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THE EFFECT OF COVID-19 PANDEMIC ON STUDENTS' SEXUAL LIFE AND CONTRACEPTIVE METHOD USE

M.Sc. THESIS

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M.Sc. THESIS

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March, 2023

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I hereby declare that this is the original work undertaken by Memunat Olayinka Oduwaye in partial fulfillment of my master of science in Nursing and that the student has not made any utilization of sources, materials, or support that are not explicitly and completely acknowledged in the text any direct citation or source of ideas has been named in the text by the author, with date and page numbers immediately following, and complete details are supplied in a reference list at the conclusion of the work.

Memunat Olayinka Oduwaye

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Abstract

The Effect of Covid-19 Pandemic on Student's Sexual Life and Contraceptives Method Use

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Purpose: The goal of this study is to seek and explore the effect of the COVID-19 pandemic on students' sexual lives and contraceptive method use in Near East University Turkish Republic of Northern Cyprus. The purpose of the study was to find out how the COVID-19 pandemic affected the sexual lives, behavior of the students and the contraception method they used to collect data.

Methodology: A primary study was used for this study and a close ended questionnaire was used as a tool to collect data. A descriptive study method was used with the formula for probability population method to select 367 university students for this study. The sample size from the faculty of law department of international law was 158 students, from faculty of Economics and Administrative Science Department of Banking and finance was 128, Faculty of Arts and Science Department of English language and literature was 81 students. Data collection was achieved from the students in the school premises during break time and few copies was distributed to the students through mobile link due to the social distance during the covid-19 pandemic.

Findings: The study discovered that during the pandemic, Majority of the students utilized contraception to prevent unintended pregnancies and COVID-19 . The contraception methods they used are condoms with 46%, oral contraceptive pills with 16%, intrauterine devices with 25%, injections with 5%, implants with 3%, diaphragms with 2%, and the withdrawal method with 3%. The study revealed that the students encountered problems with the use of contraceptive methods. The study revealed that 60% of the students had closures and cuts to their sexual and reproductive health services; 19% of the students had economic difficulties; and 7% of the student's lacked information and guidance on the use of contraceptives. The study also discovered that, the student's sexual desires increased by 25% and decreased by 60% during the pandemic. The study also revealed that before the pandemic, students who

have sexual activity ones in five days was 3.8%, and during the pandemic there was decreased of sexual activity with 0.3%. This study shows the comparison on the Sexual desire, Orgasm, Lubrication level, Arousal, Satisfaction, Pain and Erection scores by the effect of covid-19 on student's sexual desire during pandemic that there was a statistically significant change ($p<0.05$). The findings revealed a high effect of the COVID-19 pandemic on students' sexual lives, behavior and the contraception method used. The statistically methods used in this study are Kruskal-Wallis H Test and Chi square test.

Objective: The global pandemic of COVID-19 put an extreme strain on the world's healthcare systems, making it difficult for these systems to continue providing their usual services. On March 11, 2020, the World Health Organization (WHO) announced that COVID-19 had reached epidemic proportions. There have been several precautions taken by the government to reduce the possibility of the sickness spreading. Restrictions on travel, forced quarantines for travelers, social distance, prohibitions on public gatherings, closure of schools and colleges, closure of businesses, self-isolation, requesting individuals to work from home, curfews, and lockdowns are some of the measures that have been taken. The restriction affected students' sexual lives and the use of the contraceptive.

Conclusion: Based on the results of this study .This research's finding may provide a roadmap for enhancing general public health outcomes in the TRNC and among university students to create more awareness about preventing the COVID-19 pandemic transmission and contraceptives method use.

Key words: Covid-19, sexuality, contraceptive use, university students and TRNC.

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Table of Contents

Approval……..…..3

Declaration…….……4

Dedication…….....5

Acknowledgements……....5

Abstract…….……6

Table of contents…….…....10

List of Tables…….……....12

Abbreviation……..13

CHAPTER 1

1.1 Introduction …….14

1.2 The background of the study……..……..19

1.3 The aim of the study……..……...20

1.4 The significance of the study…….....21

CHAPTER 2

2.1 Literature review….....22

2.1 Effect of covid-19 pandemic on Sexuality and reproductive health……22

2.2 How the COVID-19 pandemic affected the use of contraceptive methods…….....25

CHAPTER 3

3.1 Methodology…….…….30

3.1 Research Design…….……....30

3.2 Participants/Population and Sample.....30

3.3 Data collection tools/materials.....30

3.4 Data Analysis plan.....31

3.5 Sample size…….…….…….….31

3.6 Inclusion criteria……...…... ….33

3.7 Ethical considerations……..33

CHAPTER 5

5.1 Discussion…….…….….54

CHAPTER 6

Results and recommendations

6.1 Conclusion…….……..62

6.2 Recommendation……..…….…….…...63

References…….……..…64

Appendices……...……...70

List of Tables

Page

Table 1. The socio-demographic characteristics of the students……...…….34
Table 2. Student's having Covid-19 vaccination and Disease Experience……...…35
Table 3. Student's Sexual Relationship Experience Before and During Pandemic……..36
Table 4. Student's Sexual Activity Frequency Before and During Pandemic…….…….....36
Table 5. The effect of covid-19 pandemic on student's sexual desire and habits ……....37
Table 6. The effect of covid-19 pandemic on student's sexual behaviors.....37
Table 7. The fear of the students of having sexual relationship during the pandemic 38
Table 8. Changes seen in Sexuality of the Student's before and during the pandemic…....38
Table 9. Effect of covid-19 on student's sexuality….....39
Table 10.Contraceptives Methods used by the student's during the pandemic……....40
Table 11. Problems with the use of the contraceptive methods…….…..…….……41
Table 12. Student's having sexual intercourse without the use of contraceptives methods…….42
Table 13. Methods used in the absence of contraceptives…….42
Table 14. The types of contraceptive method students easily got accessed during the pandemic.…….43
Table 15.The experience of unwanted pregnancy during the pandemic…….……..43
Table 16. The method used for ending the unwanted pregnancy….....44
Table 17. The problem faced with the termination of pregnancy…….44
Table 18. The effect of pandemics on the student's sexual life and sexual compatibility…44
Table 19. Comparison of covid-19 experience on the student's sexual habits…….45
Table 20. The effect of student's covid-19 experience on the orgasm……46
Table 21. The effect of covid-19 on the student's lubrication.....…...46
Table 22. The effect of covid-19 on the students erection……47
Table 23. Comparison of the students contraceptive method use during the pandemic by the Covid-19 experience .....…..47
Table 24. Comparison of the contraceptive methods used by the student's had covid-19….....48

Table 25. Comparison of the problem students faced with contraceptive used during covid-19 by the covid-19 experience…….....…….48
Table 26. Comparison of the method student's used in the absence of contraceptive method during covid-19.....…...49
Table 27. Comparison of the student's having covid-19 vaccination and method used in abscess to contraceptives……50
Table 28. Comparison of the students fear of having sexual relationship and contraceptive method use……..51
Table 29. Comparison of students having Covid-19 vaccination by the fear of having relationship.....…...51
Table 30. Comparison of students having Covid-19 Vaccination by department or faculties …….…… ……52
Table 31. Comparison of student's having covid-19 vaccination according to chronic disease……..……53

List of Abbreviations

COVID-19: Coronavirus disease of 2019
STDS: Sexually transmitted diseases
STI: Sexually transmitted infections
HIV: Human immunodeficiency virus
WHO: World Health Organisation
HPV: Human Papilloma Virus
EC: Emergency contraception
LNG-IUS: Levonorgestrel-releasing system
SARC: Short-acting reversible contraception
LARC: Long-acting reversible contraception
DMPA: Depot med Roxy progesterone acetate
IUDS: Intrauterine devices
US: United States of America
ACOG: American College of Obstetrics and Gynecologists
SFM: Society of Family Planning
ASRM: American Society for Reproductive Medicine

FSFI: Female Sexual Function Index

CHAPTER I

1.1 Introduction

The 2019 coronavirus disease (COVID-19) was initially recognized in December of that year in Wuhan, China. There have been 23,491,520 confirmed cases and 809,970 deaths across 216 countries as of August 25, 2020. (Asia, Europe, and United States of America, Africa, and Global). In order to reduce the chance of illness spreading, a number of governmental actions have been implemented. Some of these measures include restricting travel, quarantining passengers, isolating people from one another, prohibiting public gatherings, shutting down businesses and educational institutions, asking people to work from home, instituting curfews, and instituting lockdowns (Orben, Tomova, and Blakemore, 2020).

In an effort to slow the rapid spread of viral infection, authorities in various nations across the world have imposed curfews or announced lockdowns. These regulations have a detrimental impact on many aspects of society, including business, education, health, and teen access to contraceptives. (Orben, Tomova and Blakemore, 2020).

Sexuality is an essential part of being human, and sexual experience is a cornerstone of healthy adolescent development. To be healthy sexually is to be healthy in all aspects of your being: mental, emotional, and social, as well as your physical health. Sexual health necessitates a nonjudgmental and accepting perspective on sexuality and relationships and the opportunity to engage in sexual activities that are both satisfying and protective of one's physical and emotional well-being. All people need to have their sexual rights respected, protected, and fulfilled if sexual health is to be achieved and sustained (Kanem, 2019).

The health of sexually active young people is becoming increasingly problematic worldwide. Due to home confinement and school closures, it has been hypothesized that the COVID-19 epidemic has had a variety of effects on young people's sexual lives, perhaps harming their wellbeing. In addition, many areas of young people's lives have changed as a result of the absence of peer interaction. Sexual activity, close relationships, availability of contraception, defense against the human immunodeficiency virus, avoidance of unintended pregnancies, or other STIs, as well as physical, psychological, or emotional health were all negatively impacted as a result. Due to the restriction on interpersonal interaction brought about by the

social distance that was enforced, sexual activity, the number of partners with whom one has sex, sexual desire and satisfaction, and the consumption of pornographic material have all been impacted. The evidence that is currently available suggests that all of these effects mostly affect younger people, such as teenagers and young adults. (Li et al., 2020).

Even among young people, the effects of the pandemic have been significant on their sexual and reproductive health. Peer relationships were disrupted as young people who had studied abroad were coaxed back home. The long-term consequences of such a severe restriction on personal space and opportunities for social interaction are unknown. Although some young people have reported a decline in sexual activity due to social isolation, roughly 30% of young people said they were still regularly meeting close friends and having sex during the first peak of the pandemic (Orben, Tomova & Blakemore, 2020).

During the pandemic's students have some problems about their sexual life. 35.9% of people in the study reported increased sexual desire during isolation, 34% reported decreased desire, and 29.1% reported it was about the same as before the pandemic (Ballester et al., 2020).

According to a study conducted in Italy, while 12.1% of men and 18.7% of women reported increased sexual desire during the lockdown, 18.2% of men and 26.4% of women reported a decrease (Panzeri et al., 2020). There was an increase in arousal experienced by 15.2% of men and 20.9% of women during the lockdown and a decrease in arousal experienced by 12.1% of men and 20.9% of women. Furthermore, women had a harder time achieving an orgasmic state than men (6.1% vs. 17.6%), while men reported achieving an orgasmic state more quickly and frequently (15.2% vs. 3.3%). (Panzeri et al., 2020). These ways include a decrease in the use of contraceptives and an increase in the unmet need for family planning, as well as an increase in unintended pregnancies, maternal mortality, induced abortions, and violence against intimate partners (Blackstone, S. R. 2017).

Pandemics do not lessen the demands of adolescents and young adults in terms of reproductive health. Due to the pandemic's effects on the environment, including as changes in parental supervision, daily routines, and availability to contraceptives and condoms, the need for contraception services may be greater than usual. Adolescent and young adult patients require contraception more than anybody, thus healthcare providers need to recognize this and implement novel strategies to meet this vital need. Because a lockdown may prevent 47 million women from having access to contraception every six months, which would lead to an extra 7 million unplanned births, ensuring access to contraception is crucial. As a result of the COVID-19 epidemic to ensure the delivery of important healthcare services

and reduce exposure risks to staff and patients, health care experts are looking at novel approaches, such as virtual care. Thankfully, contraceptive treatment may be delivered effectively over the phone and through video. While it's ideal to have a face-to-face consultation, many forms of reproductive healthcare can be delivered digitally, including contraceptive counseling, the provision of both regular and emergency contraception, and sexual risk-reduction guidance (Wilkinson, Kottke, & Berlan, 2020).

