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Ashley Beamon

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How Does Birth Control Impact Overall User Wellness:
A Mixed-Methodology Approach Surveying How Physical, Mental,
and Social Wellness is Impacted by Use of Birth Control

A Capstone Presented for the
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Ashley Beamon

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ABSTRACT

The purpose of this study is to understand the ways in which birth control may impact wellness. By looking at physical activity, social wellness, experienced side effects, and a range of demographics, the goal is to better understand how the use of birth control may impact its user's overall wellness. After gathering data in a two-week survey, I discovered that mood swings, weight gain, and depression were the top three reported side effects and Latina women reported irregular bleeding at a higher frequency than white women. Loneliness is impacted by birth control use; users were 30% more likely to report being lonely multiple times a week than nonusers. The results of this research can be used to further investigate the relationship between social wellness and birth control use. Additionally, more research can be done into why Latina women may experience irregular bleeding more frequently.

INTRODUCTION

According to Greek mythology, Persephone, the Greek goddess of Spring, was kidnapped to the Underworld, raped, and forced to marry the God of Death, Hades. While in the underworld, she ate only one thing: pomegranate seeds. As a result of eating the pomegranate seeds, she was forced to remain in the Underworld for a third of the year, corresponding to Wintertime on Earth. The purpose of the Greek myth is to explain the first Winter on Earth; a time where the Goddess of Spring withheld her fertility, contained in the Underworld (Knowles, 2012). Modern scientists now know that pomegranate seeds contain estrone, estriol, and other phytoestrogens that give it contraceptive qualities (Nelson, 2009). It can be reasonably argued then, that Persephone ate the pomegranate seeds to prevent herself from becoming pregnant, and that wintertime is symbolic of her choice to take control of her fertility.

Humans have been controlling fertility since the days of living in caves. From drinking lead and mercury, to hanging the testicles of a weasel on one's thigh, to walking in a circle three times around the spot where a pregnant wolf had urinated, centuries of people have desperately searched for ways to prevent pregnancy (Knowles, 2012). In the mid-20th century, contraception as we know it today was created. The pill was dreamed up by Margaret Sanger and Katharine Dexter McCormick, and created by biologists John Rock and Gregory Pincus (Knowles, 2012; *Our Bodies Ourselves Today*, 2023). In the first stages, 'The Pill' was tested on poor women in Puerto Rico. These women were not informed of the experimental stage that the pill was in, and since the pill had unnecessarily high amounts of estrogen, the women in Puerto Rico began having blood clots and dying. After learning this information, Rock and Pincus lowered the amount of estrogen and then sent 'The Pill' to market. There was no publication of the risk of blood clots and associated death until after a million U.S. women were already taking the pill (*History of Birth Control*, 2019).

Sadly, this was not the only time that a contraceptive method was not thoroughly and ethically tested before being sent to market. The Dalkon shield was a type of IUD that boasted a 1.1% pregnancy rate. Over a year, the creator of the Dalkon shield, Dr. Hugh Davis, inserted his IUD into over 600 patients. With those patients as the only testing done, he then opened the Dalkon Shield up to the medical market. Within 3 years, almost 4 million Dalkon Shields were sold. Over these 3 years, and the years following, the FDA was flooded with reports from Dalkon Shield users who were suffering from pelvic inflammatory disease and blood poisoning. Twenty women died as a result of complications from the Dalkon Shield. Women suffered from spontaneous abortion, had babies with brain damage, and some were left sterile.

It was later publicized that the testing Dr. Davis claimed to prove the safety and efficiency of his Dalkon shield was faulty. He not only advised his patients to use spermicide in addition to the Dalkon Shield, but only followed up on each patient an average of five months. The 1.1% pregnancy rate was completely falsified, and the safety of the Dalkon Shield was based upon five-month follow ups (*The Contraceptive (Dalkon Shield)*, 2018).

All of this is not to discount the impact that contraception has had on women's lives. Between 1960 and 2021, the percentage of women in the United States over the age of 25 with at least a high school degree increased from 42.5% to 91.6% and the percentage of women with a bachelor's degree increased from 5.8% to 39.1% ("Rates of High School Completion and Bachelor's Degree Attainment Among Persons Age 25 and Over, by Race/Ethnicity and Sex: Selected Years, 1910 Through 2021," 2021). Women have made immense progress in the workplace, now earning half of all doctorate, medical, and law degrees (McKay, 2020). Birth control has changed the way people live, and most of that change has been good. However, it is important to recognize the ways in which the negative change has impacted women's lives and overall wellness. In order to keep making improvements, the negatives need to be not only heard,

but believed and addressed. The purpose of this study is to understand the ways in which birth control may impact wellness. By looking at physical activity, social wellness, experienced side effects, and a range of demographics, the goal is to better understand how the use of birth control may impact its user's overall wellness.

