

Unintended Pregnancy in Low-Income Couples:
Report on Phases I and II Data Analyses.

Report to The National Campaign
to Prevent Teen and Unplanned Pregnancy

Warren B. Miller*
Transnational Family Research Institute
Aptos, California

Abigail A. Haydon
Gillings School of Global Public Health
University of North Carolina
Chapel Hill, NC

June 26, 2009

*For correspondence: 229 Wixon Avenue, Aptos CA 95003-4626

Email: rennie@tfri.org

Phone and Fax: 831-662-8440

Unintended Pregnancy in Low-Income Couples:
Report on Phases I and II Data Analyses.

Warren B. Miller
Abigail A. Haydon

Introduction

This report details the results of the first two phases of the analysis of data collected from a sample of 268 low income couples who were at risk of an unintended pregnancy. These couples were recruited from family planning clinics in the area of San Jose, California, where they had gone in search of contraceptive services. They were interviewed about various aspects of their family planning and reproductive experiences, motivations, and goals around the time of their clinic attendance and then re-interviewed six months later to determine the presence or not of changes in their contraceptive practices.

This first phase of our analysis was accomplished in several steps. First, we examined the data for coding errors and made corrections by referring back to the original hard copies of the interviews. We then identified all cases of missing data and replaced those with imputed values where ever possible in order to maximize the number of cases that would be available for multivariate analyses. Finally, we constructed variables that we hypothesized would be of importance in understanding the psychological –especially the motivational– factors that affect contraceptive decision-making and use, thereby resulting in unintended pregnancies. This variable construction was in some cases based on single interview items but in other cases required statistical techniques such as factor and cluster analysis that allowed us to group multiple items into the measurement of a single construct.

The second phase of our analysis involved examining the predictors of certain key contraceptive behaviors. Although we initially examined these relationships with bivariate analyses (cross-tabulations and correlations), what we will be reporting here are

the results of subsequent multivariate analyses. In the latter we used either ordinary or logistic regression to determine what set of predictors significantly predicted the contraceptive behavioral outcomes. We conducted these regressions separately but simultaneously for males and females, using equality constraints. This technique allowed us to test whether the predictors of the behavioral outcomes were the same for males and females and if they were the same, whether the prediction coefficients were of the same strength or not.

Being able to make determinations about the similarities or differences between the sexes will provide us some helpful clues for the third phase of this study in which the focus will be on determinants of the contraceptive behavior of couples. Because understanding the dynamics of the family planning behavior of couples is the major emphasis of this study, we will summarize at the end of this report how the findings presented here will be used in the third phase of this study to examine dyadic (couple) interaction.

Theoretical Framework

The research literature indicates that there are four types of contraceptive behavior that contribute to the occurrence of unplanned pregnancy. First, there is the effectiveness of the method that the individual or, for the purposes of the current study, the couple have chosen. A distinction may be made between the theoretical and use effectiveness of methods. However, because we believe that couples selecting a specific method generally do so with risk of unintended pregnancy that its use effectiveness implies, we will base our construct of method effectiveness on what is the reasonably well established use effectiveness associated with each method. A second type of contraceptive behavior contributing to unplanned pregnancy is the effectiveness with which the method that has been selected is used by the couple. They may select a very effective method but use it inconsistently, or just the opposite may be the case. The point here is that apart from the general risk associated with a method, there is a separate risk that is associated with how the couple uses it. A third type of contraceptive behavior that contributes to risk is when methods are changed. There are at least three reasons why

change contributes to risk. One is that during the transition from one method to another there may be a time period between stopping the current method and starting the next when effective protection from pregnancy is compromised. Another is that the skill sets that are necessary for the effective use of a new method commonly take time to develop, creating another kind of gap in effective protection. A third is that there are some couples cannot stay with one method because of the unique problems associated with each option. This may result in what is commonly referred to as frequent method switching, a pattern that may aggravate the first two reasons for increased risk during change. Finally, there is a fourth type of contraceptive behavior that presents the greatest risk of all, namely the non-use of any method at all for extended period when the couple is having regular intercourse. This behavior may occur as a result of inertia in making the method selection decision, denial of the possible consequences, or sheer frustration with the inconveniences and unpleasanties of using contraception. Because the sample in the current study consists of couples in an established relationship who have sought contraceptive services, such non-use is relatively infrequent and when it does occur, tends to be of short duration. This means that non-use in this study can and will be treated as an extreme form of the second type of contraceptive behavior, which we will define as inconsistent or irregular contraceptive use.

Working with the three applicable types of contraceptive behavior, we have constructed a theoretical model that captures their relationship to each other and to the antecedent psychological and dyadic (couple) variables that we hypothesize predict them. Figure 1 depicts this model. It shows that psychological traits and states of the individuals comprising the couples in our sample and certain aspects of their dyadic decision-making in selecting their current contraceptive method predict that method, the use effectiveness of that method, and –as moderated by their current method– both the effectiveness with which they use that method and whether they change that method six months after their initial interview. In addition, the figure shows both that the current method predicts how effectively it is used and that a change in method at six months is predicted by the current method, its use effectiveness, and the effectiveness with which it is used.

Sample

In Table 1 we show frequency counts of the selected demographic characteristics of our sample. Additional characteristics of males and females include the following: mean (standard deviation) age were 26.2 (6.4) and 24.7 (5.6) years; mean (standard deviation) relationship length was 38.0 (28.6) and 37.6 (28.7) months; and, mean (standard deviation) annual employment income was 20.6 (17.1) and 12.27 (9.0) thousand dollars. The couples reported having a mean number of 0.88 children at home. Overall, the sample may be described as youths in established relationships who are predominantly unmarried and cohabiting, less than college educated, of low income, and of diverse racial and ethnic background.

Measures

Four groups of measures were included in the study. Three of these groups were predictor variables, including psychological traits, psychological states, and aspects of dyadic decision-making. In addition, there was one group of behavioral outcome variables. Psychological trait variables represent enduring dispositions of the individual, such as attitudes, motivations, and cognitions. These trait variables were selected because of their potential on-going effect on contraceptive decision-making and use. Psychological state variables reflect more short term feelings about the individual's contraceptive practice, their relationship with their contraceptive partner, and their motivation regarding childbearing with that partner. Thus they tend to be more reflective of the individual's response to his or her situation. Although we prefer to study dyadic level issues by combining data from both partners in specific ways (see the Discussion), we did include in the current analyses two dyadic decision-making variables based on questions asked of both male and female respondents about aspects of their joint decision-making when selecting their current contraceptive method.

Table 2 briefly describes the instruments used to measure each trait, outlines the scoring procedures for each instrument, and lists the items used to define each scale. The domains assessed by these instruments include contraceptive attitudes, gender role

attitudes, attitudes about the use of alcohol in conjunction with sexual behavior, and cognition. Table 3 shows the descriptive statistics for all eleven of the psychological trait variables, separately by sex.

Table 4 gives the response categories and the sex-specific frequency counts for the interview-based psychological state variables that relate directly to the respondents current contraceptive method. Table 5 gives either response categories and frequency counts or descriptive statistics for interview-based psychological state variables that represent two domains with high relevance to contraceptive use, namely the respondents' current intimate relationship and their recent pregnancy desires.

Table 6 gives the response categories and the sex-specific frequency counts for the interview-based psychological state variables that reflect aspects of dyadic decision-making when respondents and their partners chose their current contraceptive method.

Table 7 gives the response categories and the sex-specific frequency counts for the interview-based contraceptive behavior outcome variables. The first nine variables were measured at the initial interview, at the same time all the predictor variables were measured. Only the changed method variables are truly longitudinal, being measured at the 6 month follow up to the initial interview.

Results of Analyses

In this section we report and briefly discuss the results of the logistic and the maximum likelihood regressions conducted according to our theoretical framework. As an aid to understanding how the different analyses relate to that framework, we group the analyses of similar framework components together and present the analyses in groups. We then precede each group with an image of the theoretical framework, showing the particular components under consideration high-lighted in bold.

The Prediction of Current Contraceptive Method

Figure 2 shows the first group of analyses examines, which consist of logistic regressions of the respondents' current contraceptive method on the psychological and

dyadic predictors. Tables 8, 9, and 10 show the results in which oral contraception, condoms, and Depo Provera are, respectively, the current methods. The parameter estimates are not standardized, so the best way to determine the relative size of the effect of those predictor variables that remain in the model after backwards elimination of non-significant predictors is by the magnitude of the Wald chi-square or, alternatively, by the smallness of the p value. In the interpretation of the findings in these three models, it is important to keep in mind that the analyses have been conducted on data collected at the same point in time. Thus although many of the predictors may reasonably be interpreted as reflecting psychological factors that influenced the decision the respondents made to use their current method, some may reflect the post-decision influence of a method on the user. It is also important to keep in mind that the outcome variables are dichotomous, with 1 coding for the method of interest and 0 coding for all other methods. This means that any given model, the method of interest is always being compared against methods that become the method of interest in other models. This in turn means that predictors will tend to have opposite effects in two models, especially those that involve the two most common current methods, oral contraception and condoms.

Looking across all three of these tables, we see that almost all of the predictors are equally predictive across the two sexes, and in two of the five cases where they are not, the predictor of neither sex is significantly different from zero, meaning that the predictor could be dropped from the model. We also see that the two variables reflecting anti-oral contraception and anti-coitus dependent attitudes have very large effects on the selection of our respondents' contraceptive method. Those who are very opposed to contraceptive characteristics typically associated with hormonal methods are much less likely to be using O.C. or Depo Provera and much more likely to be using condoms. In contrast, those who are very opposed to contraceptive characteristics typically associated with methods that are applied at the time of intercourse (coitus dependent methods) are much less likely to be using condoms and much more likely to be using O.C.

It is of interest to look at the constellation of predictors that are associated with each of the three current contraceptive methods that we modeled. As seen in Table 8, only among O.C. users does an effective birth control attitude promote selection of that method. This fits with wanting to avoid pregnancy as a predictor of O.C. use and with

the high effectiveness generally attributed to oral contraception. A strong traditional gender role attitude –one where the man is generally dominant– is predictive of not using O.C. Perhaps related to this is that when either sex reports less experience of conflict in the relationship, that method is more likely O.C. As Table 10 shows, the gender role trait and experience of conflict state have an opposite pattern in the prediction of Depo Provera use, perhaps suggesting that the latter method is used in more gender segregated and conflicted relationships. When the woman perceives her partner as being high in contraceptive confidence, the current method is not O.C. Probably related to this finding, Table 9 shows that when the man reports being high in contraceptive confidence, the chosen method is condoms. We see in Table 8 that when either sex perceives the partner as more satisfied with their current method, O.C. is more likely to be the chosen method. This suggests a cooperative consensus between the sexes with regard to O.C use. Finally, when respondents of either sex report that alcohol has a disinhibiting effect on their sexual behavior, O.C is the more likely current method. Because this predictor has an opposite effect when condoms are the selected method, this finding may be related to the freedom that couples feel to consume alcohol when they do not have to worry about using a coitus dependent method.

