affectionate

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

52. Theatrical

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

53. Assertive

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

54. Flatterable

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

55. Happy

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

56. Strong personality

a. 1 ___ 2 ___ 3 ___ 4 ___ 5

57. Loyal

- a. 1___2___3___4___5
58. Unpredictable
a. 1___2___3___4___5
59. Forceful
a. 1___2___3___4___5
60. Feminine
a. 1___2___3___4___5
61. Reliable
a. 1___2___3___4___5
62. Analytical
a. 1___2___3___4___5
63. Sympathetic
a. 1___2___3___4___5
64. Jealous
a. 1___2___3___4___5
65. Has leadership abilities
a. 1___2___3___4___5
66. Sensitive to the needs of others
a. 1___2___3___4___5
67. Truthful
a. 1___2___3___4___5
68. Willing to take risks
a. 1___2___3___4___5
69. Understanding
a. 1___2___3___4___5
70. Secretive
a. 1___2___3___4___5
71. Makes decisions easily
a. 1___2___3___4___5
72. Compassionate
a. 1___2___3___4___5
73. Sincere
a. 1___2___3___4___5
74. Self-sufficient
a. 1___2___3___4___5
75. Eager to soothe hurt feelings
a. 1___2___3___4___5
76. Conceited
a. 1___2___3___4___5
77. Dominant

- a. 1___2___3___4___5
78. Soft spoken
a. 1___2___3___4___5
79. Likable
a. 1___2___3___4___5
80. Masculine
a. 1___2___3___4___5
81. Warm
a. 1___2___3___4___5
82. Solemn
a. 1___2___3___4___5
83. Willing to take a stand
a. 1___2___3___4___5
84. Tender
a. 1___2___3___4___5
85. Friendly
a. 1___2___3___4___5
86. Aggressive
a. 1___2___3___4___5
87. Gullible
a. 1___2___3___4___5
88. Inefficient
a. 1___2___3___4___5
89. Acts as a leader
a. 1___2___3___4___5
90. Childlike
a. 1___2___3___4___5
91. Adaptable
a. 1___2___3___4___5
92. Individualistic
a. 1___2___3___4___5
93. Does not use harsh language
a. 1___2___3___4___5
94. Unsystematic
a. 1___2___3___4___5
95. Competitive
a. 1___2___3___4___5
96. Loves children
a. 1___2___3___4___5
97. Tactful

- a. 1____2____3____4____5
98. Ambitious
- a. 1____2____3____4____5
99. Gentle
- a. 1____2____3____4____5
100. Conventional
- a. 1____2____3____4____5

E.) Section 5. In this section, you will be asked miscellaneous questions about yourself

101. In regards to the next 3 months, whether I got pregnant or not I would be fine either way.
- Strongly disagree Strongly agree
- a. 1____2____3____4____5

F.) Section 6. For this section questions will be asked related to sexual intercourse and contraceptive use.

102. Has a physician ever diagnosed that you are infertile?
- a. Yes
- b. No
103. Have you been sexually active in the past 3 months?
- a. Yes
- b. No
104. How many times have you had sexual intercourse in the past three months? (If you are unsure of the exact number, please provide your best guess). Numerical value_____
105. What is the percentage of times you have used contraceptives in the past 3 months? Circle one.
- 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
- Never Half the time Always
106. What method of birth control/contraceptives have you used in the past 3 months? Check all that apply
- __birth control pill, __implant, __shot, __patch, __IUD, __nuva ring, __cervical cap, __diaphragm, __spermicide, __male condom, __female condom, __morning after pill, __my partner has a vasectomy, __tubal ligation (tubes tied), __hysterectomy (uterus removed), __other, please explain_____, __none.
107. What methods of avoiding pregnancies have you used in the past 3 months? Check all that apply

I use one of the birth controls/contraceptives from question 106,
 withdrawal (pull out method), avoiding having sex around my
ovulation cycle, engaging in other sexual activities besides sexual
intercourse, to avoid sexual intercourse other, please explain,
 none

108. In the past 3 months when you do not use contraceptives, please
indicate which of the following reasons best explain why. Check all
that apply.