LITERATURE REVIEW

The scope of this literature review is limited to my ability to gain access to studies through the institution University of Nebraska at Omaha. One area of struggle I encountered while looking for research into birth control usage and the symptoms associated, was finding recent studies in the United States. A majority of the research available relevant to this topic was done in Europe in the 1990's. Additionally, most studies available to me examine oral contraception only. This poses a problem because hormonal birth control extends beyond just oral contraceptives. In the current political climate of the United States, access to abortion and reproductive healthcare services have become more limited than in the past. For that reason, literature about the impact that accessibility to reproductive healthcare has on women's health is included within the scope of this literature review. The literature included gives context to the original research I conducted by highlighting the lack of accessible information regarding people's complaints about birth control and the gap between user experience and what the research has concluded.

The Contraceptive Mandate falls under the ACA (Affordable Care Act), implemented by President Barack Obama in 2010. It ensures that female contraceptives are covered under the ACA and plans offered through network providers cannot charge a copayment, coinsurance, or deductible for preventative measures (Chamber and Jeffries, 2021). This mandate allows for easier access to birth control for women who come from lower socioeconomic classes, and

therefore will help to support planned pregnancies and the removal of barriers to financial success (Chamber and Jeffries, 2021). When the Trump Administration took office, they allowed for exemptions to the Contraception Mandate, which allowed employers to omit contraceptive services in their insurance plans (Chamber and Jeffries, 2021). This decision disproportionately impacts women of color and women experiencing poverty, as they are no longer able to afford effective forms of birth control (Chamber and Jeffries, 2021). Within the scope of my own research, the rollback of the Contraceptive Mandate and the overturn of *Roe v. Wade* limits both women's choice to be on birth control. In turn, women's health and wellness may be negatively impacted.

German women's perception of side effects of birth control, compared to side effects actually experienced are at odds (Oddens, 1998). While 59-73% of women reported expecting to gain weight when starting birth control, only 27% of users, past and present, reported actually gaining weight (Oddens, 1998). A 2022 study found that 40% of the women that turned down a method of birth control, turned it down due to its potential side effects (Kingsberg, 2022). When looked at as a cohort, it was found that depression and oral contraceptives had no association (De Wit et Al., 2020). Oral contraceptives were not shown to have a significant impact on mood swings (Natale and Albertazzi, 2006). In fact, oral contraceptive users reported a steadier mood level than nonusers over an entire menstrual cycle (Natale and Albertazzi, 2006).

A 1997 study in Sweden found that for all age groups studied, oral contraception was the most frequently used method of birth control (Larsson et. Al, 1997). For 19-year-olds, contraception use at some point in their life was reported by 73% of respondents. For 24-year-olds and 29-year-olds, contraception use was reported by 94% and 97% of respondents, respectively (Larsson et. Al, 1997). The most frequently reported reason for oral contraception cessation across all age groups was fear of oral contraception (Larsson et. Al, 1997). Weight

gain, menstrual bleeding disorders, and mental side effects accounted equally across all age groups as reason for cessation (Larsson et. Al, 1997). Throughout the literature, a fear of potential side effects, or perceived side effects was a common theme. Looking across various studies (Larsson et. Al, 1997; Kingsberg, 2022), side effects were reported as reasoning for cessation, however, there is no significant relationship between birth control use and these side effects (Natale and Albertazzi, 2006; De Wit et Al., 2020). It begs the question, why are so many people reporting side effects then? Is it a mass placebo or is there something else that hasn't yet been studied? There is a gap between the symptoms being experienced by women and what the research is reporting. My research will hopefully be able to start layering the foundation for closing that gap.

Kingsberg (2022) compared women's perspective of the side effects they experienced and the perspective of their healthcare professional. They found that 65% of women have turned down a birth control method in the past and that blood clots were the most concerning side effect (Kingsberg, 2022). Comparing what healthcare providers believed women were concerned about, and what women actually reported being concerned about, blood clots had the highest discrepancy (Kingsberg, 2022). When doctors are unaware of the fact that women are concerned about potential side effects, are they less likely to explain them to women before prescribing birth control? The data obtained from my research will be published for the access by the general public with the hopes of being a resource for women to educate themselves on contraceptives.