Although we have already touched on many of the variables that predict condoms to be the respondents' current contraceptive method, several additional findings of interest appear in the condom model. One of these involves the appearance of the variable for attention concentration deficit. We would have expected that those respondents with this cognitive difficulty to shy away from a coitus dependent method. However, just the opposite is the case, with a high score on this variable predicting condom choice. It is noteworthy that women with high scores on this variable tend not to choose Depo Provera, as shown in Table 10. Again this is a somewhat counter-intuitive finding. Overall the evidence suggests that respondents with this kind of cognitive difficulty may actually be drawn to the selection of a coitus dependent method like condoms. The other two predictors of condom use yet to be discussed are dyadic decision-making variables. For women only, giving their partner primary responsibility for method selection and reporting high disagreement with their partners about the choice of method both predict condom use.

We have also touched on some of the variables from Table 10 that predict Depo Provera choice. There are, however, two new variables not previously discussed. For men, difficulty in communicating about contraception predicts not selecting Depo Provera. Taken together with the finding that disagreement during the selection of a contraceptive method also predicts not selecting Depo Provera for both sexes, this is further evidence that decision-making around this particular method is especially fraught with couple conflict. The other new variable in this model is involves a normative discomfort attitude, which predicts selection of Depo Provera in both sexes. This finding may suggest that the respondents who end up selecting Depo Provera come from communities where attitudes toward contraception are less modern and have a more inhibiting effect during decision-making.

The Prediction of the Effectiveness of Current Contraceptive Method

Figure 3 shows the prediction of this component of our general model. The interpretation of findings in this maximum likelihood analysis primarily reflects the extent to which use effectiveness of a method affects the particular method selected. Not surprisingly, the three primary contraceptive attitudes all predict the effectiveness of the method selected. Thus an effective birth control attitude and an anti-coitus dependent attitude both predict the selection of a more use effective method and an anti-oral contraception attitude predicts the opposite. Also unsurprising is the finding that contraceptive confidence, partner's contraceptive confidence, and, for men, wanting to avoid a pregnancy all predict the selection of a more use effective method. Why the latter variable only predicts among men is not immediately obvious, but it may reflect the relative comfort of men with condoms, which are relatively low in use effectiveness, and the consequent extra motivational push men need to select a more effective method than condoms.

It is of interest that when men report their partners had primary responsibility for selection of a contraceptive method, the method selected is more use effective. When women report themselves to have had primary responsibility for selection of a contraceptive method, the resultant variable just barely misses significantly ($p = 0.0514$)

predicting the choice of a more use effective method. These findings are further evidence from this model of the relatively lower impact of men on use effectiveness as a selection criterion. It is also of interest that couple disagreement about which method to choose leads to the selection of a less use effective method. This suggests that the focus on disagreement, which will be one of the foci in the couple analysis phase of this study, may provide some important additional evidence on this score.

One finding in the use effectiveness model is not easily interpreted; high scores on negative childbearing motivation predict the selection of a less effective method. This is quite the opposite of what we would expect based on other findings in this study (see the discussion of Table 14 below) and on our own previous research. High negative motivation for children should drive men and women to select more effective methods. More detailed analyses (not shown) indicate that this effect is primarily connected with the selection of Depo Provera, a highly effective method but one that does not require regular mindfulness about preventing pregnancy. Perhaps the respondents who select Depo Provera do so because they know that their low negative motivation puts them at risk of inconsistent efforts to prevent pregnancy.

The Prediction of the Effectiveness of Method Use

Figure 4 shows the first component of our framework that we explore in this section by conducting an analysis across all members of the sample to determine which current contraceptive methods predicted effectiveness of use. Table 12 shows the results of that maximum likelihood regression. The interesting findings are twofold: for females only, currently using oral contraception predicts a lower effectiveness of use compared to all other contraceptive users, including male oral contraceptive users; and for males only, currently using Depo Provera predicts a higher effectiveness of use, compared to all other contraceptive users, including female Depo Provera users. We interpret these two predictions as indicating that women under-report to their partners the ineffectiveness with which they are using these two methods. There is support for this conclusion in the frequency counts shown in Table 7. Interestingly, the frequencies in Table 7 for the effectiveness of use of condoms suggests that men under-report to their partners the

ineffectiveness with which they are using condoms, but this difference is apparently not great enough to be significant in the regression.

Figure 5 shows the next component of our framework explored in this section, which involved conducting maximum likelihood regressions of effectiveness of method use on the psychological and dyadic predictor, separately for each of three current methods. Because there was insufficient variance in the data of Depo Provera males to include them in the analyses, the regression for that method included only women.

Table 13 shows the results of the regression for oral contraception users. We see that the two variables reflecting anti-oral contraception and anti-coitus dependent attitudes have major effects on effectiveness of use. The direction of these effects, as indicated by the sign of the coefficient, is contrary to what might be expected; for example, a high score on the anti-oral contraception variable predicts greater effectiveness of use. A reasonable assumption might be that respondents, especially women, with strong negative attitudes towards the characteristics usually associated with oral contraception might be less effective in their use of this method, but just the opposite occurs. How can this be? We believe that this finding is explained by the fact that those respondents who are using oral contraception have been selected out of the general pool of contraceptors represented by our sample by their relatively low scores on the anti-oral contraception attitude scale. This belief is supported by comparing the mean and standard deviation of the anti-oral contraception variable in the subgroup using oral contraception ($M = 1.01$, $S.D. = 2.28$) with that of the subgroup using condoms ($M = 3.67$, $S.D. = 1.89$). For a variable that has a score range of about -5.0 to +6.0, the greater than 2.5 difference between the means is large. The implication of this selecting out process is that those respondents who are using oral contraception form a subgroup that tends to have relatively low scores on the anti-oral contraception variable and that those who have the relatively higher scores within that subgroup must be strongly motivated to use oral contraception—presumably because of factors such as convenience and effectiveness—in spite of their high scores. It is very probably this strong motivation that results in more effective use. Later in this section when we discuss the predictors of change in method from oral contraception, we will again see a reflection of this strong

motivation in the prediction of not changing method by a high score on the anti-oral contraception variable.

Much the same argument for the interpretation of the anti-oral contraception attitude finding can be made with respect to the anti-coitus dependent attitude finding shown in Table 13. We also note that a positive effective birth control attitude predicts greater effectiveness of oral contraception use in men, suggesting that the male partners of oral contraceptive users are an important source of these women's strong motivation. Among the psychological state variables, we see that perception by both sexes of high confidence in oral contraception predicts that it is used more effectively, suggesting in this case the operation of a cooperative consensus that boosts confidence. Also supporting the importance of cooperation in the development of method confidence is the finding that the experience of relationship conflict by men is associated with a lower effectiveness of use, whereas a greater emotional closeness for both sexes is associated with higher effectiveness of use. The finding that more contraceptive satisfaction predicts less effectiveness of use for both sexes may seem surprising but it fits with our interpretation of why a high score on the anti-oral contraception variable predicts greater effectiveness of use. In other words, both a negative attitude toward oral contraception and dissatisfaction in using it are based on the side effects and other characteristics associated with O.C., but both appear to be overcome by the same strong motivation to use a method that has certain clear advantages. The final finding from Table 13 is that disagreement in the method selection decision as reported by men predicts more effective oral contraceptive use. This may be another illustration of the strong motivation that drives women's oral contraceptive use, but the p value is marginally significant, so it may only represent a chance finding. Perhaps the couple analyses will shed further light on the role of couple disagreement in method use.

Table 14 shows the results of the regression of effectiveness of method use on the psychological and dyadic predictors for condom users. As would be expected for this method, high scores on the effective birth control attitude, anti-oral contraception attitude, and negative child bearing motivation scales all predict more effective use of condoms for both sexes. For males, a more traditional gender role attitude predicts less effective use, perhaps because male dominance in the relationship interferes with

cooperative condom use. For females, a disinhibition response to the use of alcohol in conjunction with sex predicts more effective use of condoms. Perhaps women who use alcohol to relax during sex are less attentive to their partner's condom use and, therefore, less well informed about ineffective use.

The only variable that entered the regression of effectiveness of method use among female Depo Provera users was the communication difficulty attitude scale, where a high score predicted less effective use. This is another piece of evidence that the relationship of Depo Provera users is more conflicted, at least when it comes to contraceptive behavior.

The Prediction of Change in Contraceptive Method

In this section we explore various predictors of whether the contraceptive method being used at the initial interview has been changed at the follow up six months later. First, we examine the prediction of method change at 6 months by the initial current contraceptive methods, as shown in Figure 6. The results of a logistic regression of the dichotomous method change variable onto the four predominant current methods at the initial interview are shown in Table 15. Only oral contraception and Depo Provera remain in the regression, with both predicting no change in method. The bivariate relationship between current contraception and method change for condom users was 0.120 ($p = 0.017$), suggesting that using condoms at the initial interview might predict a change at 6 months. However, the condom variable was not retained in the multivariate context.

Figure 7 shows an alternative prediction of method change at 6 months, using the effectiveness of each method, the effectiveness with which each method is used, and the interaction between those two variables. Table 16 shows the result of this logistic regression. Using a contraceptive method with greater use effectiveness and using any contraceptive more effectively both predict no change in method from the initial interview. Interestingly, the interaction term for these two behaviors is positive, indicating that it predicts change in method at the 6 month follow-up. How can this finding be explained. Our explanation is contingent on recognizing that the positive

coefficient occurs in the presence of two negative coefficients for each component of the interaction term. This suggests the following scenario. When the two components are interacted, there are some low scores for the interaction variable that represent a less effective method such as condoms being used effectively and some high scores that represent a more effective method such as O.C. being used ineffectively. In the presence of the negative coefficients for the two components of the interaction term, there is a piece of the relationship between that term and change in method at 6 months that is not well captured by the two negative coefficients but is, in fact, well captured by a positive coefficient.