I did not mind if I got pregnant

I am generally a lucky person, I would not have become pregnant

I wasn't having enough sex to need birth control/contraceptives

I previously had side effects from birth control/contraceptives

I was worried I would have a side effect

I had barriers accessing birth control services

I could not afford birth control/contraceptives

Sometimes I forgot to use or take my birth control method

I thought my partner was infertile

I thought I was infertile

I did not use birth control/contraceptives because it makes me
closer to my partner

It felt better to not use birth control/contraceptives

My partner did not want to use any birth control/contraceptives

I was not planning on having sex

I did not use contraceptives for religious reasons

Other, please explain _____

N/A

Debriefing

This study's purpose was to measure the relationship between unprotected sexual intercourse and motherhood values, ambivalence toward pregnancy, invulnerability, and traditional gender roles.

We would like for you to take the time to answer the following debriefing questions. Your feedback will help us understand the study's impact and improve the process for future participants.

116. Is there any part of the questionnaire or study that you felt uncomfortable with? Can you tell us which part and why you felt uncomfortable?

117. Is there any wording in the questionnaire that was confusing to you? Or was there any part of the questionnaire that you did not understand? If so, which questions or part?

118. If you could change or add a question or ask a question differently which question would you change and why?

119. Please estimate on a 1-10 scale, with 10 being highest, how much risk you feel was produced to you by participating in the study.

1 2 3 4 5 6 7 8 9 10

Low Risk

High Risk

120. Please estimate on a 1-10 scale, with 10 being the highest, how much benefit you feel you derived from participating in the study.

1 2 3 4 5 6 7 8 9 10

Low Benefit

High Benefit

APPENDIX B

The following is a list of items that were kept in the measurements of the predictor variables: Motherhood Values, Ambivalence, Masculinity, and Femininity. Reliability analysis was used to determine which items produced the highest reliability alpha.

Motherhood Value

Likert scale key: Strongly disagree (1), Disagree (2), Neither disagree or agree (3), Agree (4), Strongly agree (5) Circle one.

1. Having children would enrich my life.
a. 1____2____3____4____5
2. If I had children my leisure time would be restricted.
a. 1____2____3____4____5
3. I want children to have someone to love.
a. 1____2____3____4____5
4. I would like to have a child to establish my own family.
a. 1____2____3____4____5
5. If I were to discover I was infertile, I would be devastated.
a. 1____2____3____4____5
6. I believe that having children is the right thing to do.
a. 1____2____3____4____5
7. Having children is important to me in order to feel complete as a woman.
a. 1____2____3____4____5
8. I always thought I would be a mother.
a. 1____2____3____4____5
9. Children are a source of worry and stress.
a. 1____2____3____4____5
10. Having children can lead to financial strain and long term debts.
a. 1____2____3____4____5
11. Having children is a way to give and receive warmth and affection.
a. 1____2____3____4____5
12. Having children may interfere with my employment opportunities and/or career advancements.
a. 1____2____3____4____5
13. I can see that the strains of having children may weaken rather than strengthen a marriage.
a. 1____2____3____4____5
14. If I had children I would be restricted from pursuing my interests and hobbies.
a. 1____2____3____4____5

15. I think my life would be more fulfilling with children.
a. 1____2____3____4____5
16. It is important for me to have children.
a. 1____2____3____4____5
17. Having children results in a significant loss of freedom.
a. 1____2____3____4____5

Ambivalence

Likert scale key: Disagree (1), Agree (2), Neutral/neither (3). Circle one.

1. If I got pregnant, it would be embarrassing for my family.
a. 1____2____3
2. If I got pregnant, it would be embarrassing for me.
a. 1____2____3
3. If I got pregnant, I would be pleased.
a. 1____2____3
4. Getting pregnant at this time is one of the worst things that could happen to me.
a. 1____2____3
5. If I were to get pregnant, I would look forward to telling my loved ones about a baby.
a. 1____2____3
6. If I were to get pregnant, I would feel very upset.
a. 1____2____3

Masculinity

Likert Scale Key: Never or almost never true (1), somewhat untrue(2), Neutral(3), somewhat true (4), Always or almost always true (5) Circle one.