METHODS

In order to execute this study, a survey was used as the source of data collection. Qualtrics software was used, as it is provided for free to University of Nebraska at Omaha students. Questions were designed with a holistic approach, using various sources (Mayo Clinic,

2022; Oddens, 1998) for background information such as common side effects of birth control and birth control methods. Question design took place over multiple days, with a first draft sent to faculty mentor Dr. Heineman. After revision, questions were entered into Qualtrics, and the survey was tested by a fellow researcher, and then once approved, opened to the public. The parameters of the study were people over the age of 18 who live in Nebraska.

The link to the survey was sent directly to the members of Panhellenic sorority Alpha Xi Delta via QR code. A clickable link was sent to the Collegiate Panhellenic Council to distribute to the three other Panhellenic sororities, Chi Omega, Zeta Tau Alpha, and Sigma Kappa. Through direct messaging, a clickable link was sent to Multicultural Sororities Lambda Theta Nu and Sigma Lambda Gamma. A clickable link was sent through email to the Women and Gender Equity Center for distribution through their social media. A clickable link was sent to Dr. Morrison, director of the Honor's Program, for distribution through the weekly Honor's newsletter. A clickable link was sent to Dr. Sarah Nelson for distribution to the UNO Medical Humanities faculty. In addition to these avenues, the link was sent to personal connections including family members, friends, and secondary acquaintances of those family members and friends. This was in an attempt to gain a broader age demographic. All people who responded to the survey were made aware that the requirement was to be above the age of 18 and to be a resident of Nebraska.

The survey remained open for submission for two weeks, between February 21 and March 7, 2023. On the morning of March 8, 2023, the survey was closed, and submissions stopped being accepted. Qualtrics provides baseline analysis of the data, including percentage conversions of response numbers. Mixed methodology was used in the analysis of the data. For the text box questions that allowed for free answers, grounded theory was used to code. Grounded theory is based upon using data collected in order to create theories. Other calculations

were completed in excel, including cross tabulation calculations. Mean, median, and mode were also calculated and recorded for individual variables as well as multiple variables. In order to answer the question of how demographics impact side effects experienced, the data was separated into weight, age, and race categories and compared against reported side effects. Distribution percentages were calculated for each demographic group as opposed to distribution percentages across demographic groups since demographic responses were not equally dispersed.

RESULTS

A total of 214 people responded to the survey. Out of those 214, a total of 178 completed the entire survey (92% completion rate), and therefore, the results were analyzed using a total number of 178. Demographic categories that had less than 8 respondents were excluded from further analysis. Out of the 178, 88 respondents reported currently using a form of birth control (49.72%). The largest age group who partook in the survey, ages 18-22, made up 62.92% of the responses to the survey (Fig. 1). The second largest age group was 48-52 and made up 10.11% of the survey responses (Fig. 1). People who identify as white made up 84.3% of the respondents to the survey (Fig. 2). Those who identify as Black made up 2.3% of responses, Latinx/Hispanic made up 8.99%, Asian made up 2.8%, and Native American/Pacific Islander 1.7% (Fig. 2). The largest weight range, 135-144, made up 16.9% of the respondents, as can be seen in Fig. 3.

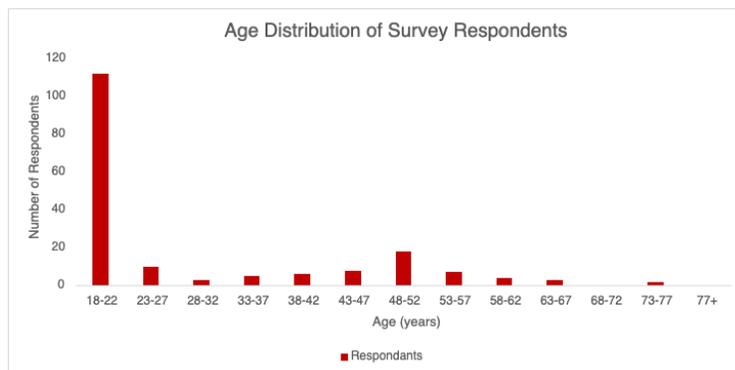


Figure 1. Age distribution of survey participants.

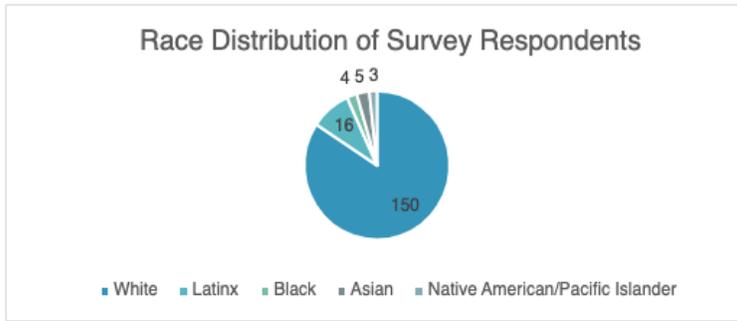


Figure 2. Race distribution of survey participants.