Figure 8 shows the third prediction of method change at 6 months, using the respondents' current contraceptive methods as moderators of that prediction by the antecedent psychological and dyadic variables. Because of insufficient data for Depo Provera, the only use current contraceptive methods used as moderators are oral contraception and condoms. Table 17 shows the results of the logistic regression with O.C. as the moderator. The only trait variable significantly different from zero is the anti-oral contraception attitude for women. As discussed above in connection with the same variable predicting effectiveness of oral contraceptive method use, we interpret the negative coefficient as indicating a strong motivation among women with a negative attitude toward oral contraception to use the method in spite of its negativities because of its convenience and effectiveness. We see here that this presumed strong motivation not only promotes effective use but also continued use. Table 17 also shows that satisfaction with oral contraception by both men and women predicts continued use, as does perception of the partner's wanting to avoid pregnancy. A somewhat surprising finding is that for both men and women, the more they perceive their partner as feeling emotionally close in their relationship, the more likely they are to change from oral contraception at 6 months. We suspect that greater perceived closeness may have this effect for at least two reasons. First, it may facilitate a level of communication that enables the couple to switch to a method like condoms that requires joint cooperation and at the same time avoids some of the onerous side effects of oral contraception. Second, it may signal a greater willingness to switch to a more risky method, in essence indicating

that the relationship has reached the point where an unplanned pregnancy is more acceptable.

Table 17 shows the results of the logistic regression with condoms as the moderator. We see that a higher effective birth control attitude predicts no change from using condoms, just as it predicted more effective condom use. This finding parallels that in which a higher anti-oral contraception predicts no change from using oral contraception, and as with the oral contraception finding, it suggests that a strong motivation based on a belief in the potential effectiveness of condoms, leads to both effective and continued use. Not surprisingly, an anti-coitus dependent attitude predicts the discontinuation of condoms at 6 months. An interesting finding is that when men rate that alcohol tends to improve their sexual responsivity, they are more inclined not to discontinue the use of condoms. A reasonable interpretation is that because condoms are themselves known for decreasing penile sensation, the improved sexual responsivity that these men experience with alcohol may compensate for any penile sensation loss.

Among the psychological state predictors in this regression, there are a number of sex-specific findings. Perception by men of their partners as having contraceptive confidence predicts discontinuation of condoms. This finding is consistent with that in Table 11 showing that perceived partner contraceptive confidence predicts use of a more effective method and suggests that when these men perceive their women partners as having contraceptive confidence, they switch to the more effective O.C. The next finding that when men experience satisfaction with condoms, they do not change methods at follow-up makes good intuitive sense. The findings for emotional closeness indicate that it has an opposite effect in the two sexes. Greater closeness in men predicts changing from condoms, where as in women it predicts the opposite. We believe that these gender differences may reflect the way greater emotional closeness leads to the development of greater trust with respect to who is allowed to be in control of contraception. When men are more trusting they give up condoms and allow use of a female method; when women are more trusting, they allow men to continue using condoms. Finally, the more the partners of both men and women are perceived as wanting to avoid pregnancy, the more there is a switch away from condoms at follow-up. This finding fits well with the general

perception of condoms as less effective than the female methods of O.C. and Depo Provera.

The one dyadic decision-making predictor indicates that when the partner –regardless of sex– is perceived as having had a greater responsibility for the original selection of condoms as the couple’s method, then that method was more likely to be discontinued at follow-up. This finding may reflect a disagreement effect. However, because of the way the variable is constructed –low score = self dominant, high score = partner dominant– it is difficult to make an interpretation when across sex constraints have been imposed. The questions raised by this finding will be better pursued through the couple analyses.

Discussion

The results from the analyses reported above are informative on a number of levels. First, they indicate that it is possible to predict contraceptive behaviors with considerable success using a limited number of psychological trait and state variables together with a small number of dyadic decision-making variables. Some of the predictors appear in many of our primary regression models –see Tables 8, 9, 10, 11, 13, 14, 17, and 18. For example, one or more of the three key contraceptive attitude (trait) variables occur in all eight of the regressions of contraceptive behaviors on our selected psychological and dyadic predictors. Similarly, one or more of the four contraceptive confidence and satisfaction (state) variables occur in seven of those eight regressions. One or two of the three personal relationship (state) variables appear in five of the eight regressions and one or more of the two childbearing motivational (trait) variables and the two pregnancy desires (state) variables appear in five of the eight regressions. Finally, one or both of the two dyadic decision-making variables appear in six of the eight regressions. Such consistency helps to identify the key motivational domains affecting contraceptive behavior. In addition to these groups of successful predictors, there are other variables that appear in only one or few models but that seem to provide a especially interesting insight into what drives a particular behavior. Here we have in mind the two attitude traits that affect comfort with the use and discussion of

contraception, the gender role attitude trait, the two traits that reflect how alcohol affects sexuality, and the attention concentration deficit trait.

Second, the results are informative because they allow comparisons of the effects of selected predictors as they affect different contraceptive behaviors. Perhaps the best example of this involves the anti-oral contraception variable and its performance as a predictor of four outcome behaviors related to oral contraception: selection of current method, effectiveness of current method, effectiveness of current method use, and change of current method. It is by making comparisons across all four of these behaviors that we best come to an understanding of how this predictor is operating in any one of them.

Third, our results are informative at the level of the theoretical framework that organizes the set of analyses reported here. This framework links a major set of contraceptive behaviors that can be linked to unplanned pregnancies. The results presented here, including not only the role of psychological and dyadic predictors but also the importance of contraceptive behaviors themselves as predictors and moderators, provide supportive evidence for this formulation.

Fourth and finally, our results provide leads that support the plan for the final phase of this project, namely couple analysis. Although most of the predictors in our regression models were of similar strength in males and females, this does not mean that these predictors will not be important in couple analyses. In fact, one of the first steps in the next phase will be to look at how the more successful trait and state predictors described above, including those with equal predictive strength across the sexes, operate when they are combined into couple variables. We plan to construct at least three primary couple variables for each of these successful predictors: a sum variable, consisting of the sum of each male and female partner's scores; a difference variable, consisting of the difference between the two partners' scores; and an absolute difference variable, consisting of the absolute difference between the two partners' scores. When these three are entered simultaneously into the model, the sum variable tells us how the combined weight of the two partners' traits or states effect a contraceptive behavior, the difference score tells us whether one sex or the other has a greater influence on the behavior, and the absolute difference score tells us what extent disagreement is driving the outcome behavior.

Our results also indicate a number of variables where one sex or the other had either a dominant or an exclusive effect on contraceptive behavior. These instances provide clues regarding additional variables, other than the highly successful predictors, that need scrutiny regarding their dyadic effects. These too will be explored with the three types of variables just discussed.

Finally, if time permits we will look at the relationship between one partner's perception of the other partner's motivations or attitudes and the other partner's actual motivations or attitudes. A weak relationship implies poor intra-couple communication and/or empathy and may have consequences for contraceptive behavior. We may also look at the relationship between each partner's score on the two dyadic decision-making variables used in the current analyses to determine the level of agreement between them about the process leading to the selection of current contraception. Weak agreement here will again have similar implications for couple communication and empathy.

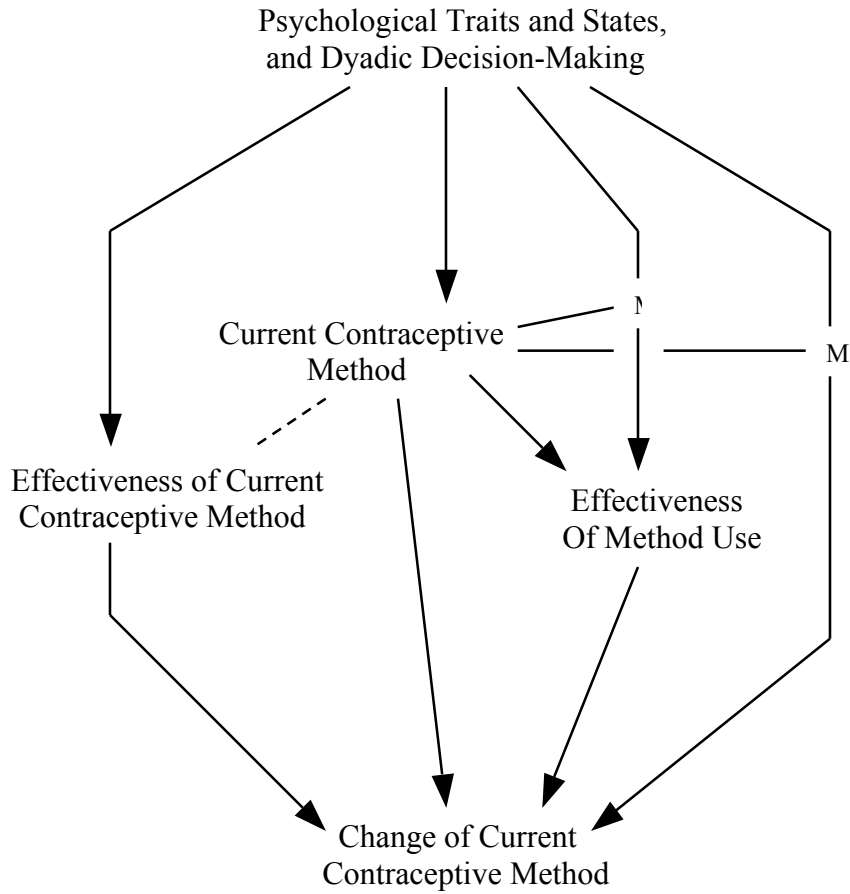


Figure 1. Theoretical model of the relationship between psychological and behavioral factors affecting the occurrence of unintended pregnancy.