Responding to a worldwide catastrophe while maintaining reproductive health under COVID-19. Prior to the COVID-19 outbreak and lockdown, 97.7% of Nigeria's 307 primary health clinics provided family planning services. Sexual Reproductive Health Issues During the lockdown, there was a little decline to 95.8%, and then there was a further decline to 92.5%. Before to the COVID-19 epidemic and throughout the lockdown in Nigeria, family planning services were provided by 90–100% of the tested Private Health Care Systems Incorporated within States. After the shutdown, as liver fewer establishments provided assistance for foreign policy. (Adelekan et al., 2021).

Some policymakers and medical center administrators view providing contraception as a non-essential service and have issued cease-and-desist orders to numerous clinics as a result (to stop the operations). It's possible that contraception counseling and administration appointments have been rescheduled or otherwise pushed back in clinics that have remained open. Fear of contracting COVID-19 among patients and lacking public transportation options in some countries also contribute to declining clinic attendance. According to reports from stakeholders in some countries, women are less likely to visit reproductive health clinics (Aly et al., 2020; Vedam et al., 2019). Researchers in Nigeria found that contraceptive supplies were depleted during pandemics by 25.1%. Significant drops in the utilization of sexual and reproductive health services were reported in a recent survey of frontline health workers in 81 countries (Church, Gassner, & Elliott, 2020).

In contrast, contraceptive usage was shown to have a higher correlation to COVID-19-related economic instability in Burkina Faso than in Kenya, where similar correlations were found to have a lower magnitude. 14.4% of non-consumers in Kenya and 3.8% of non-consumers in Burkina Faso said that COVID-19-related factors were the reason they did not use birth control.

A physical examination, pelvic or breast examinations, STD or cervical cancer screenings are seldom necessary for the safe supply of contraception, which mostly depends on a patient's

medical history. The patient's history can give most of the necessary information, including patient-reported or previously recorded blood pressure, but pandemics result in lock down and limit to access all services (Dragoman et al., 2016). During the pandemic young generations reaching services was interrupted and safe provision of contraception cannot be done. In addition to a rise in traumatic stress, depression, suicide, and intimate partner violence, a decline in access to contraception is associated with increased unsafe abortions, miscarriages, pregnancy complications, and the spread of HIV and other STDs (Aly et al., 2020).

Adolescent sexual experimentation is associated with poor sexual and reproductive health for many young people. However, adolescents rarely get the counseling they need to develop healthy sexual and reproductive behaviors. Thirty percent of 13- to 17-year-olds with four or more years of continuous enrollment in a Minnesota health plan had no preventive care visits, and forty percent had only one (Lindberg et al., 2020).

Based on these results, it's clear that it's crucial to treat any contact with adolescents as a potential time to offer preventive care. Many adolescents do not receive the preventative sexual and reproductive health counseling they need before their first sexual experience or first experience of sexual intercourse (referred to in the literature as "sexual debut"), which can have serious short- and long-term health consequences such as sexually transmitted infections and unintended pregnancies. To guarantee that all teenagers get necessary sexual and reproductive health services, such as education and treatment for sexually transmitted diseases (Santa et al., 2017).

There are high teen pregnancy rates in rural areas of West Virginia, so in 2016, researchers looked at the effectiveness of using telehealth to teach reproductive health to 55 female students at two high schools in the area. Over a month, eight 60-minute sessions were provided by a group of knowledgeable faculty, residents, and medical students based out of a "distant" (hub site where the provider is located) academic hospital three hours away using high-definition teleconferencing equipment. At the six-month evaluation, 91.8 percent of participants rated telehealth as "very effective" as a teaching tool in terms of their acceptance and understanding, and the reported rate of HPV (Human Papillomavirus) vaccination rose from 38. (Stingley & Schultz, 2016). Results show that telehealth can facilitate access to services for sexual and reproductive health. Convenience, accessibility, and patient comfort are its benefits, especially for younger individuals. Considerations for privacy would need to

be made when using visual technologies for telehealth sessions. Both professionals and patients approved of the integration of telemedicine into healthcare (Cheng et al., 2021).

Self-care interventions, which allow people, families, and communities to promote health and manage illness with or without the assistance of a health care provider, are necessary due to a lack of health workers, according to the World Health Organization. However, they should serve as an adjunct to, not a substitute for, direct interaction with the health system. Both current accompanying programs and this telemedicine strategy can offer advice and assistance to individuals who are self-managing their abortions. To administer the entire spectrum of contraceptive options, such as misoprostol, and frequently have misoprostol on hand for the prevention of post-partum hemorrhage, links to clinicians knowledgeable in abortion care are still crucial. (Shaikh et al., 2021).

Unwanted pregnancies and STIs (sexually transmitted infections) are serious problems among sexually active young people for various reasons, some related to the young people themselves and others to their lack of access to family planning and contraceptive services. Even if the pandemic may lead to fewer opportunities for intercourse for some young people, disruptions in access to contraception and abortion can be quite problematic for those adolescents and young adults who can still be physically near their relationships. Kirwan et al. (2020).

Due to constraints and the fear of getting the disease, the pandemic has undoubtedly affected sexual connections and changed societal dynamics worldwide (Van et al., 2020). They had little time to adjust to the rapid change brought on by the fear of spreading disease, which resulted in a dramatic era in which pictures of illness and death were posted on social media every day. The most often discussed subjects in the literature that has investigated the psychological reactions of the populace to the dire situation include fear, sadness, rage, guilt, grief, and loss, post-traumatic stress, and stigma. (Pan et al., 2020).

In order to elicit an orgasm, one must stimulate or manipulate his or her genitalia, including the penis, clitoris, vulva, and breast. Instead, it's known as sexual pleasure or sexual self-gratification. Despite initiatives to encourage relationship connection, recognize masturbation as a technique to enhance sexual health, and lower teen pregnancy, STIs, and HIV transmission. There has been quiet in the scientific and educational sectors on masturbation as a background for healthy sexual development. Masturbation is a technique that some sexual therapists employ to help their clients better understand their own sexual reaction

(Kaestle and Allen, 2011). In order to properly treat common sexual health issues and offer medically accurate, nonjudgmental, and private sexual therapy, nurses must be proficient in handling sexual health issues. Nurses must educate patients on medically necessary information, clarify any misinformation, and encourage healthy sexual attitudes and practices (Mushy et al., 2021).

1.2 Background of the study

The global pandemic of COVID-19 has put an extreme strain on the world's healthcare systems, making it difficult for these systems to continue providing their usual services. Even in high-income nations, people are reporting that it will be difficult to have access to family planning services in the year 2020 (World Health Organization, 2020). Sexual behavior, interpersonal connections, availability of contraception, safety from HIV and other STDs, and overall physical, mental, and emotional health were all significantly impacted as a direct result (Banerjee & Rao, 2020). As a result of the imposed social distance, contact between individuals was limited, and this had knock-on effects on people's sexual activity, sexual partners, sexual desire, and satisfaction, as well as their intake of pornographic media (Fegert et al., 2020).

Production of crucial pharmaceutical components of contraceptive techniques or production of the methods themselves, as well as transportation of contraceptive commodities, were all negatively impacted by the COVID-19 epidemic. The epidemic devastated the distribution of contraceptive goods (Krubiner et al., 2021). In addition to people being hesitant to use healthcare facilities for sexual and reproductive health services, resources allocated to those treatments could be reallocated to fulfill other demands. There is also the possibility that clinics could shut down, and individuals would avoid seeking care at hospitals (Riley et al., 2020). As a result of widespread travel restrictions enacted by governments to stem the spread of the virus, many people are being denied access to a time-sensitive and potentially life-saving service. Also, because they are not necessities, several sexual and reproductive health services have been suspended by their providers. This resulted in limiting the sexual relationship because of the fear of being affected by the pandemic, one such service is abortion care (Gichuna et al., 2020). Individuals' reduced travel to crowded locations as a result of the fear of contracting the virus and the public health precautions has resulted in many people having difficulty maintaining personal relationships, particularly teenagers and

young adults (Shadmi et al, 2020). Many parts of young people's lives were altered since they were unable to interact with their peers because of restrictions placed on their movement and the closing of schools (Stavridou et al, 2020).

This study contributes to the literature new information about students' sexual activity, sexual habits, contraceptive method needs and difficulties reach to the contraceptive methods during the pandemics. And this study also will be the first study was done on sexual activity and contraceptive needs of the students during the pandemics in North Cyprus Republic of Turkish.

1.3 The aim of study

The aim of this study is to assess the effect of COVID-19 pandemic on sexual life of the students' and their contraceptive use.

To try to reach the research goal, the following specific goals will be looked at:

1. How were the university students' sexual habits during COVID-19 pandemic?
2. How were the university student's sexual life during the COVID-19 pandemic?
3. How has the COVID-19 pandemic affected the use of contraceptive methods by the university students?
4. Does COVID -19 pandemic affect the sexual habits of university students?

1.4 Significance of the Study

In this thesis, the researcher will be able to indicate and explore the effect of COVID-19 pandemic on the university students' sexual lives, contraceptive usage, and their fear of being infected with COVID-19 during sexual intercourse. The results of this study will be used by the next generation. Since most studies have not concentrated on how the COVID-19 epidemic influenced university students' sexual lives and behaviors, the study will also be useful to future researchers who will be researching on the same topic.

Chapter II

Literature review

2.1 Effect of covid-19 pandemic on sexuality and reproductive health

During the COVID-19 epidemic, researchers looked at how sexual habits and functioning changed. Married women in Turkey report higher levels of sexual desire and more frequent sexual encounters but also report lower levels of sexual functioning and overall quality of life, as measured by the Female Sexual Function Index (Klç, 2019). As a result of depression, loneliness, and deteriorating relationships, people's sexual inclinations have waned. COVID-19 pandemic's quarantine restrictions and people's restricted access to support networks, violence against women and girls has intensified (Shojaaddini Ardakani et al, 2021). As a result of quarantine rules, spousal violence, drug misuse, anxiety, sadness, and suicide have all been linked to the policies (Mazza et al, 2020). There was a drop in hazardous sexual behavior along with a decrease in overall sexual activity levels (Li et al., 2020).

.

Adolescent and young adult sexually transmitted illnesses can be reduced, risk behavior is prevented, and healthy behaviors are promoted via psychological and educational programs and interventions (Mwale & Muula, 2017). According to a recent study, young people are more prone to engaging in risky activities than the elderly. Young adult males, in particular, are more likely to engage in risky activities than their female counterparts. Death rates are both increased as a result of this high prevalence (Flesia et al,2020). During the outbreak of COVID-19, the World Health Organization suggested that sexual and reproductive health services, including family planning, should be maintained (Vora, Saiyed & Natesan, 2020). The COVID-19 pandemic is already putting additional strain on healthcare systems throughout the world by increasing the number of patients who need to be cared for. Although family planning was still available, it was restricted or discontinued during the pandemic due to a shortage of doctors and nurses who had been trained to handle COVID-19 patients or as a result of lockdown measures to control the COVID-19 pandemic (Khan &

Naushad, 2020). A higher incidence of disease and mortality is projected if family planning and other reproductive health services are not improved (Foreman et al, 2018).

Li et al, (2020) investigated the impact that COVID-19-related policies had on sexual and reproductive health as well as the quality of relationships between partners in China. It was established that 967 individuals were evaluated for problems related to sexual health. Twenty-two percent of the people who answered the survey said they had less sexual desire; forty-one percent said they had fewer sexual encounters; thirty percent said they were masturbating more often; twenty percent said they were drinking less alcohol before or during sexual activities; and thirty-one percent said their relationship with their partners had gotten worse because of the pandemic. In the logistic regression model, it was discovered that parameters such as exclusivity, sexual desire, and sexual enjoyment, as well as accommodations during the pandemic, had an effect on partner relationships.

