

Knowledge And Awareness Of Sexually Transmitted Diseases Among Men And Women Of Pakistan

¹Ayesha Habib Khan , ²Komal Niazi , ³Aamir Abbas , ⁴Syeda Noorulain Gillani

¹(Lecturer Anthropology, University of Azad Jammu & Kashmir) (PhD Scholar, University Sains Malaya, Malaysia) Email: ayesha.habib@ajku.edu.pk

²(Post Doctorate Fellow, Institute of Anthropology, East China Normal University, China) (Supervisor, Pakistan Study Research Centre, North Minzu University, China) Email: niazi.komal_leo@yahoo.com

³(MS Social Science Graduate, Sindh Madressatul Islam University, Karachi) Email: aamirrana798@gmail.com

⁴(Lecturer Sociology, University of Azad Jammu & Kashmir) Email: noor.ulain@ajk.edu.pk

*Corresponding Author: ayesha.habib@ajku.edu.pk

Abstract:

Sexually transmitted diseases (STDs) are a major public health concern of the 21st century, affecting more than one million populations globally (Unemo et al., 2017). These STDs differ in their course and prognosis, as most STIs remain asymptomatic and do not progress while few of these infections result in life-long complications ranging from pelvic inflammatory disease (PID), infertility and carcinomas of the reproductive tract to oral cancers (NIPS, 2018).

The present research study aimed to explore knowledge and misconceptions, cultural barriers regarding STDs knowledge, lack of sexual health care services availability for STDs and also lack of knowledge update in men impacting women sexual health.

A systematic review was conducted on electronic data bases that include PubMed, Google Scholar, EMBASE, CINAHL and Med Line. The researcher has included qualitative and quantitative research studies of male and female participants of reproductive age focusing on STDs knowledge and awareness in Pakistan. Therefore, a narrative synthesis approach was used with thematic analysis method. Research studies between 2006 -2022 was included based on inclusion and exclusion criteria. Three main themes of the study are identified that includes poor knowledge and misconception, cultural barriers regarding STDs knowledge and awareness and lack of sexual healthcare services availability among male and female of Pakistan.

Findings of the research study revealed that the majority of participants had inadequate knowledge of STDs, with significant misconceptions regarding their transmission, symptoms, and treatment. Cultural barriers, such as conservative attitudes towards sex and limited access to sexual health education, were identified as significant obstacles to STDs awareness. Furthermore, lack of sexual healthcare services availability, particularly in rural areas, further compounded the problem.

The study highlights the urgent need for targeted interventions aimed at promoting STDs awareness, improving access to sexual health education and services, and addressing cultural barriers and

misconceptions. Effective and culturally sensitive interventions, including community engagement and education campaigns, could reduce the burden of STDs and improve sexual health outcomes in Pakistan.

Keywords: sexually transmitted diseases, knowledge, awareness, Pakistan, cultural barriers, sexual healthcare services, reproductive health.

I. Introduction:

More than a million people worldwide are infected with a sexually transmitted disease (STD) every year, making this a serious public health issue in the 21st century. In spite of the fact that sexually transmitted infections (STIs) are very common and increase the likelihood of HIV transmission, comparatively little focus has been placed on STI management in an effort to curb the spread of the virus. Most STIs have no noticeable symptoms and do not advance, but others might cause serious health issues later on, such as infertility, cancer of the reproductive organs, or even mouth cancer (Adrian, 2018).

In terms of offspring, STDs are associated with a higher probability of developing cancer, infertility, dementia-adjusted life years (DALYs), and premature mortality. Furthermore, chronic diseases may cause monetary and mental strain on economies and societies of the world (Raheel et al. 2007). About 12 million individuals throughout the world get sexually transmitted diseases every year. Three hundred and fifty seven million new cases of curable STDs were reported worldwide in 2012. Many more people are infected with sexually transmitted diseases. The incidence of sexually transmitted diseases among men in Pakistan was reported to be 4.4% in a recent research. Among eunuchs, the prevalence of SAIs reached as high as 60%, while among commercial sex workers, it reached as high as 36% (Afsar, 2016).

Males in urban regions had a prevalence of STIs that ranged from 2.5% in Rawalpindi and 2% in Peshawar to 8.5% in Karachi and 5.3% in Lahore.