- > Indicates predictive effect
- M Indicates moderating effect
- - - - - Indicates conceptual relationship

Table 1. Frequency Counts of Selected Categorical Demographic Variables, Separately by Sex

| Variable | Males (N = 268) | | Females (N = 268) | |
|--------------------------|-----------------|----------|-------------------|----------|
| | Frequency | Column % | Frequency | Column % |
| Marital Status | | | | |
| 1 Never Married | 176 | 65.67 | 176 | 65.67 |
| 2 Currently Married | 66 | 24.63 | 66 | 24.63 |
| 3 Common Law | 1 | 0.37 | 0 | 0.00 |
| 4 Separated | 8 | 2.99 | 7 | 2.61 |
| 5 Divorced | 17 | 6.34 | 18 | 6.72 |
| 6 Widowed | 0 | 0.00 | 1 | 0.37 |
| Cohabitation | | | | |
| 1 No | 69 | 25.75 | 70 | 26.12 |
| 2 Sometimes | 13 | 4.85 | 12 | 4.48 |
| 3 Yes | 186 | 69.40 | 186 | 69.40 |
| Education | | | | |
| 1 <12 Years | 42 | 15.67 | 31 | 11.57 |
| 2 12 Years | 90 | 33.58 | 88 | 32.84 |
| 3 13-15 Years | 86 | 32.09 | 102 | 38.06 |
| 4 16 Years | 50 | 18.66 | 47 | 17.54 |
| Employment Status | | | | |
| 1 Not in the Labor Force | 13 | 4.85 | 37 | 13.81 |
| 2 Unemployed | 48 | 17.91 | 71 | 26.49 |
| 3 Employed | 202 | 75.37 | 160 | 59.70 |
| Religion | | | | |
| 1 Protestant | 48 | 17.91 | 64 | 23.88 |
| 2 Roman Catholic | 79 | 29.48 | 84 | 31.34 |
| 3 Other | 39 | 14.55 | 39 | 14.55 |
| 4 None | 102 | 38.06 | 91 | 33.96 |
| Race/Ethnicity | | | | |
| 1 African American | 56 | 20.90 | 52 | 19.40 |
| 2 Hispanic American | 87 | 32.46 | 93 | 34.70 |
| 3 European American | 103 | 38.43 | 93 | 34.70 |
| 4 Other | 22 | 8.21 | 30 | 11.19 |

Table 2. Items for the Psychological Trait Variables Related to Current Contraceptive Use, With Male Version in Parentheses if Different

Variable Category

Scale (Variable) Name _____

Contraceptive Attitudes

For each of the first three scales, respondents rate their items for how characteristic they are of their current method and how important that characteristic is to them. A high score indicates the item is characteristic of their method and important to them in choosing a method; a low score indicates the item is uncharacteristic of their method but important to them in choosing a method. Scores falling in the middle indicate items that are neither characteristic nor uncharacteristic of their method, as well as items that are not important to them in choosing a method.

Effective Birth Control Attitude

1. Does not result in unplanned pregnancies
2. Is recommended by many doctors
3. Is effective in preventing pregnancies

Anti-Oral Contraception Attitude

1. Does not worsen my (partner's) menstrual periods
2. Does not cause minor side effects
3. Can be bought without seeing a doctor
4. Does not effect my (partner's) health
5. Does not alter my (partner's) body chemistry
6. Protects against sexually transmitted diseases

Anti-Coitus Dependent Attitude

1. Does not interfere with sexual spontaneity or romantic mood
2. Does not cause discomfort or physical irritation
3. Is not messy to use
4. Does not decrease sexual pleasure
5. Do not have to think about it at the time I have sex
6. Is liked by my partner

For each of the next five scales, respondents rate how much they agree with each item. In some cases, a stem statement or question is used to guide the respondent's response to the items. High scores indicate a high level of agreement with the items of the scale and low scores indicate a high level of disagreement with the items of the scale. Scores falling in the middle indicate weak agreement and/or disagreement with the items.

Table 2 continued.

Communication Difficulty Attitude

How acceptable is using contraception to you and to people who are important to you?

1. It can be embarrassing to talk with my friends about contraception
2. It can be difficult or upsetting to talk with a doctor about contraception
3. I sometimes feel uncomfortable asking someone in a pharmacy about contraception
4. It is a little embarrassing to talk with my partner about contraception

Normative Discomfort Attitude

How acceptable is using contraception to you and to people who are important to you?

1. I feel a little uncomfortable with the idea of contraception
2. The people in my community whose opinion I respect do not favor someone like me using contraception
3. A lot of people in my family would probably disapprove of my using contraception

Gender Role Attitudes

Traditional Gender Role Attitude

What are your attitudes toward male and female roles?

1. I want my partner to be (I want to be) dominant in his (my) relationship with me (my partner)
2. My (My partner's) most important role is in the home
3. It is my partner's (my) responsibility more than mine (my partner's) to support the family financially
4. Choosing a contraceptive method is primarily my (my partner's) responsibility
5. My partner (I) should not be the one to worry about an unplanned pregnancy

Alcohol and Sex Attitudes

Disinhibition Attitude

When I drink enough alcohol to feel the effects:

1. I worry less about pregnancy
2. I am less nervous about sex
3. I am less likely to say no to sexual advances
4. I lose my sexual inhibitions

Improves Responsivity Attitude

When I drink enough alcohol to feel the effects:

1. I am more responsive sexually
2. I enjoy sex more
3. I feel closer to my sexual partner
4. I am a better lover

Table 2 continued.

Cognitive Difficulty

For the following scale, respondents rate the frequency that each item has been true for them during a period of time. Higher scores indicate that some or all of the items have been true for them with greater frequency.

Attention Concentration Deficit

How often have the following feelings or behaviors occurred during the past month?

1. When listening to someone, my mind repeatedly drifts off.
2. I “space out” when reading.
3. I am sidetracked from something important that I am doing.
4. I lose track of the main point when reading something.
5. Other people complain that I don’t seem to be listening to them.
6. I am easily distracted by background noises or activities.
7. I get lost in daydreaming, preoccupied with my own thoughts.
8. I have to reread something I have just read.

Childbearing Motivation

Positive Motivation

The respondent rates twenty eight items about the positive consequences of having a child for their desirability. Item examples include:

- Holding and cuddling a baby
- Playing with my child

Negative Motivation

The respondent rates twenty one items about the negative consequences of having a child for their undesirability. Item examples include:

- Being responsible for a needy and demanding baby
 - Worrying whether I am raising my child the right way
-

Table 3. Descriptive Statistics for Psychological Trait Variables Related to Current Contraceptive Use, Separately by Sex

| Variable Category | Males (N = 268) | | | | Females (N = 268) | | | |
|----------------------------------|-----------------|------|------------|--------------|-------------------|------|------------|--------------|
| | Mean | S.D. | Range | Coeff. Alpha | Mean | S.D. | Range | Coeff. Alpha |
| <u>Contraceptive Attitudes</u> | | | | | | | | |
| Effective Birth Control | 1.72 | 1.07 | -2.5 – 3.0 | 0.642 | 1.96 | 1.15 | -3.0 – 3.0 | 0.716 |
| Anti-Oral Contraception | 1.66 | 2.53 | -5.3 – 6.0 | 0.813 | 1.66 | 2.52 | -4.5 – 6.0 | 0.788 |
| Anti-Coitus Dependent | 2.46 | 2.26 | -3.5 – 6.0 | 0.789 | 3.03 | 2.34 | -4.0 – 6.0 | 0.813 |
| Communic. Difficulty | 6.22 | 2.65 | 4.0 – 16.0 | 0.760 | 5.58 | 2.30 | 4.0 – 16.0 | 0.744 |
| Normative Discomfort | 4.11 | 1.77 | 3.0 – 12.0 | 0.666 | 4.56 | 2.15 | 3.0 – 12.0 | 0.666 |
| <u>Gender Role Attitudes</u> | | | | | | | | |
| Traditional Gender Role | 10.7 | 3.26 | 5.0 – 20.0 | 0.668 | 10.9 | 3.28 | 5.0 – 20.0 | 0.668 |
| <u>Alcohol and Sex Attitudes</u> | | | | | | | | |
| Disinhibition | 14.3 | 5.16 | 4.0 – 24.0 | 0.727 | 13.3 | 5.77 | 4.0 – 24.0 | 0.787 |
| Improves Responsivity | 12.8 | 5.49 | 4.0 – 24.0 | 0.857 | 13.0 | 6.01 | 4.0 – 24.0 | 0.876 |
| <u>Childbearing Motivation</u> | | | | | | | | |
| Positive Motivation | 85.7 | 16.1 | 27 – 108 | 0.945 | 85.4 | 15.3 | 27 – 108 | 0.932 |
| Negative Motivation | 54.4 | 12.2 | 21 – 84 | 0.873 | 52.3 | 13.2 | 21 – 81 | 0.903 |
| <u>Cognitive Disorder</u> | | | | | | | | |
| Attention Concentration Deficit | 8.20 | 4.39 | 0.0 – 22.0 | 0.824 | 7.72 | 4.13 | 0.0 – 23.0 | 0.833 |

Note: Missing values for males and females range from 0 to 2 for all trait variables, with the exception of Disinhibition and Improves Responsivity, where they are 21 for males and 29 for females. For multivariate analyses, we imputed the total sample, sex-specific median value of those two variables to the cases with missing values.

Table 4. Frequency Counts for Psychological State Variables Related to Current Contraceptive Method, Separately by Sex

| Variable | Males (N = 268) | | Females (N = 268) | |
|---|-----------------|----------|-------------------|----------|
| Category | Frequency | Column % | Frequency | Column % |
| Confidence in ability to use current contraception | | | | |
| 1 = Not at all confident | 2 | 0.76 | 1 | 0.37 |
| 2 | 1 | 0.38 | 2 | 0.75 |
| 3 | 3 | 1.14 | 2 | 0.75 |
| 4 | 1 | 0.38 | 3 | 1.12 |
| 5 | 6 | 2.27 | 6 | 2.25 |
| 6 | 10 | 3.79 | 7 | 2.62 |
| 7 | 17 | 6.44 | 10 | 3.75 |
| 8 | 29 | 10.98 | 20 | 7.49 |
| 9 | 47 | 17.80 | 47 | 17.60 |
| 10 = Very confident | 148 | 56.06 | 169 | 63.30 |
| Missing | 4 | | 1 | |
| Partner's confidence in ability to use current contraception | | | | |
| 1 = Not at all confident | 4 | 1.52 | 4 | 1.50 |
| 2 | 1 | 0.38 | 1 | 0.38 |
| 3 | 3 | 1.14 | 1 | 0.38 |
| 4 | 0 | 0.00 | 4 | 1.50 |
| 5 | 7 | 2.66 | 5 | 1.88 |
| 6 | 11 | 4.18 | 7 | 2.63 |
| 7 | 20 | 7.60 | 9 | 3.38 |
| 8 | 28 | 10.65 | 30 | 11.28 |
| 9 | 54 | 20.53 | 53 | 19.92 |
| 10 = Very confident | 135 | 51.33 | 152 | 57.14 |
| Missing | 5 | | 1 | |
| Satisfaction with current contraceptive method | | | | |
| 1=Very dissatisfied | 8 | 3.03 | 3 | 1.12 |
| 2 | 5 | 1.89 | 4 | 1.50 |
| 3 | 3 | 1.14 | 8 | 3.00 |
| 4 | 7 | 2.65 | 4 | 1.50 |
| 5 | 12 | 4.55 | 11 | 4.12 |
| 6 | 12 | 4.55 | 19 | 7.12 |
| 7 | 16 | 6.06 | 19 | 7.12 |
| 8 | 38 | 14.39 | 46 | 17.23 |
| 9 | 37 | 14.02 | 35 | 13.11 |
| 10 = Very satisfied | 126 | 47.73 | 118 | 44.19 |
| Missing | 4 | | 1 | |