A self-validated survey questionnaire was used by Aolymat (2021) in her research with a sample size of 200 Jordanian women to investigate the impact that the COVID-19 pandemic had on domestic violence, the health of the genital tract, menstruation, and the use of contraceptives. According to the findings of the research, menstrual abnormalities and infections of the vaginal system dropped by a significant amount during the course of the whole period covered by the curfew as compared to the previous six months. In general, the number of menstrual or birth canal infections treated over the phone increased considerably, whereas the number of patients seen in clinics fell. The number of women using birth control dropped significantly when there was a complete curfew in place. In comparison to the time before the pandemic, the number of people using birth control methods for the purpose of family planning saw a significant drop during the epidemic. Prabowo et al, (2021). Examined the impact of working from home on the mental health and reproductive health of Indonesian women during the COVID-19 pandemic.

The effects of the COVID-19 epidemic on women's reproductive health were studied by Shojaaddini Ardakani et al. (2021). The spread of the COVID-19 pandemic led to a decrease in the quality of sexual encounters while increasing their number because partners were more likely to be at home. As a result, it became clear that sex had become less satisfying. Women's mental health has taken a hit in recent years due to increased reports of stress, anxiety, and depression.

Adolescent and young adult sexual and reproductive health has been and will continue to be negatively impacted by the COVID-19 pandemic via both proximal pathways (Wood et al., 2020). Despite the efforts that have been made to identify masturbation as a technique to enhance sexual health, boost relationship closeness, and minimize the risk of unintended pregnancy, STIs, and HIV transmission among adolescents, these initiatives have not been successful. Scientific and educational organizations have largely ignored masturbation as a potential environment for healthy sexual development. Because of the sensitive nature of sexual health concerns, nurses are expected to have the expertise to diagnose and treat sexual health problems, obtain an accurate sexual history, and provide sexual counseling grounded in evidence-based practice without passing judgment. Mushy et al., (2021). It is the job of nurses to give patients accurate medical information, correct any wrong information they may have been given, and encourage healthy sexual attitudes and behaviors among patients.

One important factor affected reproductive health is disruption of services. Mukherjee et al, (2021) found that COVID-19 caused disruptions in services that affected women's access to abortion, contraception, HIV/STI testing, and changes in their periods, plans to get pregnant, and sexual behaviors.

Stavridou et al, (2021) researched the potential for alterations in sexual activity and relationships among teenagers and young adults in the course of the COVID-19 outbreak. The researchers found that during the COVID-19 outbreak, both men and women reported having less of a desire to engage in sexual activity. It was shown that people who had fewer sexual experiences and less bonding behavior between partners had greater degrees of loneliness and sadness than those who had more of both. But some people said that their sexual desire had grown, and that masturbation was the way that they chose to satisfy that desire.

Hille et al, (2021) conducted research in Germany, Switzerland, and Austria during the COVID-19 outbreak to investigate the influence that physical separation strategies had on sexual behavior in single and coupled people. There were a total of 1017 single people and 1498 paired individuals who were analyzed. When compared to the previous period, people who were coupled masturbated much less when they were physically separated, but masturbation rates increased among men who were alone. Even though the difference was not statistically significant, the rate of masturbation was lower among single women. The only activity that did not show a substantial fall in frequency after the introduction of physical

separation measures for both groups was anal intercourse between paired people. Socio sexual factors and one's partner's physical sexual attractiveness were found to have a positive correlation with the number of new sexual practices added during physical distance measurements. On the other hand, there was no link between the number of new sexual practices and feelings of affection during sex with a partner or happiness in a relationship.

Fuchs et al, (2022) researched to investigate the impact that the COVID-19 pandemic has had on the sexual function of women. A rise in the Female Sexual Function Index score indicates that, on average, women's sexual function is much better in month five compared to month one. This can be observed by looking at the comparison between the two months. The evaluations for arousal, lubrication, orgasm, and pain were higher, but the scores for desire were lower. A nearly equivalent degree of enjoyment was reported by all involved.

Quantitative methods were employed by Rauchle et al, (2022). To investigate how people's sexual behaviors altered when the COVID-19 outbreak struck Germany. The results of the study demonstrated a decline in participants' levels of sexual enjoyment as well as an increase in the frequency of sexually-related problems and disagreements within committed relationships. The findings also indicated a rise in the watching of pornography and masturbation. As a result of the increased psychological stress brought on by the epidemic, individuals exhibited altered patterns of sexual behavior, which were associated with both an increase in time resources and a loss in social interactions.

2.2 How the COVID-19 pandemic affected the use of contraceptive methods

According to the World Health Organization, the United Nations Population Fund, and the National Centre for Women's Health in Society, safe, reliable, acceptable, and cost-effective contraceptive methods substantially impact women's health, particularly their mental health. Some modern, reversible contraception examples include male sterilization and intrauterine devices (IUDs). In addition to surgical methods like male and female sterilization, there are non-invasive methods, including depot medroxyprogesterone acetate (DMPA) injections and levonorgestrel implants (Norplant) as age-old methods like coitus interruption and abstention. Several methods are effective in treating mental illness and low mood. Much research has focused on hormonal contraceptives, sterilization, and psychological effects (Beksinska et al., 2021). Women between the ages of 15 and 49 in five European countries (France, Germany, Italy, Spain, and the United Kingdom) were polled, and the overwhelming majority (90+%) reported being very or extremely satisfied with oral contraceptives (Skouby, 2004). Women

who used contraceptive implants in Malaysia, Nigeria, and the West Indies reported high levels of satisfaction with their implants, indicating that there were no negative psychological consequences (Mwanangombe et al, 2020).

Lack of access to contraception is also associated with an increase in unsafe abortions, miscarriages, pregnancy problems, the spread of HIV and other STDs, and the occurrence of post-traumatic stress disorder, depression, suicide, and violence toward intimate partners (Aly et al., 2020). As a result, the supply of contraception is viewed as a non-essential activity by certain decision-makers and directors of medical institutions. As an outcome, numerous clinics have been compelled to cease operations as a result of this perception (to stop operations). Appointments for contraception advice and the administration of contraceptives may have been rescheduled or rescheduled altogether at clinics that have remained operational despite the hurricane. In addition to the actual closure of clinics, patients' concerns about becoming infected with COVID-19 and the restricted availability of transportation services in some nations both contribute to a decrease in patient turnout. There have been significant drops in the number of women going to reproductive health clinics, according to reports from reproductive health stakeholders in several different nations (Aly et al., 2020). The supply of safe contraception is mostly dependent on the patient's medical history, and it is only occasionally necessary to perform a physical exam, breast exam, pelvic exam, or screening for sexually transmitted infections or cervical cancer. A lot of the information needed to give contraceptives can be found in the patient's medical history, such as the patient's self-reported or previously recorded blood pressure. However, pandemics cause all services to close and limit who can use them (Dragoman, Jatlaoui, Nanda, Curtis, and Gaffield, 2016).

Women's reproductive rights, including the capacity to manage their fertility and make informed choices about when, how often, and if they want to have children, are protected by the use of contraceptives (Karp et al, 2020). Unfortunately, women's status and position in the family and community do not often allow them to fully exercise this freedom and protect themselves from STDs. The right to sexual and reproductive health care is inextricably linked to other basic human rights, including the freedom to work, a safe place to live, and an adequate education (Berro Pizzarossa, 2018). Without access to reproductive health care and the ability to make their own decisions, improving women's health on a global scale would not have been feasible. Reproductive health considers not only biological variables but also

social and cultural ones (Hoover, 2022). Access to healthcare, especially reproductive health care, is determined by government regulations. There is a possibility that social and religious attitudes against contraception and sex outside of marriage might affect government policy, resulting in tight eligibility requirements for publicly supported reproductive health care and limitations on the types of contraception that can be used (Spadt et al, 2014). Women have been the primary subjects of the majority of studies looking at factors that influence demand for contraceptives, as well as the scope and nature of the unmet contraceptive need. Women who are not pregnant but want to limit their family size are a good example of unmet demand, as are pregnant women who report that their pregnancy was either unplanned or early (Kebede et al., 2019). It is not enough to have them readily available to be able to use them. According to studies, women's reported intention to take contraceptives differs significantly from their actual use, and the researchers wanted to find out why this was the case (Bishwajit et al, 2017).

During the COVID-19 pandemic, Wood et al. (2021) analyzed the population-level changes in women's needs for contraception as well as their utilization of birth control methods. Due to the fact that they were questioned at both the baseline and the COVID-19 follow-ups, the study only included 7245 women who were married or lived together as if they were married. The number of women in Lagos who require any form of birth control increased by 5.81% points (from 74% to 80%). Contraceptive utilization among women in need increased by 17.37 % points in rural Burkina Faso, from 30% to 48%, while it increased by 7.35% points in rural Kenya, from 71.6 % to 78.9 %. Both of these countries are located in sub-Saharan Africa. A closer look at socio demographic subgroups reveals several patterns that were previously only visible on the surface of these overarching tendencies. In every single one of the places that were investigated, it was shown that nulliparous women have a greater need for birth control methods.

Marquez et al. (2020) state that the community quarantine resulting from the pandemic had numerous unfavorable effects on the sexual and reproductive health of Filipino women. Caruso, Rapisarda, and Minona (2020) conducted a study to examine the impact of social distance on hormonal contraception, the cessation of such contraception, and the risk of young women having an unexpected pregnancy during the COVID-19 pandemic. A total of 155 former users of short-acting reversible contraception (SARC) and 90 former users of long-acting reversible contraception (LARC) filled out the survey. However, during social

distancing, 51 non-cohabiting or single women stopped using their SARC method for reasons unrelated to SARC; 47 non-cohabiting or single women continued sexual activity, in violation of the rules of social distancing; and 14.9% of the women had an unplanned pregnancy for which they sought a termination.

Karp et al, (2021) investigated the dynamics of contraception as well as the COVID-19 experiences. They also investigated the COVID-19-related factors that contributed to women's refusal to take contraceptives. During COVID-19, the majority of women in Burkina Faso (68.6%) and Kenya (81.6 %) did not make any changes to their current method of contraception, and of those who did, the majority were more likely to start using a method than to cease using one (25.4% and 13.1%, respectively) (6.0 % and 5.3%, respectively). The majority of women who changed their methods of birth control used techniques that were either just as effective as or more successful than the methods they were using before the outbreak.

Coombe et al, (2021). Looked at the effects that something like this has on sexual and reproductive health. Participants' ages ranged from 18 to 24 years old, and the overwhelming majority of them said that they were aiming to delay or avoid becoming pregnant. The most common method of birth control was the oral contraceptive pill, while over 20% of women reported that they did not use any kind of birth control at all. During the government shutdown, it was easier for working women to access birth control and other contraceptives. Some of the participants in COVID-19 either put off having children or made the choice not to have children at all.

Emer and Koops (2022) conducted research on the fertility habits and goals of women in middle-income countries. The pandemic did not change how people used birth control. Instead, the number of women using intrauterine devices went down while the number of men using condoms went up. Charles et al, (2022) investigated how the COVID-19 epidemic in Brazil influenced sales of contemporary contraceptive techniques in Brazil. They discovered that there was not much of an increase in the sales of contraceptives in the year 2020 as compared to the previous year. The monthly unit sales averaged between 12.8 and 13.0 million products sold each and every month. Between June and July 2020, there was an increase in the number of sales of EC pills, but between March and June 2020, there was not a significant change in the number of sales of pills, patches, or rings. Both the levonorgestrel-

releasing intrauterine system (LNG-IUS) and the etonogestrel (ENG) implant had a decline in sales during the months of February and May of 2020. After May 2020, there was a noticeable increase in the number of implants sold. This was due to the fact that the first deaths associated with COVID-19 occurred in May of 2020 (This is in correlation with the growing incidence of fatalities caused by COVID-19).

Bailey, Bart, and Lang (2022) investigated the contraception methods used by low-income women without access to reproductive health care during the pandemic. According to their findings, the number of births to mothers with low incomes will decrease by 1.1 percent in 2021. This is due to the fact that in 2020, access to various methods of birth control will be restricted, and the economy will slow down. If more information was known about the limits placed on abortion, the birth rate for women with low incomes could potentially increase. These results also mean that the number of unplanned births would go up a lot in low-income households, which are more likely to be affected by the economy in COVID-19.