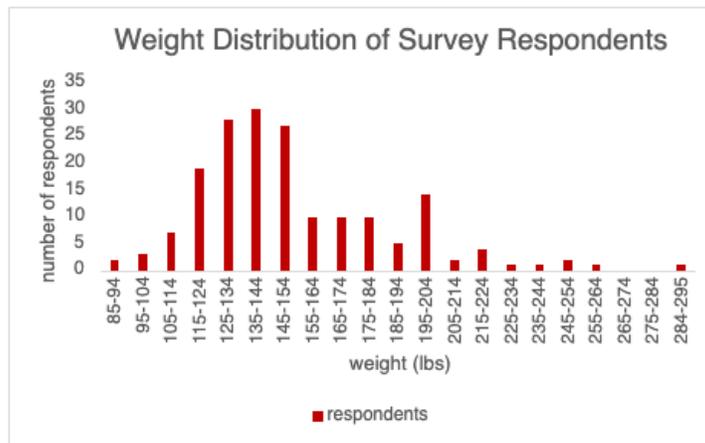


Figure 3. Weight distribution of survey participants. Separated into ranges for the purpose of data analysis.

The most frequently used type of birth control is oral contraceptives. As can be seen in Figure 6, oral contraceptive use was reported by 74.7% of respondents. The second most common type of birth control is the hormonal IUD, with 17.4% of respondents reporting use (Fig. 6). For those who reported currently using birth control, oral contraceptives were the most frequently reported method of birth control (Fig. 7). The most common reason for use of birth control, past or present, was to prevent pregnancy (63.5%, n=148 respondents) (Fig. 7).

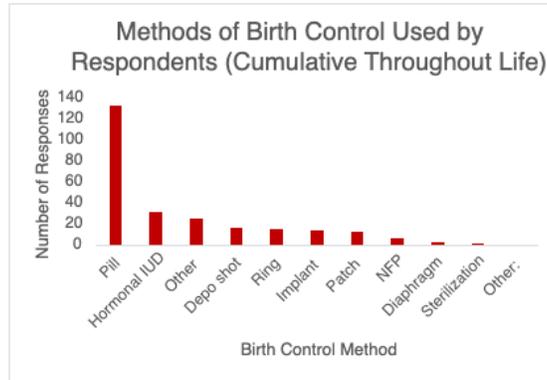


Figure 4. Birth control method usage, reported as all methods used in each respondent's life.

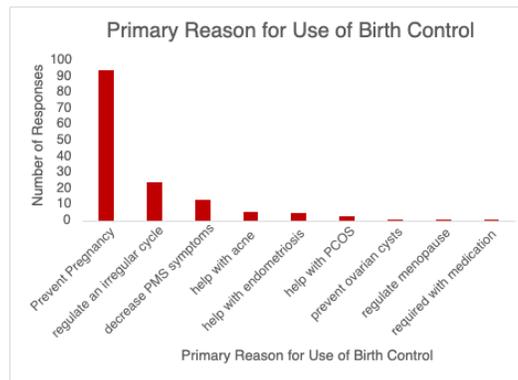


Figure 5. Primary reason for birth control use, past or present.

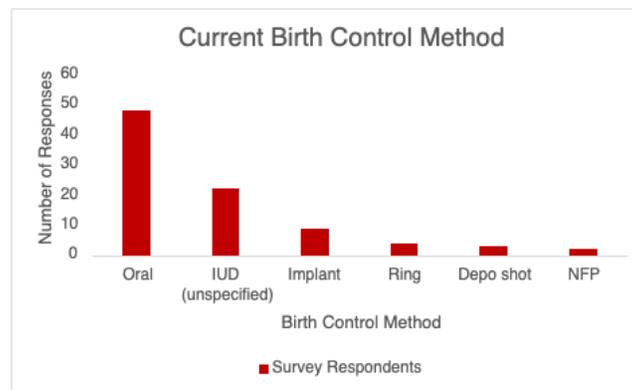


Figure 6. For respondents who reported currently using birth control, the method they are using.