Table 4 continued.

| Variable | Males | | Females | |
|--|-----------|----------|-----------|----------|
| Category | Frequency | Column % | Frequency | Column % |
| Partner's satisfaction with current contraceptive method | | | | |
| 1 = Very dissatisfied | 6 | 2.27 | 7 | 2.62 |
| 2 | 2 | 0.76 | 4 | 1.50 |
| 3 | 4 | 1.52 | 10 | 3.75 |
| 4 | 9 | 3.41 | 2 | 0.75 |
| 5 | 12 | 4.55 | 21 | 7.87 |
| 6 | 17 | 6.44 | 11 | 4.12 |
| 7 | 23 | 8.71 | 13 | 4.87 |
| 8 | 43 | 16.29 | 37 | 11.86 |
| 9 | 42 | 15.91 | 32 | 11.99 |
| 10 = Very satisfied | 106 | 40.15 | 130 | 48.69 |
| Missing | 4 | | 1 | |

Table 5. Frequency Counts or Descriptive Statistics for Psychological State Variables Related to Current Relationship and Recent Pregnancy Desires, Separately by Sex

| Variable | Males (N = 268) | | Females (N = 268) | |
|--|-----------------|----------|-------------------|----------|
| Category | Frequency | Column % | Frequency | Column % |
| Feelings of Emotional Closeness | | | | |
| 1 = None | 1 | 0.37 | 0 | 0.00 |
| 2 | 0 | 0.00 | 0 | 0.00 |
| 3 | 1 | 0.37 | 3 | 1.12 |
| 4 | 0 | 0.00 | 1 | 0.37 |
| 5 | 5 | 1.87 | 4 | 1.49 |
| 6 | 9 | 3.36 | 5 | 1.87 |
| 7 | 27 | 10.07 | 29 | 10.82 |
| 8 | 53 | 19.78 | 51 | 19.03 |
| 9 | 52 | 19.40 | 67 | 25.00 |
| 10 = Maximum Closeness | 120 | 44.78 | 188 | 40.30 |
| Partner's Feelings of Emotional Closeness | | | | |
| 1 = None | 0 | 0.00 | 1 | 0.37 |
| 2 | 0 | 0.00 | 2 | 0.75 |
| 3 | 0 | 0.00 | 0 | 0.00 |
| 4 | 2 | 0.75 | 0 | 0.00 |
| 5 | 10 | 3.77 | 4 | 1.50 |
| 6 | 7 | 2.64 | 15 | 5.62 |
| 7 | 20 | 7.55 | 23 | 8.61 |
| 8 | 45 | 16.98 | 48 | 17.98 |
| 9 | 63 | 23.77 | 58 | 21.72 |
| 10 = Maximum Closeness | 118 | 44.53 | 116 | 43.45 |
| Missing | 3 | | 1 | |

Table 5 continued.

| Variable Category | Males (N = 268) | | | | Females (N = 268) | | | |
|--------------------------------------|-----------------|------|----------|----------------|-------------------|------|----------|----------------|
| Specific Variable | Mean | S.D. | Range | N ¹ | Mean | S.D. | Range | N ¹ |
| Current Relationship | | | | | | | | |
| Experience of Conflict | -0.03 | 0.97 | -8 – 2.9 | 268 | 0.03 | 1.03 | -8 – 2.9 | 268 |
| Positive Satisfaction | 10.07 | 1.94 | 0 – 12 | 268 | 10.08 | 1.94 | 0 – 12 | 268 |
| Negative Satisfaction | 5.43 | 3.08 | 0 – 12 | 268 | 5.43 | 3.30 | 0 – 12 | 267 |
| Recent Pregnancy Desires | | | | | | | | |
| Wanted to Avoid Pregnancy | 17.4 | 4.45 | 2 – 20 | 266 | 17.4 | 4.10 | 0 – 12 | 268 |
| Partner Wanted to Avoid Pregnancy | 17.3 | 4.42 | 2 – 20 | 268 | 17.2 | 4.49 | 0 – 20 | 268 |

¹ A discrepancy between the sex-specific N of an individual trait variable and the overall sex-specific N indicates the number of missing values for that specific variable.

Table 6. Frequency Counts for Dyadic (Couple) Decision-Making Variables Related to Current Contraceptive Method, Separately by Sex

| Variable | Males (N = 268) | | Females (N = 268) | |
|--|-----------------|----------|-------------------|----------|
| Category | Frequency | Column % | Frequency | Column % |
| Who had primary responsibility for choosing contraceptive method | | | | |
| 1 = Respondent only | 17 | 6.34 | 102 | 38.06 |
| 2 = Respondent mostly | 21 | 7.84 | 66 | 24.63 |
| 3 = Respondent/partner equally | 118 | 44.03 | 90 | 33.58 |
| 4 = Partner mostly | 59 | 22.01 | 8 | 2.99 |
| 5 = Partner only | 53 | 19.78 | 2 | 0.75 |
| How much disagreement between respondent/partner about method | | | | |
| 1 = None | 191 | 71.27 | 209 | 77.99 |
| 2 = Only a little | 47 | 17.54 | 27 | 10.07 |
| 3 = A moderate amount | 6 | 2.24 | 8 | 2.99 |
| 4 = A great deal | 4 | 1.49 | 4 | 1.49 |
| 5 = No communication ¹ | 20 | 7.46 | 20 | 7.46 |

¹This category was recoded to the sex-specific median value for all multivariate analyses.

Table 7. Frequency Counts for Contraceptive Behaviors, Separately by Sex

| Variable | Males (N = 268) | | Females (N = 268) | |
|--|-----------------|----------|-------------------|----------|
| Category | Frequency | Column % | Frequency | Column % |
| Current contraception, OC | | | | |
| 0 = Not Oral Contraception | 154 | 57.46 | 151 | 56.34 |
| 1 = Oral Contraception | 114 | 42.54 | 117 | 43.66 |
| Current contraception, Condoms | | | | |
| 0 = Not Condoms | 197 | 73.51 | 199 | 74.25 |
| 1 = Condoms | 71 | 26.49 | 69 | 25.75 |
| Current contraception, Depo Provera | | | | |
| 0 = Not Depo Provera | 213 | 79.48 | 211 | 78.73 |
| 1 = Depo Provera | 55 | 20.52 | 57 | 21.27 |
| Current contraception, Withdrawal | | | | |
| 0 = Not Withdrawal | 246 | 91.79 | 249 | 92.91 |
| 1 = Withdrawal | 22 | 8.21 | 19 | 7.09 |
| Method Effectiveness | | | | |
| 1 = None | 6 | 2.26 | 5 | 1.87 |
| 2 = Rhythm, Withdrawal | 29 | 10.90 | 25 | 9.36 |
| 3 = Condom, Diaphragm, Spermicide | 61 | 22.93 | 61 | 22.85 |
| 4 = OC | 114 | 42.86 | 117 | 43.82 |
| 5 = Depo Provera, IUD, Norplant | 56 | 21.05 | 59 | 22.10 |
| Missing | 2 | | 1 | |
| Effectiveness of Method Use-All Contraceptors | | | | |
| 1 | 1 | 0.42 | 1 | 0.41 |
| 2 | 8 | 3.33 | 4 | 1.63 |
| 3 | 53 | 22.08 | 56 | 22.86 |
| 4 | 39 | 16.25 | 42 | 17.14 |
| 5 | 139 | 57.92 | 142 | 57.96 |
| Missing | 28 | | 23 | |

Table 7 continued.

| | | | | |
|--|----|-------|-----|-------|
| Effectiveness of Method Use-OC | | | | |
| 1 Missed >2 pills/month, >2x/year | 1 | 0.92 | 0 | 0.00 |
| 2 Missed >2 pills/month, 1 or 2x/year | 4 | 3.67 | 3 | 2.56 |
| 3 Missed 1 or 2 pills, >2x/ year | 33 | 30.28 | 42 | 35.90 |
| 4 Missed 1 or 2 pills, 1 or 2x/year | 22 | 20.18 | 27 | 23.08 |
| 5 Never missed a pill | 49 | 44.95 | 45 | 38.46 |
| Missing | 5 | | 0 | |
| Effectiveness of Method Use-Condoms | | | | |
| 1 Usually failed to use method (>50%) | 0 | 0.00 | 0 | 0.00 |
| 2 Often failed to use method (20 to 50%) | 3 | 4.23 | 1 | 1.45 |
| 3 Occasionally failed to use method (10%) | 17 | 23.94 | 10 | 14.49 |
| 4 Rarely failed to use method (1%) | 16 | 22.54 | 12 | 17.39 |
| 5 Never failed to use method | 35 | 49.30 | 46 | 66.67 |
| Effectiveness of Method Use- Depo Provera | | | | |
| 1 6 or more months between shots | 0 | 0.00 | 0 | 0.00 |
| 2 Combination of 1 and 3 | 0 | 0.00 | 0 | 0.00 |
| 3 4-5 months between shots | 0 | 0.00 | 4 | 7.69 |
| 4 Combination of 3 and 5 | 1 | 2.04 | 3 | 5.77 |
| 5 Shots every 3 months | 48 | 97.96 | 45 | 86.54 |
| Missing | 6 | | 5 | |
| Changed method at 6 month FU | | | | |
| 0 = No | 95 | 50.80 | 103 | 49.76 |
| 1 = Yes | 92 | 49.20 | 104 | 50.24 |
| Missing ¹ | 81 | | 61 | |
| Changed from OC at 6 month FU | | | | |
| 0 = No | 51 | 59.30 | 54 | 56.25 |
| 1 = Yes | 35 | 40.70 | 42 | 43.75 |
| Missing ¹ | 28 | | 21 | |
| Changed from condoms at 6 month FU | | | | |
| 0 = No | 18 | 39.13 | 21 | 40.38 |
| 1 = Yes | 28 | 60.87 | 31 | 59.62 |
| Missing ¹ | 25 | | 17 | |

Table 7 continued.

Changed from Depo Provera at 6
month FU
0 = No
1 = Yes
Missing¹

¹These missing cases represent the 81 males and 61 females who were lost to the follow-up at six months.