1. Self-reliant
a. 1____2____3____4____5
2. Defends own beliefs
a. 1____2____3____4____5
3. Independent
a. 1____2____3____4____5
4. Assertive
a. 1____2____3____4____5
5. Strong personality
a. 1____2____3____4____5
6. Has leadership abilities
a. 1____2____3____4____5
7. Willing to take risks

- a. 1____2____3____4____5
- 8. Makes decisions easily
 - a. 1____2____3____4____5
- 9. Self-sufficient
 - a. 1____2____3____4____5
- 10. Dominant
 - a. 1____2____3____4____5
- 11. Willing to take a stand
 - a. 1____2____3____4____5
- 12. Acts as a leader
 - a. 1____2____3____4____5
- 13. Individualistic
 - a. 1____2____3____4____5
- 14. Competitive
 - a. 1____2____3____4____5
- 15. Ambitious
 - a. 1____2____3____4____5

Femininity

Likert Scale Key: Never or almost never true (1), somewhat untrue(2), Neutral(3), somewhat true (4), Always or almost always true (5) Circle one.

- 1. Cheerful
 - a. 1____2____3____4____5
- 2. Affectionate
 - a. 1____2____3____4____5
- 3. Flatterable
 - a. 1____2____3____4____5
- 4. Loyal
 - a. 1____2____3____4____5
- 5. Feminine
 - a. 1____2____3____4____5
- 6. Sympathetic
 - a. 1____2____3____4____5
- 7. Sensitive to the needs of others
 - a. 1____2____3____4____5
- 8. Understanding
 - a. 1____2____3____4____5
- 9. Compassionate
 - a. 1____2____3____4____5
- 10. Eager to soothe hurt feelings

a. 1____2____3____4____5

11. Warm

a. 1____2____3____4____5

12. Tender

a. 1____2____3____4____5

13. Loves children

a. 1____2____3____4____5

14. Gentle

a. 1____2____3____4____5

APPENDIX C

The following is a list of items that were deleted from the measurements of the predictor variables: Motherhood Values, Ambivalence, Masculinity, and Femininity. Reliability analysis was used to determine which items to remove from the construct to produce the highest reliability alpha.

Motherhood Value

Likert scale key: Strongly disagree (1), Disagree (2), Neither disagree or agree (3), Agree (4), Strongly agree (5) Circle one.

1. I would prefer not to bring children into such a troubled world.
a. 1 _____ 2 _____ 3 _____ 4 _____ 5
2. I believe it is selfish to decide not to have children.
a. 1 _____ 2 _____ 3 _____ 4 _____ 5

Ambivalence

Likert scale key: Disagree (1), Agree (2), Neutral/neither (3). Circle one.

1. If I got pregnant, deciding whether or not to have the baby would be stressful.
a. 1 _____ 2 _____ 3
2. If I got pregnant, I would be forced to grow up too fast.
a. 1 _____ 2 _____ 3
3. Thinking about my life right now, it is very important to avoid becoming pregnant.
a. 1 _____ 2 _____ 3
4. I feel as though the advantages of becoming pregnant, within the next 3 months, are much higher than the disadvantages.
a. 1 _____ 2 _____ 3

Masculinity

Likert Scale Key: Never or almost never true (1), somewhat untrue(2), Neutral(3), somewhat true (4), Always or almost always true (5) Circle one.

1. Athletic
a. 1 _____ 2 _____ 3 _____ 4 _____ 5
2. Forceful
a. 1 _____ 2 _____ 3 _____ 4 _____ 5
3. Analytical
a. 1 _____ 2 _____ 3 _____ 4 _____ 5
4. Masculine

a. 1____2____3____4____5

5. Aggressive

a. 1____2____3____4____5

Femininity

Likert Scale Key: Never or almost never true (1), somewhat untrue(2), Neutral(3), somewhat true (4), Always or almost always true (5) Circle one.

1. Yielding

a. 1____2____3____4____5

2. Shy

a. 1____2____3____4____5

3. Soft spoken

a. 1____2____3____4____5

4. Gullible

a. 1____2____3____4____5

5. Childlike

a. 1____2____3____4____5

6. Does not use harsh language

a. 1____2____3____4____5

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