

## Research Questions

1. Is there an association between hormonal birth control and feelings of control over their emotions in women?
2. Is there an association between non-hormonal birth control and women's feelings of control over their life/choices?
3. Is there an association between the use of barrier contraception methods and distressing emotions?

## Background Research

- Many females feel trapped into using a birth control pill because it is the only socially accepted option. 84% of women in Canada have used oral birth control at some point in their lives. "No women can call herself free until she can choose consciously whether she will or will not be a mother," (2007:46). Most forms of birth control have major negative side effects (Granzow, 2007).
- It may not be possible to determine people's feelings on birth control based on people's feelings on pregnancy. People who believe that pregnancy is caused by a higher power are more likely to be okay with being pregnant. Males and females are just as likely to not being okay with having a child (Manze et al., 2021).
- Studies suggest that birth control may be correlated to a women's social identity. Many women are afraid to use birth control because they think it will negatively impact their body and fertility. Additionally, many women keep their birth control use a secret for cultural reasons. Some women use multiple forms of birth control and still deeply fear becoming pregnant (Marston et al., 2017).

After reviewing the research, I am shocked to see that so much of what women feel about birth control is based on cultural and political situations. I expected most research to be about how hormonal birth control can affect women's emotions, but many were about the politics surrounding women's ability to use and choose birth control. The research talked about how many women's emotions can stem from the social situations surrounding their birth control use.

## Method

### Sample:

This project utilized secondary data analysis to answer the research questions. The data was drawn from a publicly available sample of respondents from Wave IV of the National Longitudinal Study of Adolescent to Adult Health (Add Health). Add Health is a nationally representative sample of adults living in all 50 states of the United States. Wave IV was collected in 2008 and contains 5,114 respondents aged 25-34 years. Of those, 46% are male and 54% are female. This study only focused on the 54% that are females. The race breakdown includes approximately 72% white, 24% black or African American, 1% American Indian or Alaska Native, and 3% Asian or Pacific Islander.

## Method (Continued)

### Measures:

1. In the past 12 months, did you or your partner(s) use any of these methods for birth control or disease prevention:
  1. Condoms
  2. Birth control pills
  3. Shot (Depo-Provera)
  4. Emergency Contraception or "morning after" pill
  5. No method used

1. Participants either selected or not selected for each of the above options

The following questions are about your feelings:

1. How often do you feel isolated from others?
2. In the last 30 days, how often have you felt that you were unable to control the important things in your life?
3. In the last 30 days, how often have you felt confident in your ability to handle your personal problem?
4. In the last 30 days, how often have you felt that things were going your way?
5. In the last 30 days, how often have you felt that difficulties were piling up so high that you could not overcome them?
  1. Participants responded to the above questions on a scale from never to often
6. I get angry easily
7. I get upset easily
8. I get stressed out easily
  1. Participants rated the above statements on a scale from strongly disagree to strongly agree

## Results

### Univariate Statistics

- 21.3% of respondents reported that they did not disagree or agree with the statement "I get stressed out easily", 6.7% of respondents reported that they strongly agreed with the statement, and 3.9% of respondents reported that they strongly disagreed with the statement. 38.3% of respondents reported that they disagree with the statement.
- The mean value of negative feelings of control for respondents was 2.14729, with a standard deviation of 0.46921, and a range of 4.
- The mean value of positive feelings of control for respondents was 2.777093, with a standard deviation of 0.79757 and a range of 4.
- 56.6% of respondents reported having not used condoms in the past 12 months, while 48.4% did.
- 4.1% of respondents reported using birth control shots, while 95.9% did not.
- 63.8% of respondents have not used hormonal birth control pills, while 36.2% have used them in the past 12 months.

### Bivariate Statistics

An analysis of variance (ANOVA) was conducted to examine the relationship between the use of hormonal birth control pills and feelings of control over their emotions in women. The ANOVA was significant, suggesting that there was a relationship between the use of hormonal birth control pills and feelings of control over their emotions in women,  $F(1, 2332) = 17.16, p < 0.0001$ . The mean feelings of control over women's emotions of respondents who did not use hormonal birth control pills (group 1) was 2.73 ( $SD = 0.78$ ), and the mean feelings of control of women's emotions of respondents who did use hormonal birth control pills (group 2) was 2.87 ( $SD = 0.79$ ).

An analysis of variance (ANOVA) was conducted to examine the relationship between the use of birth control shots and women's feelings of control over their life/choices. The ANOVA was significant, suggesting that there was a relationship between the use of birth control shots and women's feelings of control over their life/choices,  $F(1, 2332) = 4.17, p = .0413$ . The mean feelings of control over women's life/choices of respondents who did not use birth control shots (group 1) was 2.22 ( $SD = 0.47$ ), and the mean feelings of control over women's life/choices of respondents who did use birth control shots (group 2) was 2.32 ( $SD = 0.41$ ).

A chi square test of independence revealed that condom use, and distressing emotions were not significantly associated,  $\chi^2 = 0.7754, 1 df, p = .3786$ . Specifically, 58.40% of respondents reported that they did not use condoms and they did experience distressing emotions compared to the 56.60% of respondents who did use condoms and did experience distressing emotions.

### Multivariate Statistics

- Emergency contraceptive use was tested as a potential moderating variable in the association between condom use and distressing emotions. The original chi square test did not show a significant association between condom use and distressing emotions ( $p = 0.3786$ ). When examining respondents who did not use emergency contraceptives, the association was not significant ( $p = 0.1886$ ), similar to the original test. Respondents who had used emergency contraceptives and did use condoms were less likely to experience distressing emotions than those who did not use condoms (58.47% vs. 55.73%). When examining respondents who did use emergency contraceptives, the association was also not significant, however it was a much stronger relationship ( $p = 0.1373$ ) ( $\chi^2 = 0.7754$  vs 2.2080). Interestingly, those who did use condoms and did use emergency contraceptives were much more likely to experience distressing emotions (33.33% vs. 73.21%). Based on these findings, emergency contraceptive use was found to be a moderating variable.