Unfortunately, the general public's understanding of STIs and their prevalence has not improved to a great extent over time. Globally, the SDGs emphasise the need of widespread accessibility to sexual and reproductive health care, which is essential for the implementation of programmes aimed at reducing the prevalence of sexually transmitted diseases (STDs) and preventing their spread (Adrian, 2018).

Without deviating from the path, the prevention of STDs may influence and improve an other SDGs, such as lowering child and neonatal mortality (SDG 3.2), ending the AIDS and certain other pandemic epidemics (SDG 3.3), enhancing women's health (SDG 3.7), and achieving universal health coverage (SDG 3.8). The amount of knowledge among young people regarding sexually transmitted diseases has been studied across the world, but in Pakistan, there has been very little investigation into the topic (Afsar, 2016).

Few data on the prevalence of sexually transmitted diseases in Pakistan are available, with the PDHS 2012–13 only looking at self-reported symptoms of common STDs. This is in contrast to the most recent WHO document on worldwide STI monitoring. The problem is exacerbated because young Pakistanis are discouraged by society and religious norms from accessing independently-verified information on sexual and reproductive health. Because of the lack of investment in the psychological, emotional, academic, and occupational well-being of Pakistan's young, sexually hazardous behaviours are frequent among this demographic. There is a lack of education on sexual and reproductive health, which contributes to these

unsafe practises. Comprehensive sexual education is still debated today, and in many countries, discussing women's health with teenagers and young people is seen as taboo (Adrian, 2018).

Because of the ongoing debate surrounding sexual education in this region, Most young people lack enough understanding about unprotected sex (STDs) and how to avoid catching them as a result of the lack of sexuality education in the national curriculum. The purpose of this research was to examine how well men informed and women now are about sexually transmitted diseases and how to protect them from contracting it, as well as the risks associated with sexual activity that might lead to transmission (Aijaz & Mehraj, 2020).

Affects the immune system (HIV) infection rates in Pakistan are now very low, with a prevalence rate of less than 0.1%. Nonetheless, there are other reasons why this nation is at high risk for an HIV outbreak. HIV and other classic STIs including chlamydia, syphilis, and gonorrhoea may spread quickly in urban areas due to high numbers of people engaging in risky behaviours.

A few examples of this category are those who use injection drugs (IDUs), members of highly mobile forms of employment (like truckers), and male and female sex workers (MSWs and FSWs). Pakistan is facing a concentrated epidemic among these high-risk populations, with the incidence of HIV among some categories having already crossed five per cent. Those who come into contact with both high-risk groups and the general community may disseminate the virus to the broader public. Epidemiologists use the term "bridging group" to describe the people who act as "bridges" between high-risk subgroups and the broader heterosexual population (Aggarwal, 2009).

It's common for them to be married or single males who utilise the services of a sex worker, identify as bisexual, or exchange needles with IV drug users. Even though there is a lack of data on sexual behaviour in Pakistan, the information that does exist implies that both gay and heterosexual premarital and premarital sexual interactions may be prevalent enough to develop and maintain a broad HIV pandemic. The possibility of a widespread HIV pandemic in Pakistan can only be estimated with a certain degree of accuracy due to a lack of knowledge regarding female sexual practices (Saleem, Adrien & Razaque, 2008).

If available, sexually transmitted infection (STI) prevalence statistics, including HIV, or the detection of risk behaviours may be used to identify the bridging population. Due to a lack of studies and conclusive evidence (There is a lack of definitive data (e.g., prevalence rates, behavioural risk factors, etc.) on Pakistan's bridging population (e.g., men who buy sex or truck drivers). Studies of high-risk groups or secluded urban areas are the primary sources for Pakistan's HIV/STI prevalence statistics. neither of which are particularly representative of the country as a whole (Raheel et al.,2007). Research has been conducted, for instance, in Pakistan on migrant male blood donors, injectable drug users, long-distance truck drivers, prisoners, college students, hijras or eunuchs, and female sex workers.

1.1 Statement of the Problem:

Sexually transmitted diseases (STDs) are a major public health concern in Pakistan. The country has one of the highest rates of STDs in the region, with an estimated 4.2 million cases annually. Despite the high prevalence of STDs, there is limited knowledge and awareness regarding STDs among men and women in Pakistan. This lack of awareness and knowledge regarding

STDs can lead to misconceptions and stigmatization, hindering prevention and treatment efforts.

I.2 Aim of the Study:

This research study aimed to explore knowledge and awareness of STDs among men and women of Pakistan.