Out of the people who reported having experienced side effects they believed to be due to their birth control, 72% reported having mood swings. 60% reported weight gain and 52% reported depression (Fig. 9). These three side effects were the most frequently reported across all demographics (age, weight, race). By age group, mood swings were most frequently reported for ages 18-27, 28-37, and 38-47, as can be seen in Table 1. Weight gain and change in sex drive were reported equally as often as mood swings for ages 28-37 and 38-47. For ages 48-57,

weight gain was the most frequently reported symptom. There was not sufficient data to make any trend conclusions for ages 58-67 and 68-77. As seen in Table 2, the most frequently reported symptom by weight for 105-124, 124-144, and 165-184 pounds was mood swings. For 145-164, 185-204, and 205-224 pounds, weight gain was the most frequently reported symptom. For weights above and below the mentioned ranges, there was not sufficient data to make any trend conclusions. By race, there was only sufficient data to analyze respondents who identified as White and who identified as Latina/Hispanic. For those who identify as white, mood swings were the most frequently reported symptom (47.3%) (Table 3). Weight gain was the second most reported symptom (39.3%) by White respondents (Table 3). For those who identify as Latina/Hispanic, the most frequently reported symptom was irregular bleeding (62.5%) (Table 3). Latina/Hispanic respondents made up almost 9% of the survey population, however, accounted for 21.3% of the respondents who reported irregular bleeding.

For those who reported currently using birth control at the time of the survey, the highest reported side effect (Fig. 10) was mood swings (56.8%, n=88 respondents). For those who reported not currently using birth control, mood swings were also the highest reported side effect (34.8%, n=89 respondents).

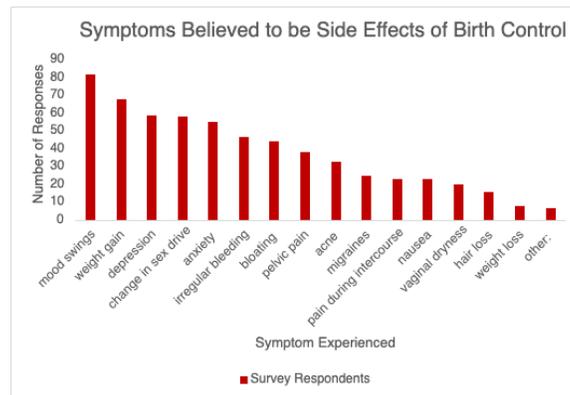


Figure 7. Reported symptoms believed to be caused by any form of birth control.

WEIGHT GAIN	15.38	32.75	43.24	55	47.36
WEIGHT LOSS	11.53	3.44	2.70	5	0
HAIR LOSS	11.53	10.34	5.40	5	10.52
ACNE	19.23	24.13	13.51	10	5.26
MOOD SWINGS	34.61	51.72	40.54	60	31.57
DEPRESSION	30.76	32.75	27.02	35	42.10
ANXIETY	26.92	32.75	27.02	40	31.57
MIGRAINES	15.38	12.06	10.81	5	15.78
CHANGE IN SEX DRIVE	26.92	32.75	29.72	45	21.05
BLOATING	23.07	27.58	16.21	30	21.05
IRREGULAR BLEEDING	19.23	24.13	21.62	40	31.57
NAUSEA	19.23	17.24	10.81	5	0
INCREASED BLOOD PRESSURE	0	0	5.40	5	10.52
PELVIC PAIN	15.38	20.68	21.62	30	15.78
VAGINAL DRYNESS	3.84	5.17	18.91	20	10.52
PAIN DURING INTERCOURSE	7.69	17.24	16.21	10	5.26

Table 3. Respondents categorized by race and percentages of race populations calculated for each symptom.

SYMPTOMS EXPERIENCED BY RACE

SYMPTOM	Percentage of Respondents by Race	
	White, n=150	Latina/Hispanic, n=16
WEIGHT GAIN	39.33	43.75
WEIGHT LOSS	4.67	6.25
HAIR LOSS	6.67	31.25
ACNE	17.33	37.5
MOOD SWINGS	47.33	50
DEPRESSION	32.67	43.75
ANXIETY	30.00	37.5
MIGRAINES	12.67	25
CHANGE IN SEX DRIVE	34.00	37.5
BLOATING	23.33	43.75
IRREGULAR BLEEDING	23.33	62.5
NAUSEA	12.67	25
INCREASED BLOOD PRESSURE	2.67	6.25
PELVIC PAIN	18.67	50
VAGINAL DRYNESS	12.67	6.25
PAIN DURING INTERCOURSE	12.00	25

NOTE: OTHER REPORTED RACES DID NOT HAVE SUFFICIENT DATA TO DRAW ANY CONCLUSIONS AND INCLUDING RESULTS WOULD RUN THE RISK OF OVERSIMPLIFICATION.