Wright et al, (2022) conducted research on 1,445 women of reproductive age in Lagos, Nigeria, during the COVID-19 epidemic. They discovered that a significant number of these women employed contemporary methods of contraception. They also investigated the elements that could have had a role in their decision to use contemporary contraception. A total of 30.8% of people were using some form of modern contraception. The following is how the events transpired: The percentage of women between the ages of 20 and 29 who used modern contraception during the pandemic was lower than the percentage of women between the ages of 30 and 39. Women who were married or had been divorced were more likely to use contemporary contraception than women who were not married or had never been married.

Chapter III

Methodology

3.1 Research Design

A descriptive research design method was used for this study.

Data collection was achieved from the students physically in the school premises during break time and few data was distributed to the students through mobile link due to the social

distance during the covid-19 pandemic. In this study 220 total number of questionnaires were distributed to the students physically while 147 total number of the questionnaire were shared online due to the effects of COVID-19 among students. The statistical analysis used in this study was chi-square test and krushkil Wallis H test.

3.2 Participants/Population and Sample

Population of this study comprised of all the students in three Faculties at Near East University: this includes; Law (Department of International Law), Faculty of Economics and Administrative Science (Department of Banking and finance), Faculty of Arts and Science (Department of English language and literature).

These three faculties were chosen because the aim of this research is to gather information of students who doesn't have basic knowledge about health science to be able to get a clear results on how pandemic has affected student's sexual life and contraceptive uses. The total number of registered students in fall semester 2021-2022 in these 3 faculties is 460 at Near East University North Cyprus. According to my study, it has been recruited those three hundred sixty-seven (367) registered students from the Law, Economics, and Administrative Science and Arts and Science faculty were included in the study.

3 .3 Data collection tools/materials

The instrument for data collection in this study was a questionnaire containing 37 question developed by the researcher according to the literature. The questionnaire contained socio-demographic information of the students, effect of pandemics on the student's sexual life. Questionnaire also contained questions on contraceptive method usage, the fear and difficulties about contraceptive use during pandemics of contacting sexual transmitted disease and Covid-19, difficulties faced to reach the contraceptive methods and sexual needs of the students during the pandemic.

The questions numbered 1-5 and 11 are measuring socio-demographic characteristics of the students, 6-10 are measuring student's chronic disease and covid-19 experienced. 12-17 measuring student's sexual activity and how covid-19 affected students sexual life during pandemic and the fear students faced, 18-24 are measuring the students sexual desire changes

pre and during the pandemic. 25-35 are measuring the contraceptive methods use among students during the pandemic and the questions numbered 36-37 measuring the student's sexual life and sexual compatibility. These questions were scored between 0-10. For these questions, zero mean no change, 5 mean moderate change and, 10 mean complete change.

3.4 Data Analysis Plan

This study was planned descriptively and tools were applied to the students by researcher face to face and some copies were shared online among the students through WhatsApp link. In this study percentile and mean is used. And according to the Kolmogorov-Smirnov test results, non-parametric tests (Kruskal-Wallis H Test) and Chi square tests were used that showed normal distribution.

3.5 Sample size

To estimate the sample size, the formulae for probability population were used. The formulae are estimated as:

No= Z2 (p) (1-p) /E2

=1.922*0.5*1-0.5/0.052

=3.6864*0.5*0.5/0.0025

=0.9216/0.0025

No=368

Where:

Z Scores =1.92,

P population proportion = 0.5,

Q=1-p

E margin of error = 0.05

No of sample size = 367

The 367 represent the total number of students that will be part of the research process. We use the probability for population formula to determine the sample size from the various departments, which is (Faculty of law- Department of International law, Faculty of Economics and Administrative Science- Department of Banking and Finance, Faculty of Arts and Science- Department of English Language and Literature) into the study.

According to the study it was recruits that 460 was the total number of registered students in the three faculties chosen outside the health faculties at Near East University 2021-2022 fall semester (Faculty of law- Department of International law, Faculty of Economics and Administrative Science- Department of Banking and Finance, Faculty of Arts and Science- Department of English Language and Literature) with the total number of students gotten from Departments of international law was 198 students, which is the total number of students the department, from Departments of Banking and finance was 160, Department of English language and literature was 102 students, using universal method to calculate the specific number of sample size, 80% out of 460 students was recruits to be the total number of 367 students in total to be used as the sample size in the study. With this result the number of the sample size to be use in this study will be 367 students from the three faculties. 158 students to be taken from Department of international law, 128 students to be taken from Department of Banking and finance, 81 students to be taken from Department of English Language and Literature (Total sample size from 3 faculties=367). In this study 220 total number of questionnaires were distributed to the students physically while 147 total number of the questionnaire were shared online due to the effects of COVID-19 among students. One hundred copies of questionnaires were distributed to the students in the Department of International Law through physically while 58 students were shared online among the students, seventy copies of questionnaire were shared among the students in Department Banking and Finance physically while 58 were shared online among the students. Fifty copies of questionnaire were shared physically among the students in the Department of English and Literature while 31 copies were shared online among the students.

3.6 Inclusion criteria

-Students over 18-year-old

-Students have no English communication problem.

- Students are sexually active.

3.7 Ethical considerations

This study was approved by the Ethics committee of Near East University on 28.04.2022 (IRB No. NEU/2022/102-1552). (*Appendix File B*) before the application of the study. Furthermore, Informed consent of all the students was taken prior to the application of questionnaire.

CHAPTER IV

Findings and Discussion

Data collection, analysis and discussion

Table 4.1: The Socio-demographic Characteristics of the Students (n=367)

Socio-demographic characteristics of students	F*	%
Age		
18-20 years	144	39.2
21-23 years	108	29.4
24- 26 years	65	17.7
27 year and above	50	13.6
Gender		
Male	300	81.7
Female	67	18.3
Academic year		
1st	122	33.2
2nd	127	34.6
3rd	81	22.1
4th	37	10.1
Person the students living with		
Alone	63	17.2
Friends	123	33.5
Family	163	44.4
Others**	18	4.9

Department		
International law	158	43.1
Business administration	110	30.0
English language art	99	27.0
Students' marital status		
Single with regular partner	349	95.1
***Married	18	4.9
Total	367	100.0

*F frequency

**The others represent a student who had an accommodation issue with no stable place but currently staying with a course mate not a friend.

***Spouses, faineance and others were matched.

Table 4.1 shows that the age of the students, 39.2% of students were between the age groups of 18–20 years. In this study 81.7% of the students were male, and 34.6% of the respondents were second-year students.

The distribution of who are living with the students is shown in Table 4.1 living with. 44.4% of the students said they are staying with their family, 33.5% said they are staying with friends. As a result, 43.1% of students were students in international law, 30% were student in business administration department, and 27% of students were in English Language Art department. As seen in the table, 95.1% of the students are single with regular partner, while 5% of them are married.

Table 4.2: Students Having Covid-19 Vaccination and Disease Experience (n=367)

	F	**%**
Having covid-19 vaccination		
Yes	241	65.7
No	126	34.3
Covid-19 Experience		
Yes	192	52.3
No	175	47.7
Total	367	100.0

Table 4.2 shows the number of students that had Covid-19 vaccination, 65.7% of the students had Covid-19 vaccination. Of the total students, 52.3% of the students had COVID-19 experience. The results show that most of the students had COVID-19.

Table 4.3: Students' Sexual Relationship Experiences Before and during the Pandemic (n=367)

Students' sexual relationships experience	**F**	**%**
Before the pandemic		
Yes	264	71.9
No	103	28.1
During the pandemic		
Yes	266	72.5
No	101	27.5
Total	367	100.0

Table 4.3 shows the sexual relationships of the students before and during the pandemic. 71.9% of the students said yes, they had sexual relationships before the COVID-19 pandemic. In our study, 72.5% of the students said they had a sexual relationship during the pandemic.

Table 4.4: Students' Sexual Activity Frequency Before and during Pandemic (n=367)

Students' sexual activity frequency	**Before the pandemic**		**During the pandemic**	
	F	**%**	**F**	**%**
Every day	206	56.1	211	57.5
Ones in two days	75	20.4	77	21.0
Ones in three days	22	6.0	24	6.5

Ones in four days	12	3.3	6	1.6
Ones in five days	14	3.8	1	0.3
More than ones in six days	7	1.9	4	1.1
Ones in seven days	9	2.5	14	3.8
Ones in fifteen days	6	1.6	5	1.4
Monthly	16	4.4	25	6.8
Total	367	100.0	367	100.0

Table 4.4 depicts the sexual activity frequency of the students before the pandemic. 56.1% of the students said that they have sex every day, 20.4% of the students said that they have sex every two days. In our study 6.0% of the students said they have sex every three days, while 57.5% of the students said that they have sex every day during the pandemic, 21.0% of the students said that they have sex every two days, 6.5% of the students said they have sex every three days during the pandemic.

Table 4.5: The Effect of Covid-19 Pandemic on the Student's Sexual Desire and Habits (n=367)

	F	**%**
Student's Sexual Desire		
Decreased sexual desire	221	60.2
Increased sexual desire	117	31.9
Desire is not affected	29	7.9
Students' habits during the pandemics		
Used sex toys instead of having sex with partner	245	66.8
Used masturbation for sexual pleasure	122	33.2
Total	367	100.0

Table 4.5 shows the effect of the COVID-19 pandemic on student's sexual desire and habits. As a result, 60.2% of the students said their sexual desire decreased during the pandemic, 31.9% of the students said that their sexual desire increased, 7.9% of the students said that the pandemic did not affect their sexual habits. In this study, 66.8% of the students said they used toys instead of having sex with other genders, 33.2% of the students said that they masturbated during the pandemic.

Table 4.6: The Effect of Covid-19 Pandemic on the Student's Sexual Behaviors (n=367)

Effect of covid-19 pandemic on sexual behavior	**F**	**%**
Changing sexual position	250	68.1
Avoiding kissing	66	18.0
Wearing face masks during the sex	20	5.4
Watching sex videos instead of having sex	15	4.1
Preferring mobile or video sex instead of sexual intercourse	16	4.4
Total	367	100.0

Table 4.6 shows the effect of the COVID-19 pandemic on the students' sexual behavior. 68.1% of the students said that the pandemic changed their sexual position, 18.0% of the students avoided kissing and, 5.4% of the students said they wore face masks during the sex and 4.4% of the students said they preferred mobile or to watch video sex instead of sexual intercourse.

Table 4.7: The Fear of Students of Having Sexual Relationship during the Pandemics (n=367)

	F	**%**
Having fear		
Yes	245	66.8
No	122	33.2
Reasons of fear for sexual intercourse (n=245)		
Being infected with STD's	50	20.4
Unwanted pregnancy	40	16.3
Being infected with Covid-19	110	44.9
Can't attend university education	39	15.9
Other*	6	2.4

**The answers were given by the students in the form as other "being scared of contacting tuberculosis, diseases from partner sputum, community discrimination and economic factors".*

Table 4.7 shows how the pandemic instill fear in the students. In this study 66.8% of the students were afraid to have a sexual relationship, 20.4% of the students said they were afraid to be infected with STDs, 16.3% of the students said they did not want any unwanted

pregnancies, 44.9% of the students said they were afraid to be infected with the COVID-19 pandemic and 15.9% of the students said that they fear about could not attending to the university.

Table 4.8: Changes Seen in Sexuality of the Students before and during the Pandemics (n=367)

Changes seen in sexuality	**F**	**%**
Moderate change	307	83.7
Completely change	60	16.3
Total	367	100.0

Table 4.8 shows the students' changes seen in sexuality of the students before and during the pandemic. As a result, 83% of the students said that they had moderate change in their sexuality, 17% of the students had completely changed.