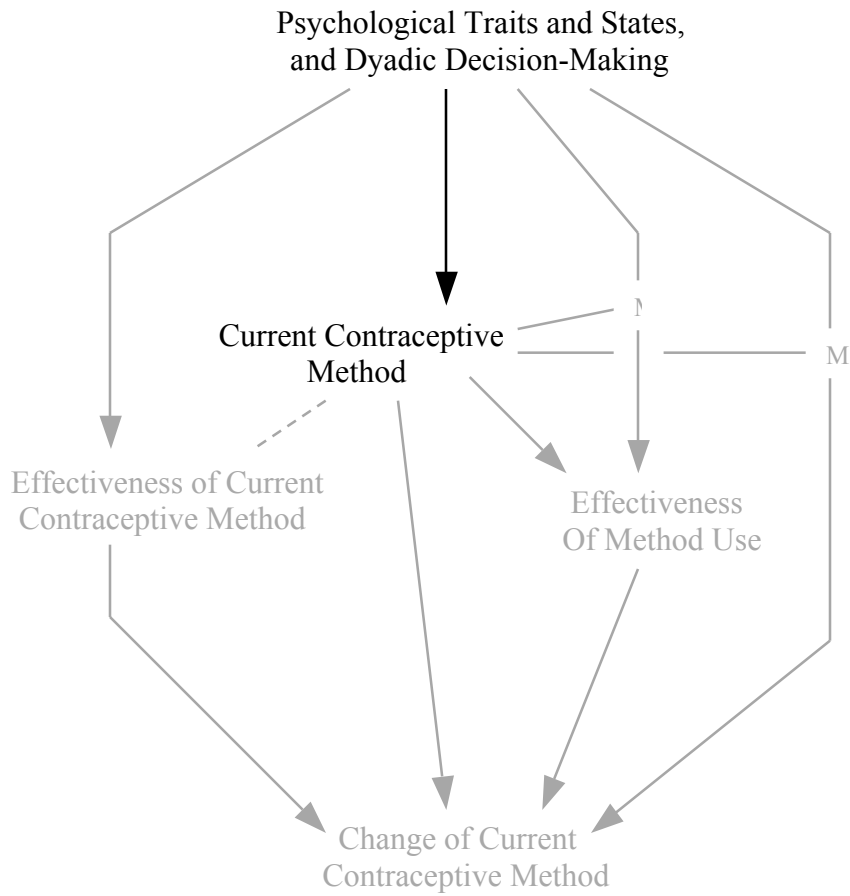


Figure 2. Components of theoretical model analyzed with logistic regression analysis and reported in Tables 8, 9, and 10.

Table 8. Results of Logistic Regression of Current Contraception, OC on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|---|--------------------|-----------------|---------------------|
| Sex = Male (Female is the reference category) | -3.8847 | 8.8979 | 0.0029 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | 0.3948 | 10.3363 | 0.0013 |
| Anti-Oral Contraception Attitude | -0.1806 | 17.4494 | <.0001 |
| Anti-Coitus Dependent Attitude | 0.2865 | 22.5251 | <.0001 |
| Traditional Gender Role Attitude | -0.0943 | 8.0438 | 0.0046 |
| Disinhibition Attitude | 0.0400 | 4.0674 | 0.0437 |
| <u>Psychological States</u> | | | |
| Partner's Contraceptive Confidence | -0.2980 | 9.5872 | 0.0020 |
| Part. Contra. Confid. * Sex | 0.3260 | 6.4616 | 0.0110 ¹ |
| Partner's Contraceptive Satisfaction | 0.1641 | 7.9444 | 0.0048 |
| Experience of Conflict | -0.2210 | 4.5566 | 0.0238 |
| Wanted to Avoid Pregnancy | 0.0505 | 3.9613 | 0.0466 |
| <u>Dyadic Decision-Making</u> | | | |
| Couple D-M Responsibility | -0.3100 | 3.6817 | 0.0550 |
| Couple D-M Resp. * Sex | 0.4670 | 4.8038 | 0.0284 ² |

Model Chi-Square P Value with 13 Degrees of Freedom = <.0001 N = 536

Predicted Classification: Correct = 80.1 %, Incorrect = 19.7%, Tied = 0.2%

¹Males and females are significantly different but only females are different from zero.

²Males and females are significantly different but neither sex is different from zero.

Table 9. Results of Logistic Regression of Current Contraception, Condoms on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|---|--------------------|-----------------|---------------------|
| Sex = Male (Female is the reference category) | 1.2040 | 0.3823 | 0.5364 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | 0.2799 | 2.4473 | 0.1177 |
| Eff. Birth Contr. * Sex | -0.4734 | 3.9173 | 0.0478 ¹ |
| Anti-Oral Contraception Attitude | 0.6879 | 77.9342 | <.0001 |
| Anti-Coitus Dependent Attitude | -0.5701 | 52.9206 | <.0001 |
| Disinhibition Attitude | -0.0629 | 5.1041 | 0.0239 |
| Attention Concentration Deficit | 0.1291 | 14.9921 | 0.0001 |
| <u>Psychological States</u> | | | |
| Contraceptive Confidence | -0.0797 | 0.3912 | 0.5317 |
| Contra. Confid. * Sex | 0.3714 | 4.2918 | 0.0383 ² |
| <u>Dyadic Decision-Making</u> | | | |
| Couple D-M Responsibility | 0.7801 | 9.9677 | 0.0016 |
| Couple D-M Resp. * Sex | -1.1251 | 13.0423 | 0.0003 ³ |
| Couple D-M Disagreement, Female | 0.8058 | 4.8027 | 0.0283 |

Model Chi-Square P Value with 12 Degrees of Freedom = <.0001 N = 536

Predicted Classification: Correct = 92.0 %, Incorrect = 7.9%, Tied = 0.1%

¹Males and females are significantly different but neither sex is different from zero.

²Males and females are significantly different but only males are different from zero.

³Males and females are significantly different but only females are different from zero.

Table 10. Results of Logistic Regression of Current Contraception, Depo Provera on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|--|--------------------|-----------------|---------|
| Sex = Male (Female is the reference category) | 6.2406 | 8.3404 | 0.0039 |
| <u>Psychological Traits</u> | | | |
| Anti-Oral Contraception Attitude | -0.3884 | 48.2838 | <.0001 |
| Communication Difficulty Attitude, Male | -0.1488 | 4.4256 | 0.0354 |
| Normative Discomfort Attitude | 0.1517 | 6.0145 | 0.0142 |
| Traditional Gender Role Attitude | 0.1373 | 12.3077 | 0.0005 |
| Attention Concentration Deficit, Female | -0.1494 | 8.8275 | 0.0030 |
| <u>Psychological States</u> | | | |
| Partner's Contraceptive Confidence, Female | 0.6751 | 9.3803 | 0.0022 |
| Experience of Conflict | 0.3932 | 11.6398 | 0.0006 |
| <u>Dyadic Decision-Making</u> | | | |
| Couple D-M Disagreement | -0.5750 | 4.6019 | 0.0319 |
| Model Chi-Square P Value with 9 Degrees of Freedom = <.0001 N = 536 | | | |
| Predicted Classification: Correct = 79.7 %, Incorrect = 20.0%, Tied = 0.3% | | | |

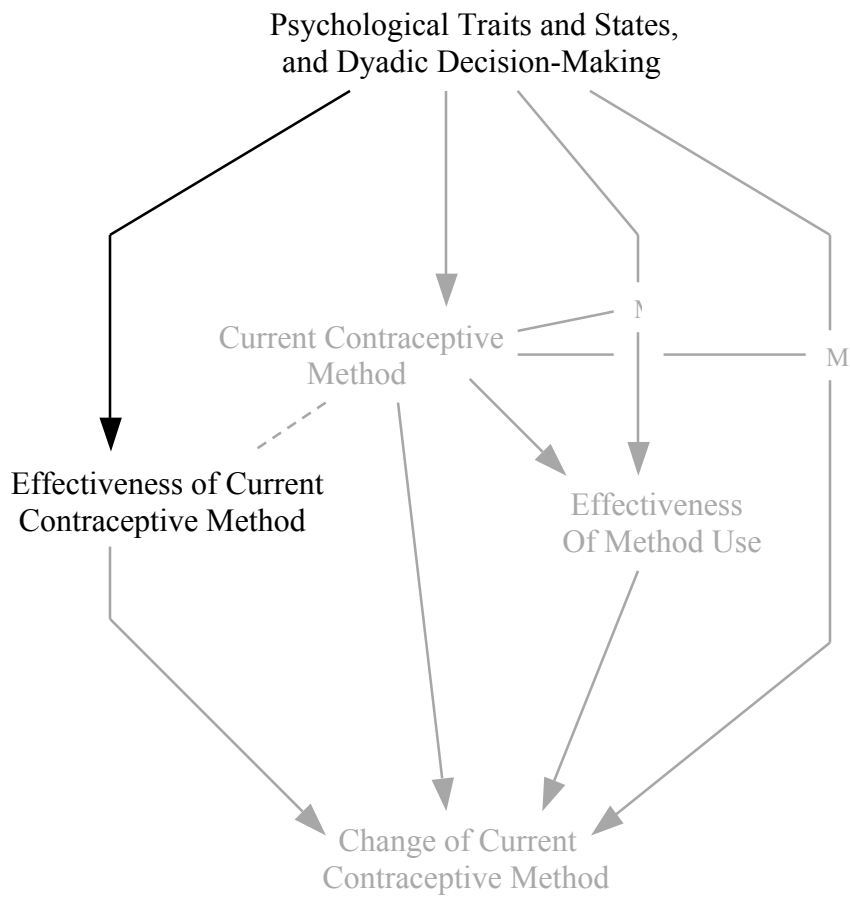


Figure 3. Components of theoretical model analyzed with ordinary least squares regression analysis and reported in Table 11.

Table 11. Results of Maximum Likelihood Regression of Current Contraceptive Method Effectiveness on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | t Value | P Value |
|--|--------------------|---------|---------------------|
| Sex = Male (Female is the reference category) | -0.6427 | -1.85 | 0.0650 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | 0.1020 | 2.81 | 0.0052 |
| Anti-Oral Contraception Attitude | -0.1496 | -10.62 | <.0001 |
| Anti-Coitus Dependent Attitude | 0.0854 | 5.04 | <.0001 |
| Communication Difficulty Attitude | 0.0226 | 1.07 | 0.2864 |
| Com. Dif. Attitude * Sex | -0.0562 | -2.02 | 0.0441 ¹ |
| Negative Childbearing Motivation | -0.0066 | -2.41 | 0.0163 |
| <u>Psychological States</u> | | | |
| Contraceptive Confidence | 0.0680 | 2.43 | 0.0153 |
| Partner's Contraceptive Confidence | 0.2980 | 2.38 | 0.0176 |
| Wanted to Avoid Pregnancy, Male | 0.0240 | 2.14 | 0.0325 |
| <u>Dyadic Decision-Making</u> | | | |
| Couple D-M Responsibility | -0.1039 | -1.95 | 0.0514 |
| Couple D-M Resp. * Sex | 0.2267 | 3.19 | 0.0015 ² |
| Couple D-M Disagreement | -0.1298 | -2.12 | 0.0342 |
| Model -2 Residual Log Likelihood with 13 DF = 1305.9 N = 533 | | | |
| Proportion of Variance Accounted for = 0.375 | | | |

¹Males and females are significantly different but neither sex is different from zero.