As seen in Figure 11, most respondents (33.71%) reported engaging in purposeful exercise three to four days a week. Most respondents (42.70%) reported their weekly activity to

be somewhat active. For the weight ranges 105-124, 125-144, and 185-204, most respondents reported their weekly activity level to be somewhat active (Table 4). For the age ranges 18-27, and 48-57, somewhat active was the highest reported activity level (Table 5). For White and Hispanic respondents, somewhat active was the highest reported activity level, 41.3% and 56.25%, respectively (Table 6). 58.1% of respondents who reported being sedentary also reported experiencing symptoms they believed to be associated with birth control. 59.2% of respondents who reported being somewhat active, 44.4% of respondents who reported being moderately active, and 25% of respondents who reported being very active also reported experiencing symptoms they believed to be associated with birth control.



Figure 9. Reported number of days of purposeful exercise.

Table 4. Respondents self-reported weekly activity level, responses separated by respondent weight and percentage of each weight population was calculated.

WEEKLY ACTIVITY LEVEL BY WEIGHT

REPORTED WEEKLY ACTIVITY	Percentage of Respondents by Weight (pounds)				
	105-124, n=26	125-144, n=58	145-164, n=37	165-184, n=20	185-204, n=19
Sedentary	7.69	17.24	18.92	15.00	21.05
Somewhat active	46.15	43.10	35.14	25.00	63.16
Moderately active	34.62	32.76	45.95	55.00	15.79
Very active	11.54	6.90	0.00	5.00	0.00

NOTE: Weights above and below the weights listed did not have sufficient data to perform analysis and were therefore excluded.

Table 5. Respondents self-reported weekly activity level, responses separated by respondent age and percentage of each age population was calculated.

WEEKLY ACTIVITY LEVEL BY AGE

REPORTED WEEKLY ACTIVITY	Percentage of Respondents by Age			
	18-27, n=122	28-37, n=8	38-47, n=14	48-57, n=25
Sedentary	9.02	62.5	50.00	24.00
Somewhat active	45.90	12.5	28.57	44.00
Moderately active	39.34	25.0	21.43	28.00
Very active	5.74	0.0	0.00	4.00

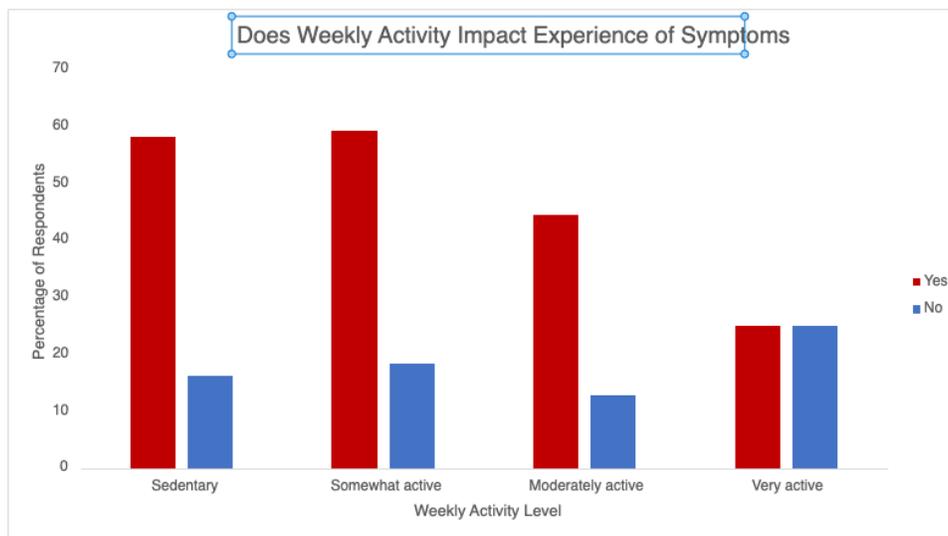
Note: ages above the ages listed did not have sufficient data to perform analysis and were therefore excluded.

Table 6. Respondents self-reported weekly activity level, responses were separated by respondent race and percentage was calculated.

WEEKLY ACTIVITY LEVEL BY RACE

REPORTED WEEKLY ACTIVITY	Percentage of Respondents by Race	
	White, n=150	Latina/Hispanic, n=16
Sedentary	16.67	12.5
Somewhat active	41.33	56.25
Moderately active	37.33	25
Very active	4.00	6.25

Note: respondents who identified as other races than the ones listed above did not have sufficient data to perform analysis and were therefore excluded.