Table 4.9: Effect of Covid-19 on the Student's Sexuality (n=367)

	Effect of covid-19 on sexual desire			
	No Change ($\bar{x}$±s)	**Moderate Change** ($\bar{x}$±s)	**Complete Change** ($\bar{x}$±s)	**P**
Sexual desire	1.10±0.384	1.95 ± 0.251	2.32 ± 0.74	0.000*
Orgasm	1.56±0.234	1.61±0.613	2.23±0.606	0.000*
Lubrication level	2.15±0.324	2.11±0.309	2.65 ±0.48	0.000*
Arousal	1.9±0.432	2.09±0.29	2.53±0.503	0.000*
Satisfaction	2.85±0.389	2.12±0.321	2.59±0.495	0.000*
Pain	2.15±0.367	2.11±0.317	2.39±0.492	0.000*
Erection	1.59±0.29	2.09±0.286	2.58 ±0.498	0.000*

**p<0,05 (Kruskal-Wallis H Test)*

Table 4.9 shows the descriptive explore analysis the effect of covid-19 on student's sexual life during the pandemic of the 367 participants, sexual desire of students said no change during the pandemic has an average mean of 1.10±384, Minimum of 1, Maximum of 3, Orgasm has an average mean of 1.56±234, Minimum of 2, Maximum of 3, Lubrication have an average mean of 2.15±324, and a minimum of 1, and a maximum of 3 Arousal has an average mean of 1.90±.432 and a minimum of 1 and, a maximum of 3 Satisfaction has an average mean of 2.85±.389, minimum of 2, maximum 3, Pain has an average mean of

2.15±.367, minimum 1, maximum is 3 While erection has an average mean of 1.59± 2.00, a minimum 1 and, a maximum of 3.

The result for moderate change also shows that sexual desire has an average mean of 1.95±.251 and a minimum of 1 and maximum of 3, for orgasm 1.61±.613, a minimum 1 and, a maximum of 3. While lubrication has an average mean of 2.11±309 and a minimum of 2 and maximum of 3, Arousal has an average mean of 2.09±.290 and a minimum 2 and maximum 3, Student's satisfaction has an average mean of 2.12. ±.321 and a minimum 2 and maximum of 3, for pain 2.11±.317 and a minimum 2, maximum 3. For erection students mean value was found 2.09±.286 and minimum of 2 and, a maximum of 3.

The results for complete change shows that out of the 367 participants, sexual desire has an average mean of 2.32 ± .740 and a minimum of 1, and a maximum of 3, Orgasm has an average mean of 2.23± .606 and, minimum of 1 and maximum of 3, Lubrication has an average mean of 2.65±.480 and a minimum of 2 and a maximum of 3,Arousal has an average mean of 2.53±.503 and a minimum of 2, and maximum of 3, Satisfaction has an average mean of 2.59±.495 and a minimum of 2, and a maximum 3, and Pain 2.39±.492 with a minimum 2, maximum 3. While Erection has an average mean of 2.58±.498 and a minimum of 2, and a maximum of 3.

The above results show that there was a statistically significant change on the Sexual desire, Orgasm, Lubrication level, Arousal, Satisfaction, Pain and Erection scores by the effect of covid-19 on sexual desire ($p<0.05$). The students who have completely changed the impact of covid-19 on sexual desire scored higher.

Table 4. 10: Contraceptive Methods Used by the Students during the Pandemics (n=367)

	F	**%**
Contraceptive methods used		
Yes	238	64.9
No	129	35.1
Name of the methods used		
Condom	110	30.0
Oral contraceptives pills	40	10.9
Intrauterine Device	60	16.3
Injections	12	3.3

Implants	8	2.2
Diaphragm	5	1.4
Withdrawal method	3	0.8
Abstinence	129	35.1
Total	367	100.0

Table 4.10 shows the responses of the students to the contraceptive method they used during the pandemic. As a result, 64.9% of the students used contraceptive methods, 30.0% of the students' used condoms, and 10.9% of the students used oral contraceptive pills during the pandemic. In our study, 16.3% of the students used intrauterine devices during the pandemic.

Table 4.11: Problems with the use of the Contraceptive Methods (n=367)

	f	**%**
Problems Faced		
Yes	224	61,0
No	143	39,0
Kind of problems (n=224)		
Closures and cuts to sexual and reproductive health service	135	60,3
Economic difficulties	44	19,6
Lack of having information and guidance	15	6,7
Others*	30	13,4

**Answers were given as other were such as the use of counterfeit medicine product (A medicine made by someone other than the genuine manufacturer, by imitating an original product without authority).*

Table 4.11 shows the problem students encountered with the use of the contraceptive method. 61% of the student's encountered problems with the usage, 60.3% of the students had closures and cuts to their sexual and reproductive health services problem, 19.6% of the students had economic difficulties and, 6.7% of the student's lacked information and guidance on the use of contraceptives.

Table 4.12: Student's having Sexual Intercourse without the use of Contraceptive Methods (n=367)

Student's Having Sexual Intercourse without the use of Contraceptive Method	**F**	**%**
Yes	231	62
No	136	38
Total	367	100

Table 4.12 shows the responses of the students to have sexual intercourse without the use of a contraceptive method. As a result, 62% of the students had sex without any contraceptives method during the pandemic.

Table 4:13: Methods used in the absence of contraceptives (n=367)

Methods used	**F**	**%**
Abstinence from sex	202	55.0
Masturbation	69	18.8
I/my partner used withdrawal method	63	17.2

Sex toys	2	0.5
Unprotected intercourse	26	7.1
Others*	5	1.4
Total	367	100.0

**Answers was given as other was oral sex.*

Table 4.13 shows the responses of the methods students used in the absence of contraceptives methods. As a result, 55% of the students were abstinent from sex, 19% of the students masturbated. 17% of the students used the withdrawal method.

Table 4.14: The Types of Contraceptive Methods Students Easily got accessed during the Pandemics (n=367)

Contraceptive method	**f**	**%**
Abstinence	133	36,2
Withdrawal	103	28,1
Condoms	107	29,2
Pills	16	4,4
Implant	6	1,6
Other*	2	0,5
Total	367	100,0

** The others represent injection, patch and traditional methods.*

Table 4.14 shows the types of contraceptive methods they easily got access to during the COVID-19 pandemic. 36.2% of the students were abstinent from sex, 28.1% of the students used withdrawal methods, 29% of the students' used condoms. As a result, 4.4% of the students used pills.

Table 4.15: The Experience of Unwanted Pregnancy during the Pandemics (n=367)

Experience of unwanted pregnancy	F	%
Yes	225	61.3
No	142	38.7
Total	367	100

Table 4.15 shows the experience of unwanted pregnancy during the pandemic among university students. Out of the 367 participants, %61.3of the student's indicated that yes, they have experience of unwanted pregnancy during the pandemic.

Table 4.16: The Method used for Ending the Unwanted Pregnancy (n=367)

The method ending unwanted pregnancy	F	%
Giving birth	256	69.8
Abortion	111	30.2
Total	367	100

Table 4.16 shows how the students' end unwanted pregnancy during the pandemic. 69.8% of the students said that they give birth to babies. While the other 30.2% of the students said they did abortion.

Table 4.17: The Problem Faced with the Termination of Pregnancy (n=367)

The problem with the termination of pregnancy	f	%
Economic factors	224	61.0
Social condemnation	81	22.0
Interrupting education	55	15.0
Other*	7	2.0
Total	367	100.0

**The others represent the number of students that encounter problems of pregnancy termination from family culture circumstances between the ages of 18-20.*

Table 4.17 shows the problem students encountered during the pregnancy termination. 61% of the students had economic problem, 22% social condemnation and, 15% education was interrupted.

Table 4.18: The effects of pandemics on the student's sexual life and sexual compatibility (n=367)

	Effects of covid-19 on student's sexual life.			
	No Change ($\bar{x}$±s)	**Moderate Change** ($\bar{x}$±s)	**Complete Change** ($\bar{x}$±s)	**P**
Sexual life	1.04±0.205	1.94±0.582	2.26±0.642	0,000*
Sexual compatibility	1.27±0.520	2.16±0.465	2.47±0.505	0,000*

**p<0,05 (Kruskal-Wallis H Test)*

The above table 4.18 results shows' affection of covid-19 on sexual life of the students. The students have no change an average mean of 1.04±0.205 and results show for sexual compatibility with an average mean of 1.27±0.520.

The above results show for affection of covid-19 on sexual life for moderate change, with and average mean of 1.94±0.582 and the results show for sexual compatibility with an average mean of 2.16±0.465.

The above results shows' affection of sexual life for completely change with an average mean of 2.26±0.642 and the results shows for sexual compatibility, with average mean of 2.47±0.505.

The above results show that there was a statistically significant change on the sexual life and sexual compatibility scores by the effect of covid-19 on sexual desire ($p<0.05$). The students who have completely changed the impact of covid-19 on sexual desire scored higher.

Table 4.19: Comparison of Covid-19 experience on the student's sexual habits (n=367)

Sexual habits of the Student's	**Covid-19 Experience**				
	Yes		**No**		
	n	**%**	**n**	**%**	**P**
Decreased sexual desire	153	79.7	68	38.9	

Increased sexual desire	33	17.2	61	34.9	0.000*
Not effected	6	3.1	46	26.3	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

In Table 4.19, it was determined that 79.7% of the students who had coronavirus had decreased sexual desire, 17.2% had increased, and 38.9% of the students who did not have coronavirus had a decreased sexual desire and 34.9% had increased. The sexual desire of students who had coronavirus decreased significantly more than students who did not have coronavirus ($p<0.05$).

Table 4.20: The effect of student's covid-19 experiences on the orgasm (n=367)

Change in orgasm	**Covid-19 Experience**				
	Yes		**No**		
	N	**%**	**N**	**%**	**P**
No change	114	59.4	27	15.4	
Moderate change	70	36.5	112	64.0	0.000*
Complete change	8	4.2	36	20.6	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

In Table 4.20, it was determined that 54.4% of the students who had coronavirus had no change orgasm, 36,5% had moderate change, and 38.9% of the students who did not have coronavirus had no change orgasm and 64.0% had complete change. The rate of no change in orgasm in students who had coronavirus was statistically significantly higher than those who did not have coronavirus ($p<0.05$).

Table 4.21: The effect of Covid-19 on the student's lubrication (n=367)

Lubrication level of students	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Moderate change	179	93.2	113	64.6	0.000*
Complete change	13	6.8	62	35.4	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

In Table 4.21, it was determined that 93.2% of the students who had coronavirus had moderate change lubrication, and 64.6% of the students who did not have coronavirus had moderate change lubrication and 35.4% had complete change. The rate of moderate change in lubrication in students with coronavirus was statistically significantly higher than those without coronavirus (p<0.05).

Table 4.22: The effect of covid-19 on the student's Erection (n=367)

Erection	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Moderate change	176	91.7	126	72.0	0.000*
Complete change	16	8.3	49	28.0	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

In Table 4.22, it was determined that 91.7% of the students who had coronavirus had moderate change erection, and 72.0% of the students who did not have coronavirus had moderate change erection and 28.0% had complete change. The rate of moderate change in lubrication in students with coronavirus was statistically significantly higher than those without coronavirus (p<0.05).

Table 4.23: Comparison of the student's Contraceptive Methods use during the Pandemic by the Covid-19 experience (n=367)

Using Contraceptive Methods	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Yes	170	88.5	68	38,9	0,000*
No	22	11,5	107	61,1	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

In Table 4.23, it was determined that 88.5% of the students who participated in the study who had coronavirus, used contraceptive methods during the pandemic, and 11.5% did not. It was determined that 38.9% of the students who did not have coronavirus used contraceptive methods during the pandemic, and 61.1% did not. The rate of using contraceptive methods during the pandemic by students with coronavirus is statistically significantly higher.