²Males and females are significantly different but only males are different from zero.

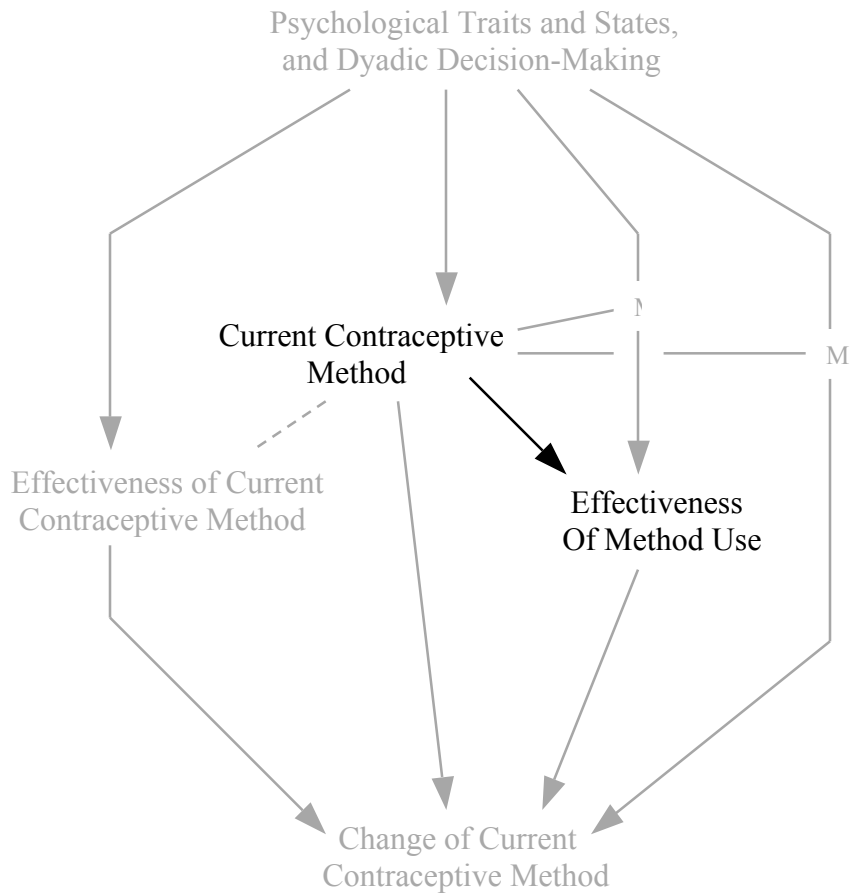


Figure 4. Components of theoretical model analyzed with ordinary least squares regression analysis and reported in Table 12.

Table 12. Results of Maximum Likelihood Regression of Effectiveness of Current Contraceptive Method Use, All Contraceptors on Current Contraceptive Method Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | | | |
|--|--------------------|---------|---------------------|
| Specific Variable | Parameter Estimate | t Value | P Value |
| Sex = Male (Female is the reference category) | -0.3161 | -2.30 | 0.0217 |
| <u>Behavioral Variables</u> | | | |
| Current Contraception, OC | -0.5125 | -4.04 | <.0001 |
| Current Contraception, OC * Sex | 0.3876 | 2.17 | 0.0308 ¹ |
| Current Contraception, Depo Provera | 0.3016 | 1.94 | 0.0525 |
| Current Contracep., Depo Provera * Sex | 0.5272 | 2.13 | 0.0214 ² |
| Model -2 Residual Log Likelihood with 5 DF = 1243.1 N = 485 | | | |
| Proportion of Variance Accounted for = 0.132 | | | |

¹Males and females are significantly different but only females are different from zero.

²Males and females are significantly different but only males are different from zero.

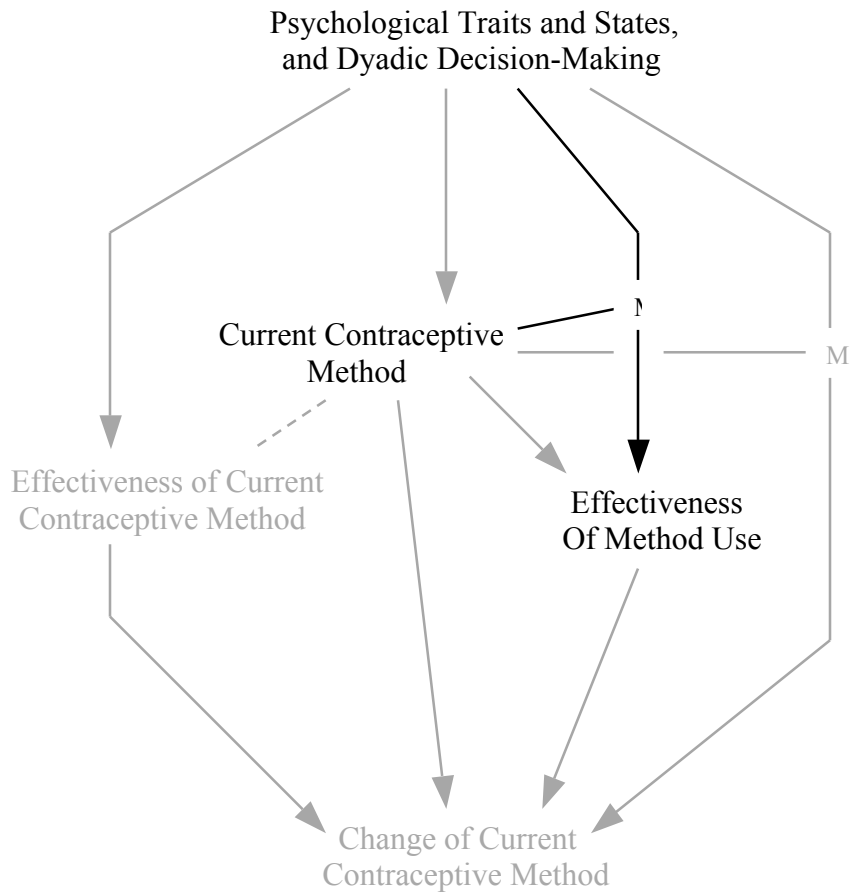


Figure 5. Components of theoretical model analyzed with ordinary least squares regression and reported in Tables 13 and 14.

Table 13. Results of Maximum Likelihood Regression of Effectiveness of Current Contraceptive Method Use, OC on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | | | |
|--|--------------------|---------|---------------------|
| Specific Variable | Parameter Estimate | t Value | P Value |
| Sex = Male (Female is the reference category) | 0.3085 | 0.46 | 0.6486 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude, Male | 0.2287 | 2.11 | 0.0362 |
| Anti-Oral Contraception Attitude | 0.1074 | 4.01 | <.0001 |
| Anti-Coitus Dependent Attitude | -0.1455 | -4.07 | <.0001 |
| <u>Psychological States</u> | | | |
| Partner's Contraceptive Confidence | 0.1411 | 3.50 | <.0006 |
| Contraceptive Satisfaction | -0.0954 | -2.52 | 0.0125 |
| Experience of Conflict | 0.0754 | 0.77 | 0.4445 |
| Experience of Conflict * Sex | -0.3486 | -2.56 | 0.0112 ¹ |
| Emotional Closeness | 0.1441 | 2.15 | 0.0327 |
| <u>Dyadic Decision-Making</u> | | | |
| Couple Decision-Making Disagreement, Male | 0.2873 | 1.97 | 0.0498 |
| Model -2 Residual Log Likelihood with 10 DF = 602.0 N = 226 | | | |
| Proportion of Variance Accounted for = 0.194 | | | |

¹Males and females are significantly different but only males are different from zero.

Table 14. Results of Maximum Likelihood Regression of Effectiveness of Current Contraceptive Method Use, Condoms on Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | t Value | P Value |
|---|--------------------|---------|---------|
| Sex = Male (Female is the reference category) | 1.0011 | 2.44 | 0.0161 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | 0.1735 | 2.80 | 0.0058 |
| Anti-Oral Contraception Attitude | 0.0752 | 2.02 | 0.0455 |
| Traditional Gender Role Attitude, Male | -0.0776 | -2.62 | 0.0097 |
| Disinhibition Attitude, Female | 0.0352 | 2.07 | 0.0405 |
| Negative Childbearing Motivation | 0.0124 | 2.21 | 0.0289 |
| Model -2 Residual Log Likelihood with 6 DF = 360.9 N = 140 | | | |
| Proportion of Variance Accounted for = 0.191 | | | |

¹Males and females are significantly different but only males are different from zero.

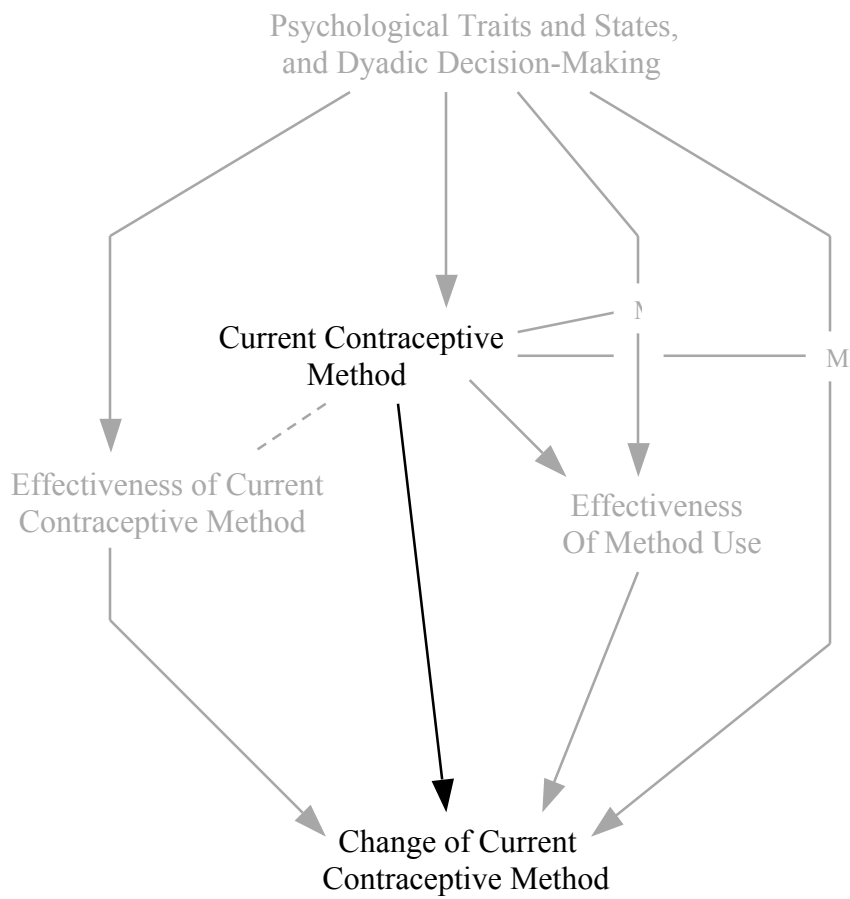


Figure 6. Components of theoretical model analyzed with logistic regression and reported in Table 15.