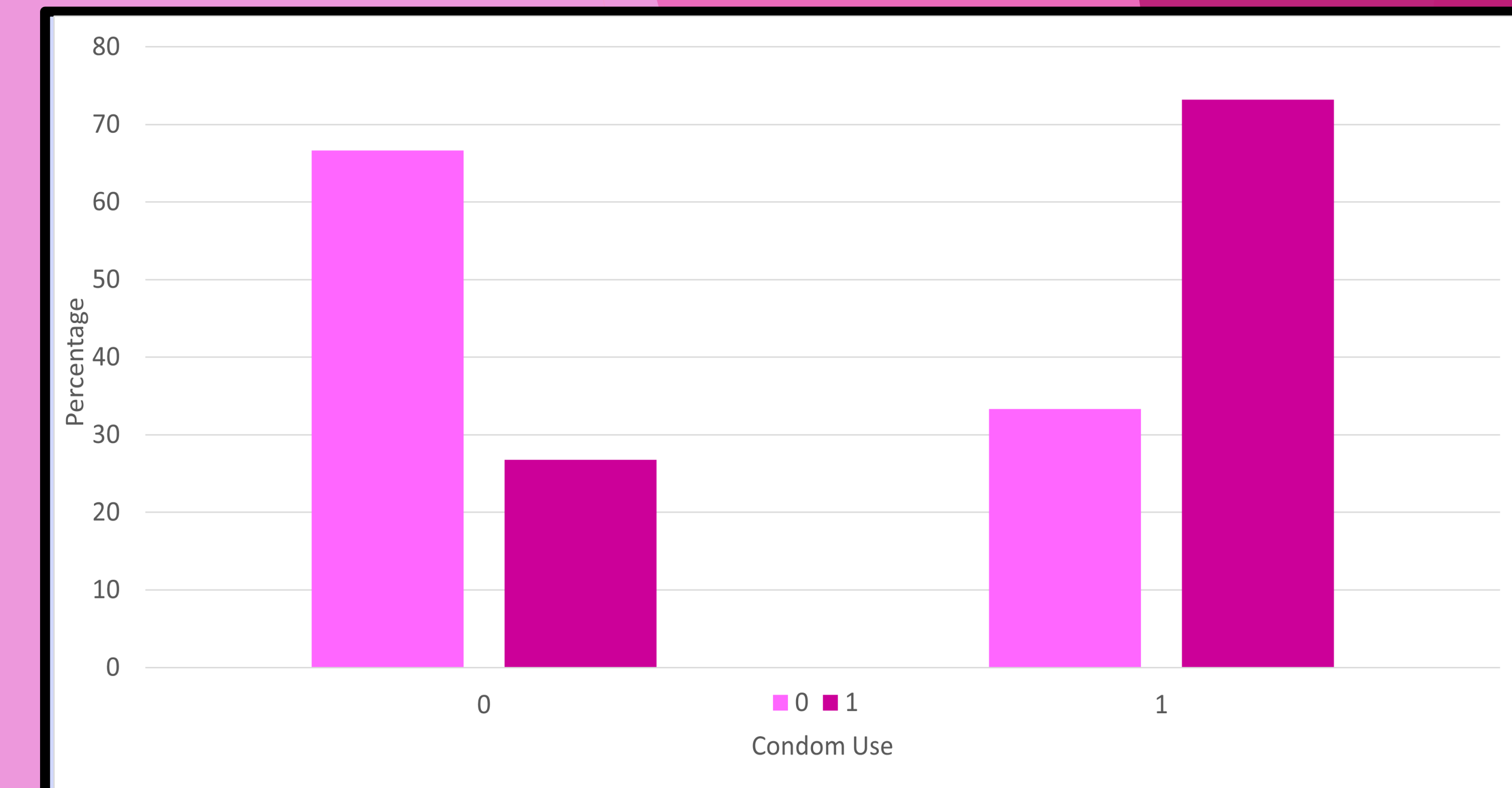


Figure 1. Condom use explaining distressing emotions by emergency contraceptive use.

## Discussion

The results of this study suggests that there is a correlation between hormonal birth control pills and women's feeling of control over their emotions. Additionally, the results suggest that there is a relationship between non-hormonal birth control shots and women's feelings of control over their life choices. Furthermore, results suggest that condom use does not correlate with distressing emotions.

Overall, these results show that women's lives may be being impacted greatly by non-barrier contraceptive methods of birth control. These findings show that women need better options for controlling their reproductive health that do not affect their day to day lives.

If I had the opportunity to conduct further research, I would like to look further into less popular birth control methods like natural family planning and IUDs. This could help elaborate on which methods impact women's emotions and daily lives the least.

## References

- Granzow, K, (2007). De-constructing "choice": The social imperative and women's use of birth control pill. *Culture, Health, and Sexuality*, 9(1), 43-54.
- Manze, M, Romero, D., De, P, Harnett, J, & Roberts, L, (2021). The association of pregnancy control, emotions, and beliefs with pregnancy desires: A new perspective on pregnancy intentions. *Plos One*, 16(3), 1-15.
- Marston, C, Renedo, A, & Nsorma, N, (2017). Fertility regulation as identify maintenance: Understanding the social aspects of birth control. *Sage Journals*, 23(2), 1- 31.

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