Table 4.24: Comparison of the student's Contraceptive Methods used by the Students had Covid-19 experience (n=367)

Contraceptive methods used during pandemics	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Condoms	95	48,0	82	46,9	0,000*
Oral contraceptives pills	23	12,0	30	17,1	
Intrauterine Device	59	30,7	11	6,3	
Others (Injection, Implants, Diaphram., Withdrawal)	15	7,8	52	29,7	
Total	192	100	175	100	

**p<0,05 (Chi square test)*

When Table 4.24. is examined, 49.5% of the students who had coronavirus used Condoms, 12.0% Oral contraceptives pills, 30.7% Intrauterine Device as a contraceptive method during the pandemic. It was determined that 46.9% of the students who did not have coronavirus used Condoms, 17.1% Oral contraceptives pills, 6.3% Intrauterine Device. The rate of using

Intrauterine Device during the pandemic of the students who had coronavirus was statistically significantly higher than those who did not have the coronavirus ($p<0.05$).

Table 4.25: Comparison of problems students faced with the contraceptive methods used during Covid-19

Problem students faced contraceptive used during Covid-19	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Closures and cuts to sexual and reproductive health service	171	89.1	62	35.4	0.000*
Economic difficulties	14	7.3	46	26.3	
Others	7	3.6	66	37.7	
Total	195	100	174	100	

**p<0,05 (Chi square test)*

In table 4.25. It was determined that 89.1% of the students who had coronavirus had closures and cuts to sexual and reproductive health service problems, 35.4% of the students who did not have coronavirus had closures and cuts to sexual and reproductive health service, and 26.3% had economic difficulties. The rate of experiencing closures and cuts to sexual and reproductive health service problems of students who had coronavirus was found to be statistically significantly higher than students who did not have coronavirus ($p<0.05$).

Table 4.26: Comparison of the methods students used in the Absence of Contraceptive Methods during Covid-19 by the Covid-19 experience (n=367)

The method used	Covid-19 Experience				
	Yes		No		
	n	%	n	%	P
Abstinence from sex	139	72.4	63	36.0	0.000*
Masturbation	41	21.4	28	16.0	
Withdrawal method	6	3.1	57	32.6	
Others	1	0.5	6	3.4	
Unprotected intercourse	5	2.6	21	12.0	
	192	100	175	100	

**p<0,05 (Chi square test)*
** The others represent injection, patch and traditional methods.*

In table 4.26. It was determined that 72.4% of the students who had coronavirus Abstinence from sex, 36.0% of the students who did not have coronavirus Abstinence from sex. The rate of experiencing Abstinence from sex of students who had coronavirus was found to be statistically significantly higher than students who did not have coronavirus ($p<0.05$).

Table 4.27: Comparison of the students having Covid-19 Vaccination by Method used in Abscess to Contraceptive Method (n=367)

Methods used	**Having Covid-19 vaccination**				
	Yes		**No**		
	n	**%**	**n**	**%**	**P**
Abstinence from sex	165	68,5	37	29,4	0,000*
Masturbation	46	19,1	23	18,3	
Withdrawal method	17	7,1	46	36,5	
Others	4	1,7	3	2,4	
Unprotected intercourse	9	3,7	17	13,5	
Other					
Total	241	100	126	100	

**p<0,05 (Chi square test)*
**Answers was given as other was oral sex.*

Table 4.27 shows that, out of the 367 participants, 68,5% of the students who were vaccinated used abstinence from sex, 19.1% used masturbation, 7.1% used withdrawal method, and 3.7% continued with unprotected intercourse. 29.4% who were not vaccinated use abstinence from sex, 18.3% use masturbation, 36.5% use withdrawal method, 13.5% continued unprotected intercourse. Therefore, we concluded that students who were vaccinated use more other methods in the absence of contraceptives than others.

The above results show that, there is a statistically significant difference in students who were vaccinated and, the other methods used in the absence of contraceptives methods. The rate of sexual avoidance of vaccinated students was statistically significantly higher than non-vaccinated students ($p<0.05$).

Table 4.28: Comparison of Students Fear of Having Sexual Relationship and Contraceptive Method Use (n=367)

Contraceptive methods used	**Fear of having sexual relationship**

	Yes		No		
	n	%	n	%	P
Condoms	129	52,7	48	39,3	0,000*
Oral contraceptives pills	36	14,7	17	13,9	
Intrauterine Device	63	25,7	7	5,7	
Others (Injection, Implants, Diaphragm., Withdrawal)	17	6,9	50	41,0	
Total	245	100	122	100	

**p<0,05 (Chi square test)*

Table 4.28 shows that out of 367 participants, 52.7% of the students who had a fear of having a sexual relationship used condoms, 14.7% used oral contraceptive pills, 25.7% used an intrauterine device. During the pandemic, 39.3% of students who did not fear having a sexual relationship used condoms, 13.9% used oral contraceptives pills, 5.7% used an intrauterine device.

The rate of using Other (Injection, Implants, Diaphragm, Withdrawal) methods of students who are afraid of sexual intercourse was found to be statistically significantly higher than students who are not afraid of sexual intercourse (p<0,05).

Table 4.29: Comparison of the students having Covid-19 Vaccination by the Fear of having Relationship

Fear of having sexual relationship	Having Covid-19 vaccination				
	Yes		No		
	n	%	n	%	P
Yes	207	85,9	38	30,2	0,000*
No	34	14,1	88	69,8	
Total	241	100	126	100	

**p<0,05 (Chi square test)*

In Table 4.29., it was determined that 85.9% of the vaccinated students were afraid of having sexual intercourse during the pandemic, and 69.8% of the unvaccinated students were not afraid of having sexual intercourse during the pandemic.

It was determined that there was a statistically significant difference between the fear of having sexual intercourse during the pandemic according to the vaccination status of the

students (p<0.05). The rate of fear of having sexual intercourse during the pandemic of vaccinated students is higher than non-vaccinated students.

Table 4.30: Comparison of students having Covid-19 Vaccination by Departments or Faculties (n=367)

Department and faculty name	Having Covid-19 vaccination				
	Yes		No		
	N	%	N	%	P
Law	103	42.7	55	43.7	
Business Administration	73	30.3	37	29.7	0,980
English Language Art	65	27.0	34	27.0	
Total	241	100	126	100	

(Chi square test)

Table 4.30 shows that, 42.7% of the students who have been vaccinated were in law, 30.3% were in business administration, and 27% were in English language arts department's students. In the study, 43.7% of the students who did not have COVID-19 were from the international law department, 29.4% were from the business administration department, and 27.0% were from the English language arts department. There is no statistically significant difference between the student's departments or faculty and having covid-19 vaccination (p>0,05).

Table 4.31: Comparison of students having Covid-19 Vaccination by Chronic Disease (n=367)

Students having chronic disease	Having Covid-19 vaccination				
	Yes		No		
	N	%	N	%	P
Yes	111	46.1	3	2.4	0,000*
No	130	53.9	123	97.6	

**p<0,05* (chi-square test)

Chi square test)

Table 4.31 shows that, 46.1% of the students who have covid-19 vaccination indicated that they have chronic disease, and while 53.9% of them said no. 3 of the students who did not have vaccine indicated that, they have chronic disease and, 97.6% of them did not. Vaccination rate of patients with chronic disease was found to be statistically significantly higher than those without chronic disease (p<0.05).

CHAPTER V

Discussion

Our studies result shows that majority of the students had Covid -19 vaccination (Table 4.2). Prior to the national vaccination campaign, Barello et al (2020)'s survey on young adults in Italy found that; 86.1% of the sample had a tentative intention to receive the COVID-19 vaccine. When we compare the result of the students of our study with the Barello et al (2020)'s survey, we can say that one in third were not vaccinated and it is an important result for young generation. Several studies conducted in the United States looked at the intents and reluctance of students studying for health professions. According to the survey, only 45% of nursing students and faculty members planned to be vaccinated, Copeland et al. (2020). Another research of medical students discovered that 23% were reluctant to get the COVID-

19 vaccination right away after the Food and Drug Administration (FDA) approved, because many students are afraid of taking the vaccine, Lucia et al, (2020).

In this findings majority of the students said they had a sexual relationship during the pandemic. The rate of students having sexual relationship during and before the pandemic was found more in this study. Moreover, half of the participants in the study (53.8%) reported engaging in sexual activity when the school was under lockdown, compared to 41% of the men. The majority of women (57.7%) who reported being sexually active with their partners said they felt a strong emotional connection with them. (Roy et al., 2021).

In these findings, before the pandemic majority of the students said that they had sex every day (Table 4.4). This study shows that majority of the students who have sex every day using different methods during pandemic and, one-fifth of those who have sex every two days (Table 4.4.). According to the referenced literature, COVID-19 and social distancing recommendations can lead to more teens engaging in romantic or sexual activities online. Sexting is said to be the safest means of sexual intercourse during the pandemic, and previous research has shown that adolescents establish new connections online, and young people often contact their partners by smartphone or text. Online dating, sexting, digital sex, and other forms of virtual contact for romantic or sexual encounters have become increasingly popular among young people throughout the planet. Porn use among adolescents of sexual minority status has also been reported to increase throughout the pandemic, according to available research. Although many young people reported physically withdrawing from their partners during the COVID-19 pandemic, many maintained sexual and romantic connections. The findings imply that emergencies like the current COVID-19 pandemic extend the time young people need access to sexual health education and services (Haddad et al., 2022).

The results of Table 4.5 demonstrated that during the pandemic, majority of the students' sexual desire reduced, minority of the student’s sexual desire increased during the pandemic, majority of the students used toys instead of having sex with other genders, and one-third of the students masturbated during the pandemic. According to these findings, Stavridou et al. (2021) discovered that sexual desire spiked throughout the pandemic, with masturbation being the most popular means of satisfying it. In addition, Hille et al. (2021) discovered that during the epidemic, 46% of unmarried women masturbated. According to Räuchle et al. (2022), a decline in sexual satisfaction was accompanied by increased sexual problems and marital strife. Masturbation and the viewing of pornographic media also rose. It is safe to

engage in masturbation and see pornographic media throughout the epidemic. İbrahim, 45% of individuals reported a decline in the quality of their sexual life, while 42% and 13%, respectively, indicated no change or improvement (as corroborated by zlü et al., 2022). The average number of times people engaged in sexual activity, whether alone or with a partner, fell significantly from the previous year. As a result, common forms of sexual conduct practiced for pleasure and recreation declined on average during this period of widespread restrictions on movement and interaction.

Table 4.6 shows the effect of the COVID-19 pandemic on the students' sexual behavior majority of the students said that the pandemic changed their sexual position, one-fifth of the students avoided kissing and, 5% of the students said they wore face masks during the sex and 4% of the students said they preferred mobile or to watch video sex instead of sexual intercourse. A study shows that, during the first 12 weeks of lockdown over 80% of teens reported to have a new sexual partners each week, in order to deal with the isolation and loneliness they had been feeling since the epidemic started, individuals who admitted to violating societal taboos to engage in sex claimed that at the moment it was something they needed. Many people, nevertheless, also felt guilty of their actions and had to strike a balance between their personal wants and what was best for the group or society. (Williams et al., 2022).

According to Table 4.7, most students in this research are worried about having sexual encounters when the COVID-19 virus is circulating. While a sizable minority of students worry about contracting COVID-19 from having sexual encounters during the pandemic, about a third of students are concerned about contracting an STD from having sexual encounters during the pandemic. Broche-Pérez et al. (2022) agreed with these results and said that fearing COVID-19 could have good and bad effects. Fear of COVID-19 may cause people to be more aware of potential dangers, increase handwashing, and increase social isolation. Concern about contracting COVID-19 has been linked to sexual restraint or abstinence, as Baran & Aykac (2021) noted. When partners forgo sexual activity for fear of spreading disease, it can harm their relationships and lead to sexual dissatisfaction. According to Fuchs et al. (2020), a major increase in stress and anxiety levels and a big drop-in sexual activity were induced by the COVID-19 pandemic, primarily as a result of isolation and poor sexual desire brought on by stress. The epidemic has been related to a decline in both sexes' sexual enjoyment.

Table 4.8 shows changes seen in sexuality of the students before and during the pandemic. As a result, majority of the students said that they had moderate change in their sexuality, one-fifth of the students had completely changed. Although Hensel et al. (2020) found a decrease in vaginal intercourse among American couples, among British participants, 60.1% did not engage in sexual activity, while the remaining 39.9% had sex at least once a week throughout the self-isolation period. Another study by Lehmiller 2020 indicated that during the lockdown, the quality of sexual encounters dropped for 43.5% of individuals from various countries, and the frequency of sexual activity dropped significantly.