Table 15. Results of Logistic Regression of Changed Contraceptive Method at Follow Up on previously measured Contraceptive Behaviors, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|---|--------------------|-----------------|---------|
| Specific Variable | | | |
| Sex = Male (Female is the reference category) | -0.0572 | 0.0779 | 0.7801 |
| <u>Contraceptive Behavior</u> | | | |
| Current Contraception, OC | -0.7891 | 11.1950 | 0.0008 |
| Current Contraception, Depo Provera | -0.5753 | 4.0919 | 0.0431 |
| Model Chi-Square P Value with 3 Degrees of Freedom = <0.0086 N = 394 | | | |
| Predicted Classification: Correct = 50.3 %, Incorrect = 32.0%, Tied = 17.7% | | | |

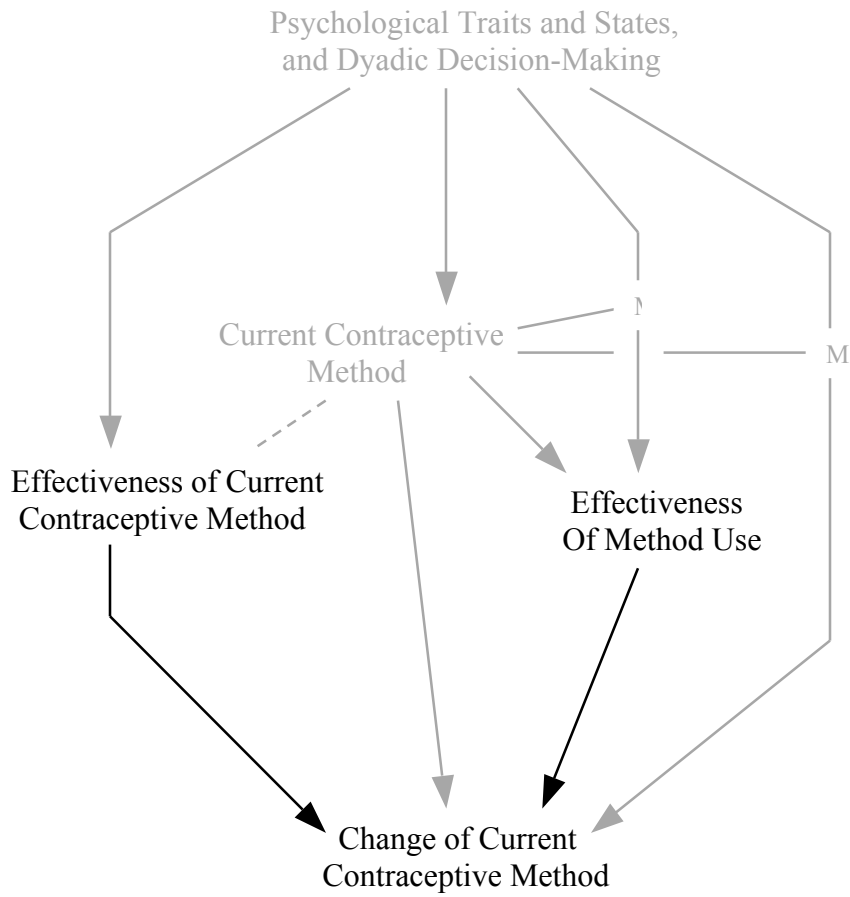


Figure 7. Components of theoretical model analyzed with logistic regression and reported in Table 16.

Table 16. Results of Logistic Regression of Changed Contraceptive Method at Follow Up on Previously Measured Contraceptive Behaviors and Their Interaction, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|--|--------------------|-----------------|---------|
| Sex = Male (Female is the reference category) | -0.0861 | 0.1679 | 0.6820 |
| <u>Contraceptive Behavior</u> | | | |
| Current Contraceptive Method Effectiveness | -2.2507 | 7.0488 | 0.0079 |
| Effectiveness of Current Contraceptive M. Use | -1.4962 | 4.9074 | 0.0267 |
| C. C. M. Effectiveness * E. C. C. M. Use | 0.4258 | 5.7013 | 0.0170 |
| Model Chi-Square P Value with 4 Degrees of Freedom = <0.0151 N = 381 | | | |
| Predicted Classification: Correct = 56.3 %, Incorrect = 36.0%, Tied = 7.7% | | | |

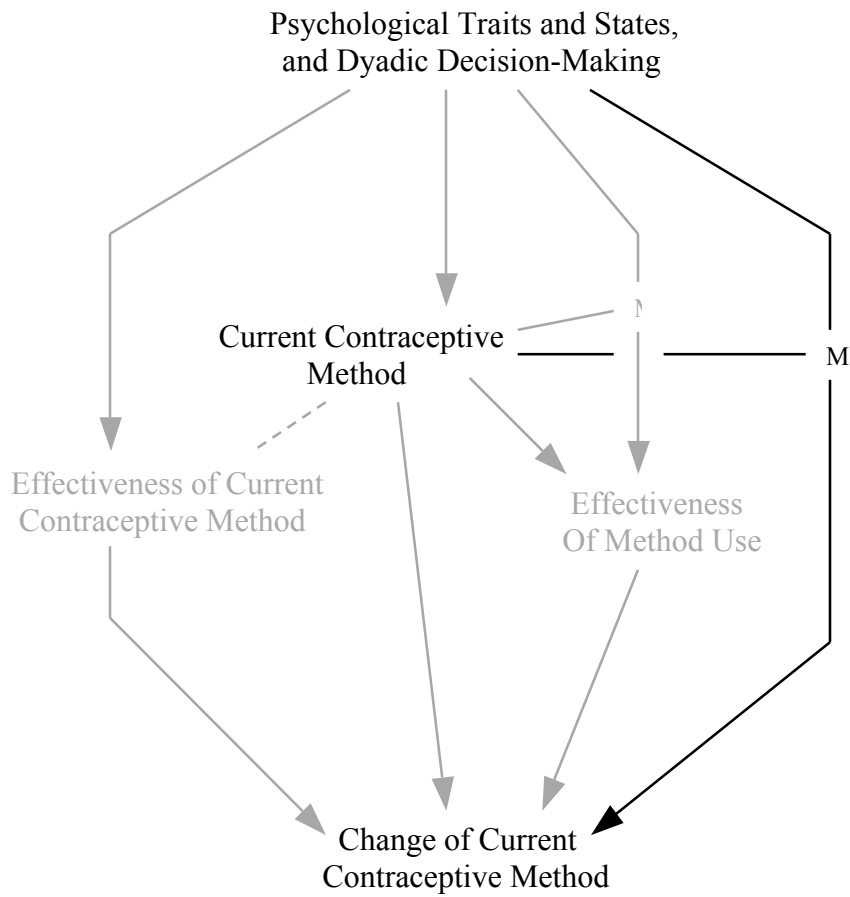


Figure 8. Components of theoretical model analyzed with logistic regression and reported in Table 17 and 18.

Table 17. Results of Logistic Regression of Changed Contraceptive Method, OC at Follow Up on Previously Measured Initial Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | Parameter Estimate | Wald Chi-Square | P Value |
|---|--------------------|-----------------|---------------------|
| Sex = Male (Female is the reference category) | 1.5984 | 2.4139 | 0.1203 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | 0.5846 | 2.8465 | 0.0916 |
| Effective B. C. Att. * Sex | -0.9873 | 4.7285 | 0.0297 ¹ |
| Anti-Oral Contraception Attitude | -0.3456 | 7.2191 | 0.0072 |
| Anti-O. C. Att. * Sex | 0.5095 | 9.4089 | 0.0022 ² |
| <u>Psychological States</u> | | | |
| Contraceptive Satisfaction | -0.3272 | 8.5777 | 0.0034 |
| Partner's Emotional Closeness | 0.3605 | 6.8733 | 0.0087 |
| Partner Wanted to Avoid Pregnancy | -0.1202 | 7.2852 | 0.0070 |

Model Chi-Square P Value with 8 Degrees of Freedom = <.0001 N = 182

Predicted Classification: Correct = 73.3 %, Incorrect = 26.3%, Tied = 0.4%

¹Males and females are significantly different but neither sex is different from zero.

²Males and females are significantly different but only women are different from zero.

Table 18. Results of Logistic Regression of Changed Contraceptive Method, Condoms at Follow Up on Previously Measured Psychological Trait, State, and Dyadic Decision-Making Variables, with Equality Constraints Initially Imposed across Males and Females.

| Variable Category | | | |
|--|--------------------|-----------------|---------|
| Specific Variable | Parameter Estimate | Wald Chi-Square | P Value |
| Sex = Male (Female is the reference category) | -11.7957 | 4.1925 | 0.0406 |
| <u>Psychological Traits</u> | | | |
| Effective Birth Control Attitude | -0.8104 | 8.1591 | 0.0043 |
| Anti-Coitus Dependent Attitude | 0.4140 | 8.6673 | 0.0032 |
| Improves Responsivity Attitude, Male | -0.1873 | 4.6802 | 0.0318 |
| <u>Psychological States</u> | | | |
| Partner Contraceptive Confidence, Male | 0.7984 | 5.3685 | 0.0205 |
| Contraceptive Satisfaction, Male | -0.7328 | 8.0353 | 0.0056 |
| Emotional Closeness, Male | 0.9236 | 4.7081 | 0.0300 |
| Emotional Closeness, Female | -0.5429 | 4.7809 | 0.0288 |
| Partner Wanted to Avoid Pregnancy | 0.2867 | 11.7259 | 0.0006 |
| <u>Dyadic Decision-Making</u> | | | |
| Couple Decision-Making Responsibility | 1.1223 | 5.8794 | 0.0153 |
| Model Chi-Square P Value with 10 Degrees of Freedom = <.0001 N = 98 | | | |
| Predicted Classification: Correct = 84.6 %, Incorrect = 15.2%, Tied = 0.2% | | | |