Visible in Figure 4, when asked how often they feel a sense of loneliness, most people (37.85%) reported feeling lonely less than once a month. Out of the respondents who reported being lonely less than once a month, 59.7% of those people were not currently taking birth control (Fig. 5). Out of the respondents who reported feeling lonely multiple times a week, 63.6% were currently using birth control (Fig. 5). By age group, 18-27 and 28-37 reported feeling lonely multiple times a month most frequently (Table 7). For ages 38-47, 48-57, and 58-67, feeling lonely less than once a month was most frequently reported (Table 7).

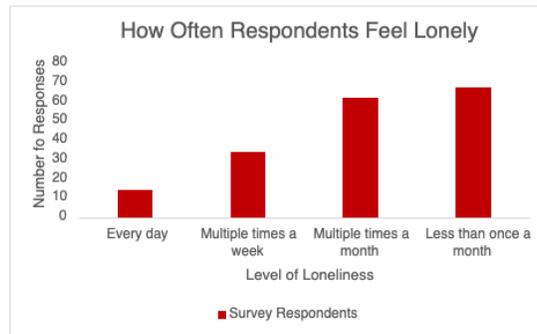


Figure 10. Reported loneliness of all survey respondents.

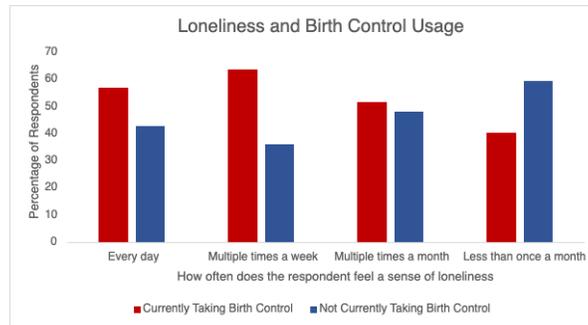


Figure 11. Reported loneliness comparison of those who reported currently using birth control and those who reported not currently using birth control.

Table 7. Respondents reported their average level of loneliness. Responses were separated by age groups and percentages were calculated.

Reported level of loneliness	Percentage of Age Group Respondents			
	18-27, n=122	28-37, n=8	38-47, n=14	48-57, n=25
Every day	9.02	0	14.29	0
Multiple times a week	21.31	25	14.29	12

Multiple times a month	39.34	62.5	21.43	16
Less than once a month	29.51	12.5	50	72

Note: Ages above the ones listed did not have sufficient data for analysis and therefore were excluded.

Respondents were prompted to respond to the question, “How does taking birth control make you feel?” Out of the 130 responses to this prompt, 36 respondents mentioned a harder time controlling their emotions. 12 reported an increase in depression, and 3 reported experiencing suicidal ideation. 9 respondents reported feeling unbalanced in some way, whether that was saying their brain feels, “foggy” or that it, “makes me feel fake, almost like I’m someone else.” 30 respondents reported that taking birth control makes them feel empowered, responsible, and safe. 2 people reported feeling angry that they were the ones responsible for controlling fertility and reproduction. 17 people reported some type of physical pain or symptom, such as weight gain, stomach pain, or migraines. People also reported feeling greater mood stability, experiencing less acne, and 3 people described their experience as “great”.

94% of respondents reported having insurance. 84% of respondents reported that their insurance covers birth control, and 18.9% reported that they are limited to certain methods of birth control due to their insurance. 55.4% were unsure if they were limited to certain methods of birth control due to their insurance, and 25.7% reported that they were not limited to certain methods due to their insurance. 37.8% reported that they have a copay for their birth control, 34.5% reported not having a copay, and 27.7% were unsure. Reported copays ranged from 5\$ to 220\$. The mean reported copay was \$31.32 and the mode reported copay was \$30. The median copay was \$18.50. Most people (69.2%) were unsure of their copay or had a changing monthly.

DISCUSSION AND CONCLUSION

Oral contraceptives were the most commonly used birth control. Mood swings, followed by weight gain and depression, were the top three reported side effects believed to be caused by

birth control. Birth control made people feel safe and responsible, however it also made controlling emotions much harder. Most respondents reported engaging in purposeful exercise three to four times a week and reported a weekly activity level of somewhat active. For those who reported being somewhat active, 59.2% reported experiencing symptoms they believed to be caused by birth control. Out of the people who reported being lonely multiple times a week, 63.6% were currently using birth control. Respondents currently on birth control reported feeling lonely multiple times a month most frequently, while respondents not currently on birth control reported feeling lonely less than once a month most frequently.