Table 4.9 shows the descriptive explore analysis the effect of covid-19 on student's who had no change sexual life during the pandemic of the 367 participants, sexual desire of students during the pandemic has an average mean for the students had no change 1.10±.384, and with a minimum of 1 and a maximum of 3. Orgasm has an average mean for the students had no change 1.56± .234, and minimum of 2, and a maximum of 3. Lubrication has an average mean for the students had no change 2.15±.367, and a minimum of 1, and a maximum of 3. Arousal has an average mean for the students had no change 1.9±.432, and a minimum of 1 and a maximum of 3, Pain has an average mean for the students had no change 2.15±.367, minimum 1, maximum is 3, while Erection has an average mean for the students had no change 1.59±.290 and a minimum of 2 and a maximum of 3 (Table 4.9) .

The result for moderate change also shows that sexual desire has an average mean of 1.95±.251 and a minimum of 1 and maximum of 3, for orgasm 1.61±.613, a minimum 1 and, a maximum of 3. While lubrication has an average mean of 2.11±309 and a minimum of 2 and maximum of 3, Arousal has an average mean of 2.09±.290 and a minimum 2 and maximum 3, Student's satisfaction has an average mean of 2.12. ±.321 and a minimum 2 and maximum of 3, for pain 2.11±.317 and a minimum 2, maximum 3. For erection students mean value was found 2.09±.286 and minimum of 2 and, a maximum of 3. Lastly, The results for complete change also shows that out of the 367 participants, sexual desire has an average mean of 2.32 ± .740 and a minimum of 1, and a maximum of 3, Orgasm has an average mean of 2.23± .606 and, minimum of 1 and maximum of 3, Lubrication has an average mean of 2.65±.480 and a minimum of 2 and a maximum of 3,Arousal has an average mean of 2.53±.503 and a minimum of 2, and maximum of 3, Satisfaction has an average mean of 2.59±.495 and a minimum of 2, and a maximum 3, and Pain 2.39±.492 with a minimum 2, maximum 3. While Erection has an average mean of 2.58±.498 and a minimum

of 2, and a maximum of 3 (Table 4.9). The above results show that, there were statistically significant difference on the student's sexual desire during the pandemic (P<0.0001). The results are highly disparate, according to the literature that is currently accessible on the three primary areas of inquiry (sexual desire, arousal, and orgasm). The majority of participants claimed that, in comparison to a pre-lockdown baseline, the students' sexual desire reduced during the lockdown. For instance, the research by Ballester-Arnal et al. (2020) in Spain found that, 35.9% of subjects claimed to have more sexual desire while confined, whereas 34.9% reported lower sexual desire., The students' Female Sexual Function Index revealed a deterioration. as did scores in the categories of sexual desire, arousal, lubrication, orgasm, and pleasure. Nonetheless, greater rates of sexual dysfunction and lower sexual activity were reported more commonly in women than in males. During the COVID-19 epidemic, several authors claimed that, being in a city was linked to a drop in both sexual desire and the number of sexual encounters. Yet, it was shown that, both males and females who had fulfilling sexual lives were protected from the deterioration of mental health and quality of life, which were the predicted results of the epidemic. According to research by Yüksel and Özgür, the COVID-19 pandemic greatly enhanced Turkish ladies' sexual desire and frequency of sex, which can be attributed to greater time spent at home with a spouse. The quality of sexual life, however, substantially declined. In addition, the pandemic was linked to higher menstruation problems, reduced female contraception, and decreased desire for pregnancy (Izdebski et al., 2022).

This study results show that, majority of the students had sexual intercourse with the use of a contraceptive method (Table 4.10). During the pandemic, the contraceptive method mostly used by the students was condoms with 30%, intrauterine devices with 16%, and oral contraceptive pills with 11%. The results of this study were confirmed by Emer & Koops (2022) who found out that, during the pandemic condoms were the most commonly used contraceptive method, and the findings greatly support the results of our study. Skouby's (2004) study showed that oral contraceptives were the most frequently used type of contraception. Marquez et al. (2020) found that during the pandemics decreased use of modern contraceptive methods and increased unmet need for family planning. Coombe et al. (2021) found that during the pandemic, women did not have access to contraceptives that reduced their use of contraceptives. As a result, using condom is a positive behavior for the student's protection of STD and pregnancy.

Table 4.11. Shows that majority of the student's encountered problems with the use of the contraceptive method. Majority of the students had closures and cuts to their sexual and reproductive health services. As a result, one-fifth of the students had economic difficulties, few of the students had lack of having information and guidance on contraception. Bailey, Bart, and Lang (2022) found out that, during the pandemic people did not have access to contraceptives, so they had unprotected sex, and the findings are consistent with the results of the study. While Purdy, (2020) also indicated that, another serious problem is the lack of and restricted access to contraception services caused by the lockdown. Modern contraceptive supply has been significantly impacted by lockdowns in several low- and middle-income nations, the closure of several pharmaceutical enterprises, a backlog in the transit of contraceptives to other countries, and their manufacturing coming to a half, this study also in line with our study.

Table 4.12 shows the responses of the students to having sexual intercourse without the use of a contraceptive method. As a result, majority of the students had sex without any contraceptive method. Minority of the students had sexual intercourse with the use of contraceptives methods during the pandemic. According to studies, many students are unable to access contraceptives use in public health sectors during pandemic, making it difficult to prevent unintended pregnancies. In the meantime, Adolescents sexual behavior and use of contraceptives must adjust to these novel circumstances. Due of their social exclusion from friends and family throughout the pandemic, they lose support and solace. We are aware of very little data on COVID-19's effects on students seeking reproductive health services, including abortion during pandemic (Tu et al., 2021).

During pandemics, fewer people use modern means of contraception, leading to a greater unmet demand. If short- and long-acting reversible contraceptive strategies were used 10% less frequently due to lack of access, an estimated 59 million more adolescent women would have an unmet need for contraception, and 15 million more women would have an unwanted pregnancy in developing nations that year (Aly et al., 2020).

Table 4.13 shows the responses of the methods students used in the absence of contraceptives methods. As a result, majority of the students were abstinent from sex, one in fifth of the students masturbated, approximately two in ten of the students used the withdrawal method. This study was confirmed by contraception although the rate of unprotected intercourse was found low in our study, Skouby, S. O. (2004) indicated that, 23% of the participants in the European research were not using any kind of contraceptive methods, while 6% of the

participants were using unreliable techniques (such as cap/diaphragm, chemical, natural, and withdrawal methods). Byers,et al,.(2009) also show that, the majority of students said having oral, anal, and vaginal sex was not abstinent, just 1% of student's classified vaginal sex as abstinent, 24% reported having anal sex as abstinent, and 37% reported having oral sex as abstinent. On the other hand, despite the fact that the majority of students identified masturbation, sexual ideas, kissing, swimming together, physical stimulation of another person to orgasm, and telephone sex as abstinence. As a result, the results of our study shows' that, majority of students had abstinence which is the safe method for them.

Table 4.14 shows the types of contraceptive method used by the students easily get access to during the pandemic. Minority of the students shows that they abstinence from sex, one-third of the students used withdrawal method, also one-third used condom. Tiziana et al., (2022), who stated that, oral contraceptives and condoms, both used by 40% of emerging adults, are the most often used forms of contraception, with injections and withdrawal coming in at 7% and 19%, respectively and 6 % prolonged abstinence as a natural method.

Table 4. 15 shows the experience of student's unwanted pregnancy during the pandemic among university students. Majority of students indicated that yes, they have experienced of unwanted pregnancy during the pandemic. This was confirmed by Gebremariam et all, (2018)'s study shows that data suggests that 80 million women worldwide have unwanted pregnancies each year. WHO stated that unwanted pregnancies are more common among young individuals, with university students reporting the greatest prevalence of the condition, unwanted pregnancies account for one in three live births and over 40% of young women become mothers before turning 20. The social, political, and economic structures are vulnerable, which amplifies the pandemic's consequences. Particularly during lockdowns, there are stark differences in sexual desire amongst couples, with some using sex as a coping tool to maintain connection and reduce tension while others entirely lose interest in sex. To fulfill their fundamental requirements and deal with inadequate and limited income, people may turn to transactional sex, which increases the chance of unintended births. Their inability to manage their reproductive health is becoming acknowledged as a key mechanism driving a high risk of unintended pregnancies, which was further heightened during the COVID-19 epidemic. Due to rapidly depleting contraceptive supplies, first reports on COVID-19 show an increase in unintended and undesired births (Haddad et al., 2022). Around one-third of women's current pregnancies were unwanted, it was determined during the COVID-19 epidemic. The research discovered that unwanted pregnancy was substantially correlated with

respondents' age, autonomy to use contraceptive methods, and anxiety of going to a medical institution, (Molla et al., 2022). During the COVID-19 pandemic, there was a considerable rise in the number of adolescents who became pregnant and utilized the services of organizations that provide abortion treatment. This finding was corroborated by the study in Kenya, which found that 59% of teenage pregnancies were unplanned, and 45% of pregnancies ended with serious abortion difficulties during the COVID-19 epidemic. This study was conducted in Kenya (Kassie et al., 2021).

Table 4. 16 shows how the students end unwanted pregnancy during the pandemic. Majority of students said that, they give birth to babies. While the other minority sets of students said they do abortion and they represent 30.2%. This result was confirmed by Wang CL et al., (2021) who show that, in a screening of 836 children delivered to COVID-19 women, 35 (4.2%) tested positive for the virus using polymerase chain reaction (PCR). Gibelin, K et al., (2021) indicated that, out of the 124 practitioners, 28.2% conducted both medical and surgical abortions, while 71.8% solely performed medical abortions. Out of the 124 practitioners, 25.8% conducted medical abortions solely at hospitals and 62.1% only in clients' homes. The rate of ending unwanted pregnancy in our study was found high when we compare with other studies. Couples used to spend more free time together at home, which resulted in more closeness, whereas the majority of the globe is settling into a new pattern of social distance. Some couples who had intended to create a family before to the COVID-19 outbreak are still trying, while others have already begun to show this desire while confined. Some people use sex as a coping method to maintain connection and reduce anxiety. To fulfill their fundamental requirements and deal with inadequate and limited income, some people turn to transactional sex, which increases the chance of unintended births (Haddad et al., 2022). Table 4.17 students to having sexual intercourse without the use of a contraceptive method. Shows the problem students encountered during pregnancy termination. Majority of students said the problem they faced during pandemic, one in fifth encounter social condemnation, while 55 encounter interrupting education with a 15%. This study was confirmed by Sorhaindo et al., (2014) who indicated that, stigma surrounding abortion is viewed, felt, and handled differently depending on the social group. In a recent United States research, for instance, Hispanics were more likely than other racial and ethnic groups to feel shame from friends and family and to keep their abortion a secret. In fact, one in third of participants in this research said they would not continue to be friends with a woman who had an abortion. The majority of respondents (61%) in a survey with a nationally representative sample of Mexican Catholics had stigmatizing beliefs on abortion despite thinking that it should be permitted in some situations. In our study, the number of students was found very low who indicated family culture as a reason of

termination pregnancy. Table 4. 18 shows effect of sexual life of students who said no change has an average mean of 1.04± .205, and minimum of 1 and a maximum of 2. The result shows no change for sexual compatibility with an average mean of 1.27±.520 and minimum of 1 and a maximum of 3. The study shows for affection of covid-19 on sexual life for moderate change, with and average mean of 1.94±0.582 and the results show for sexual compatibility with an average mean of 2.16±0.465. The results shows' affection of sexual life for completely change with an average mean of 2.26±0.642 and the results shows for sexual compatibility, with average mean of 2.47±0.505.

The study shows that there was a statistically significant change on the sexual life and sexual compatibility scores by the effect of covid-19 on sexual desire ($p<0.05$). The students who have completely changed the impact of covid-19 on sexual desire scored higher. Fuchs et al. (2020) found similar outcomes after surveying the effect of the COVID-19 pandemic on the quality of women's sexual behavior and the frequency of their sexual contact in Poland. The majority of studies have found that the COVID-19 pandemic has different effects on men's and women's sexual functioning; for example, the results of the United Kingdom study by Wignall et al. (2021) show that men reported stronger sexual desire compared with women both before and during the lockdown. The results also suggest that sexual desire among women was much lower when the facility was under lockdown. Higher rates of sexual dysfunction and reduced sexual activity were shown to be connected with the restrictions associated with COVID-19. This onset may negatively impact both sexes (Masoudi et al., 2022).

CHAPTER VI

Conclusion and recommendations

6.1 Conclusion

It was revealed from the study that, majority of the students had covid-19 vaccination and majority of the students had sexual relationship during the pandemics. Most of the students had sex on a regular basis, and only a few had sexed every month. It was revealed that, the COVID-19 affected the sexual habits of the students. The sexual desire of most students decreased, while only one in forth of the students had their sexual desire increased. In our

study most of the students' abstinence from sex while other masturbated. As a result, 6% of the students used toy sex machines as a means of satisfying their sexual desires.

It was concluded that the pandemic affected the sexual behaviors of the students. Majority of the student's changed their sexual positions, avoided kissing each other during sex making, wore facemasks during sex making, and watched sex videos as a means of their sexual gratification instead of having sex. The study discovered that during the pandemic, the students were afraid to have sex. This is because they were afraid of getting STDs. When they get pregnant or impregnate someone, it will have an effect on their education and they will not be able to get their university degree. They were afraid to get COVID-19 and were not ready for any pregnancy. The study discovered that during COVID-19 brought moderate and complete changes in their sexual desires, sexual satisfaction, orgasm, lubrication, arousal, pain, and erection.

At the end of our study during the pandemic, the students had sexual relationship without using contraceptive methods and, students' used contraception as a means of preventing any unwanted pregnancies and contracting COVID. The majority of students used contraceptive methods were condoms, oral contraceptive pills and intrauterine devices. The study revealed that majority (61.0%) of the student's encountered problems with the use of contraceptive methods. The problems encountered are closures and cuts to sexual and reproductive health services; economic difficulties; and a lack of information and guidance on the method used. As a result, health professionals and especially nurses carry out education and counseling services on COVID-19 for young generation during the pandemics.

6. Recommendation

*In our study, majority of the students had sex without using the contraceptive methods. And, during the pandemic's student faced problem with reaching the methods. It is suggested that, long term contraceptive methods as IUDs and barrier methods should be available for the students during the pandemic and tele services should be given to the students.

* Students had some problems for reaching the contraceptive methods. Contraceptive methods can be reached by the students and, by the tele health services consultations and education services should be given to the students.

*A few students used sex toys and masturbated. But, during the pandemics the safest way is thought masturbation and sex toys. Students should be informed about using private sex toys and masturbation. If a sex toy was used more than one-person, hygienic precautions should be taken.

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Appendices

Appendix A

The effect of COVID-19 pandemic on students' sexual life and contraceptive method use

Dear students,

This questionnaire is for Memunat Olayinka Oduwaye (20204387) master thesis. I kindly request from you to fill the questionnaire sincerely. Answering the questionnaire will take only 10 minutes. This questionnaire is basically on the effects of **Covid-19 on student's sexual life and contraceptive method use during pandemic**. This questionnaire can be answered by only **sexually active female and male students (you should think only for your sexuality from the starting of pandemic till now (last two years). Please do not answer the questionnaire IF YOU ARE NOT SEXUALLY ACTIVE BEFORE AND DURING PANDEMIC.** Participating in the research is confidential. All the information obtained from the questionnaire will be used only for the thesis and your privacy will be protected. Thank you.

1. What is your gender?

a) Male
b) Female

2. Please specify your age?

-

3. What is your department or faculty name?

…….

4. Please indicate your academic year.

a) 1st
b) 2nd
c) 3rd
d) 4th

5. Please mark the choice you are living with?

a) Alone
b) Friends
c) Family
d) Spouse
e) Fiance
f) Others (Please explain)

6. Do you have any chronic disease?

a) Yes b) No

IF YES PLEASE SPECIFY ……..

7. Have you had Covid-19?

a) Yes b) No

8. Have you had Covid-19 vaccination?

a) Yes b) No

9. Do you have **sexual relationship before the pandemic**?

a) Yes

b) No

10. Do you have **sexual relationship during the pandemic**?

a) Yes

b) No

11. What is your marital status?

a) Single with regular partner
b) Single with irregular partners
c) Married

12. What is your sexual activity frequency **before the pandemic**?

a) Every day
b) Ones in two days
c) Ones in three days
d) Ones in four days
e) Ones in five days
f) Ones in six days
g) Ones in seven days
h) Ones in fifteen days
ı) Monthly

13. What is your sexual activity frequency **during the pandemic**?

a) Every day
b) Ones in two days
c) Ones in three days
d) Ones in four days
e) Ones in five days
f) Ones in six days
g) Ones in seven days
h) Ones in fifteen days
ı) Monthly

14. How did Covid-19 pandemic has affected your sexual habit?

a) My sexual desire decreased

b) My sexual desire increased

c) I used sex toys instead of having sex with other gender

d) I used masturbation

e) Not effected

15. How did Covid-19 pandemic has affected your sexual behavior?

a) I changed my sexual position

b) I avoided kissing

c) I wear face masks during the sex

d) I watched sex videos instead of having sex

e) I preferred mobile or video sex instead of sexual intercourse

16. During pandemic did you have fear of having sexual relationship?

-Yes -No (**If NO Skip question numbered 17**)

17. Please mark **the right choice/choices** related to your reason of fear on sexual intercourse during Covid-19 pandemic? (You can mark **more than one choice**)

a) Being infected with STD's

b) Unwanted pregnancy

c) Being infected with Covid-19

d) Can't attend my university education

e) Other (Please explain)

18. Please mark your sexual desire change during the pandemic on the line which is given below **Zero mean no change, 5 mean moderate, 10 mean completely changed**). (This question should be answered by both female and male)

0- 1--2--3--4--5--6--7--8--9—10

Question 19 to 24 will be answered by both Men and women.

19. Please score your difficulty to achieve orgasm according to your pre-pandemic experiences (***Zero mean no change, 5 mean moderate, 10 mean completely changed***).

0- 1--2--3--4--5--6--7--8--9—10

20. Please score your lubrication level according to your pre-pandemic experiences **(Zero mean no change, 5 mean moderate, 10 mean completely changed**)

0- 1--2--3--4--5--6--7--8--9—10

21. Please score your Arousal level according to your pre-pandemic experiences **(Zero mean no change, 5 mean moderate, 10 mean completely changed**)

0- 1--2--3--4--5--6--7--8--9—10

22. Please score your satisfaction level according to your pre-pandemic experiences **(Zero mean no change, 5 mean moderate, 10 mean completely changed**)

0- 1--2--3--4--5--6--7--8--9—10

23. Please score your pain level according to your pre-pandemic experiences **(Zero mean no change, 5 mean moderate, 10 mean completely changed**)

0- 1--2--3--4--5--6--7--8--9—10

24. Please score your Erection (For men only) level according to your pre-pandemic experiences **(Zero mean no change, 5 mean moderate, 10 mean completely changed**)

0- 1--2--3--4--5--6--7--8--9—10

25. Did you use any contraceptive method during pandemics?

a) Yes
b) No (**IF NO Skip question numbered 26, 27, 28, 29 and 30**)

26. If YES which of the contraceptive method/methods have you used? Please mark (**You can mark more than one choice**).

a) Condoms
b) Oral contraceptives pills
c) Intrauterine Device
d) Injections
e) Implants
f) Diaphragm
g) Withdrawal method
h) Other (**Please explain**)

27. During pandemic, did you have any problem with the contraceptive method use?

a) Yes
b) No (**If NO Skip question numbered** 29)

28. If YES what kind of problems did you face?

a) Lack of having information and guidance

b) Closures and cuts to sexual and reproductive health service

c) Economic difficulties

d) Others (**Please explain**)

29. During the pandemics do you have sexual Intercourse **without using any form of contraceptive method?**

a) Yes

b) No (If NO skip question number 31)

30. During pandemics in the absence of access to any contraceptive method what other method did you use?

a) Abstinence from sex

b) Masturbation

c) I/my partner used withdrawal method

d) Sex toys

e) I continued unprotected intercourse

f) Others (**Please explain**)

31. What type of contraceptive method/methods did you get easily during covid-19 pandemic? (You can **mark more than one choice**)

a) Abstinence

b) Withdrawal

c) Condoms

d) Pills

e) Intra uterine device

f) Diagram

g) Emergency contraceptive pills

h) Implant

ı) Other **(Please explain)**

32. Have you or your partner had an experience of unwanted pregnancy

during the pandemic?

a) Yes

b) No (If NO **Skip question numbered 33, 34 and 35**)

33. How did you/partner end unwanted pregnancy?

a) Giving birth a baby

b) Abortion

c) Other (Please explain)

34. Have you had a problem for termination of the pregnancy?

a) Yes b) No (**If NO skip question number 36**)

35. What was the **problem for termination of pregnancy**?

a) Economic factors

b) Social condemnation

c) Interrupting education

d) Other (Please explain)

36. With regards to show how pandemics has affected your sexual life quality. Please mark on the line is given below. **Zero mean no change, 5 mean moderate change and 10 mean completely change.**

0--1—2—3—4—5—6—7—8—9----10

37. Please mark the sexual compatibility with your partner during Covid-19 pandemics on the diagram is given below. **(Zero mean no change, 5 mean moderate change and 10 mean completely change).**

0—1--2—3—4—5—6—7—8—9----10

APPENDIX B

YAKIN DOĞU ÜNİVERSİTESİ
BİLİMSEL ARAŞTIRMALAR ETİK KURULU

ARAŞTIRMA PROJESİ DEĞERLENDİRME RAPORU

Toplantı Tarihi :28.04.2022

Toplantı No :2022/102

Proje No :1552

Yakın Doğu Üniversitesi Hemşirelik Fakültesi öğretim üyelerinden Prof. Dr. Gülşen Vural'ın sorumlu araştırmacısı olduğu, YDU/2022/102-1552 proje numaralı ve **"The effect of COVID-19 pandemic on students' sexual life and contraceptive method use"** başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uygun bulunmuştur.

Prof. Dr. Şanda Çalı

Yakın Doğu Üniversitesi

Bilimsel Araştırmalar Etik Kurulu Başkanı

Kurul Üyesi	**Toplantıya Katılım**	**Karar**
	Katıldı(✓)/ Katılmadı(X)	*Onay(✓)/ Ret(X)*
Prof. Dr. Tamer Yılmaz	✓	✓
Prof. Dr. Şahan Saygı	✓	✓
Prof. Dr. Nurhan Bayraktar	✓	✓
Prof. Dr. Mehmet Özmenoğlu	✓	✓
Prof. Dr. İlker Etikan	✓	✓
Doç. Dr. Mehtap Tınazlı	✓	✓
Doç. Dr. Nilüfer Galip Çelik	✓	✓
Doç. Dr. Emil Mammadov	✓	✓
Doç. Dr. Ali Cenk Özay	*X*	*X*

YAKIN DOĞU ÜNİVERSİTESİ
İKTİSADİ VE İDARİ BİLİMLERİ FAKÜLTESİ

NEAR EAST UNIVERSITY
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

11.05.22

Hemşirelik Fakültesi Dekanlığına,

Doğum Kadın Sağlığı ve Hastalıkları Hemşireliği Yüksek Lisans öğrencisi MEMUNAT OLAINKA ODUWAYE isimli öğrencinin İktisadi ve İdari Bilimler Fakültesi Bankacılık ve Finans bölümü lisans öğrencilere "The effects of Covid-19 pandemic on students' sexual life and contraceptive method use" isimli anketi uygulanması uygun bulunuştur.

YAKIN DOĞU ÜNİVERSİTESİ İKTİSADİ ve İDARİ BİLİMLER FAKÜLTESİ DEKANLIĞI 1988

Prof. Dr. Şerife Eyüpoğlu

Dekan

İktisadi ve İdari Bilimler Fakültesi