The purpose of this study was to discover the ways in which birth control may impact wellness. In terms of physical wellness, there did not seem to be a trend in level of physical fitness and experience of side effects. Most respondents from all demographics reported being either somewhat or moderately active. This could be due to the large majority of the sample was college-aged people, which one could assume would generally be more active. Whereas the older populations are more likely to have jobs that require them to be more stationary, college students are walking on campus for most of the day. If the sample population was more evenly distributed among ages, this result could have been different. Moderately active respondents reported experiencing symptoms they believed to be associated with birth control 14.8% less frequently than somewhat active respondents. Social wellness was measured by reported level of loneliness. There was a difference in reported loneliness between those who were currently on birth control and those who were not. For those currently using birth control at the time of the survey, 23.9% reported feeling lonely multiple times a week, compared to 13.5% of those not using birth control. 30.7% of those using birth control reported feeling lonely less than once a month, compared to 44.9% of those not using birth control. Loneliness seems to be impacted by use of birth control.

The second goal of this survey was to understand how age, race, and weight impacts the experience of taking birth control. By age, mood swings was in the top two reported symptoms across participants of all ages. For those between the ages of 18 and 27, the top three reported symptoms were mood swings, depression, and weight gain. For those between the ages of 28 and 47, mood swings, weight gain, and a change in sex drive were the top three reported symptoms. For those aged 48 to 57, weight gain was the top reported side effect, followed by a three-way tie between mood swings, depression, and change in sex drive. From these results, it can be inferred that symptoms do not drastically change as a person ages. Across all ages, the results stayed consistent, maintaining mood swings and weight gain in the top three. By weight, mood swings was the top reported symptom for respondents 105-144 pounds. For respondents 145-164 and 185-204, weight gain was the top reported symptom. For respondents 165-184, weight gain (55%) and mood swings (60%) differed by only one response. These results suggest that as weight increases, likelihood of weight gain due to birth control use also increases. Potentially this could be due to genetic pre-disposition to weight gain, however, it could also just be chance in the sample population. More research specifically looking at weight and its relation to the impact birth control has on users could shed more light on if this was chance, or if there is significance.

Analyzing by race was not as effective as originally planned. The range of responses leaned incredibly in one direction, with a huge majority of respondents being white. With so few respondents identifying as Black, Asian, and Native American/Pacific Islander, the data from these respondents was unable to be analyzed. However, the data from White respondents and Latina/Hispanic respondents was sufficient to be analyzed. For White respondents, the top three reported symptoms were mood swings, weight gain, and change in sex drive, respectively. For Latina/Hispanic respondents, the top reported symptoms were irregular bleeding, bloating,

depression, and weight gain. Latina/Hispanic respondents represented a disproportionately high number of respondents who experienced irregular bleeding. While making up only 9% of the survey population, they accounted for 21.3% of respondents who reported irregular bleeding. Bloating, depression, and weight gain were reported equally by Latina/Hispanic respondents.

Overall, symptoms did not differ by age or weight. However, race did seem to impact the most frequently experienced symptoms. This could be worth looking into further because it is unclear if it is the small sample size of Latina/Hispanic respondents contributed to the results.

Within the context of the existing literature, this study serves as a branchpoint for more specified surveys on the impact that birth control has on wellness. There is little research done on the relationship between wellness and birth control. The results of this study indicate that there is value in further investigating the emotional impact that birth control has on users. Gaining a deeper knowledge of the ways in which users are negatively impacted by birth control provides areas for improvement in our birth control methods. Without research providing this, birth control manufacturers have no way of knowing how to improve. This study provides a broad overview of potential research questions that could be examined more intimately. Some example areas of further exploration include the relationship between weight and birth control side effects, how birth control impacts social wellness (in terms of loneliness and isolating behaviors), and how much of a role does birth control play in users' emotional wellness (such as depression and anxiety).

This study was weakened by the lack of diversity in race. It was also limited by the design of some of the survey questions. By utilizing open answer responses in place of multiple-choice categories, it hindered the ability to cross-analyze the data. However, it allowed respondents to provide unique responses without the influence of prepared answers. From these open-ended questions, responses could be coded, and trends could be identified. By looking at

such a wide range of factors, I was unable to draw any specific conclusions about the data. In the future, diversifying the respondents of the survey, and narrowing down the range of questions would increase the specificity of the conclusions that could be drawn.

This study had to goal of gaining a deeper understanding of the ways in which birth control impacts wellness. There was not evidence to make any conclusions, however, there is a whole new set of data available for future research projects. Trends indicated that birth control increases loneliness and that mood swings were the most frequently experienced symptom. Future research projects could focus on mood stabilization and healthcare providers could emphasize the importance of social support when prescribing birth control.

RESOURCES

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