I.3 Research Objective:

Research objectives of the present research study are as follows:

- To explore knowledge and misconception about STDs among men and women in Pakistan.
- To identify cultural barriers regarding STDs knowledge and awareness among men and women of Pakistan.
- To explore the sexual health care services availability for men and women about STDs in Pakistan.

I.4 Research Questions:

The present research study has focused on following research questions.

- Does lack of knowledge and misconceptions affects sexually transmitted diseases in the men and women of Pakistan?
- What are the sexual health care services available for men and women in Pakistan regarding STDs?
- Does cultural barriers affects regarding STDs knowledge and awareness among men and women in Pakistan?

I.5 Hypotheses:

Hypotheses of the present research study are as follows.

H1: There is a significant relationship between knowledge and misconceptions and STDs among men and women in Pakistan.

H2: There is a significant relationship between cultural barriers and STDs related knowledge and awareness among men and women in Pakistan.

H3: There is a significant relationship between lack of sexual health care services availability and STDs related knowledge and awareness among men and women in Pakistan.

I.6 Research Gap:

Although, there are some studies on the knowledge and awareness of STDs among men and women in Pakistan, there is a significant research gap in this area. The majority of studies focus on specific populations, such as university students or women in urban areas, and there is a lack of comprehensive studies that cover a wide range of populations and geographic regions in Pakistan. Additionally, there is limited research on the cultural barriers that hinder knowledge and awareness regarding STDs in Pakistan, and the availability of sexual health care services for men and women. Therefore, there is a need for comprehensive studies that explore the knowledge and awareness of STDs, cultural barriers, and sexual health care services availability for both men and women across different regions of Pakistan.

I.7 Significance of the study:

This study is much important as it explains the level of awareness for STDs in men and women of Pakistan. The Government and the HIV / Aids (unaided Program) are very worried about the potential threats posed by bridging populations

because of the spread of HIV and other STDs. It is necessary to identify the bridging populace and bridging behaviours in men and women and to determine their levels of knowledge and awareness in relation to STDs and HIV in order to stem the potentially rapid spread of the virus in Pakistan.

2. Literature Review

Sexually transmissible diseases (STDs) are illnesses transferred from just an infected people to an individual's body via sexual contact. STDs may be produced by microorganisms, viruses, or parasites. The sexually transmitted diseases gonorrhoea, genital herpes, varicella infection, acquired immune deficiency syndrome, chlamydia, syphilis, and syphilis are all examples. STDs are a major global health issue because of their catastrophic effect on mothers and newborns and their sub with HIV/AIDS. HIV and STDs are linked because they have similar biological properties and impact the same populations. The development and spread of HIV infection may be influenced by co-infection with other sexually transmitted illnesses (STDs). Finally, STDs may pose serious long-term health risks, particularly to pregnant women and their infants. Sexually transmitted infections may cause a wide range of medical issues, including leakage, tubal or ectopic birth, lymphoma, and prenatal or congenital sickness in newborns of infected mothers (Afsar et al., 2016).

Research supported by the National Institute of Allergy and Infectious Diseases (NIAID) aims to improve methods of preventing and treating STIs. In order to create effective treatments for sexually transmitted diseases (STDs), researchers must first have a thorough understanding of the underlying biology of the bacteria, viruses, parasites, protozoa, and fungi responsible for these conditions (Mazhar, Agha & Shaikh, 2006). The study of the effects of sexually transmitted diseases (STDs) on different populations is also crucial to fundamental research (Aggarwal,

2009). The NIAID's efforts in genome sequencing have a multiplier effect on the pace at which scientists learn about the molecular mechanisms of STDs. The National Institute of Allergy and Infectious Diseases (NIAID) has compiled genetic data on STD bacteria and made it available to qualified researchers via internet databases. Genomes of pathogens responsible for genital warts, syphilis, gonorrhoea, and trichomoniasis have recently been sequenced (chancroid). Researchers are able to read and interpret genetic data thanks to genome sequencing, which might lead to the creation of new diagnostics, topical treatments, and vaccinations (Mazhar, Agha & Shaikh, 2006)..

The likelihood of limiting the impact of sexually transmitted diseases (STDs) is increased by early and speedy diagnosis. Complications from sexually transmitted diseases (STDs) such gonorrhoea, syphilis, chlamydia, prostatitis, and genital warts (HPV) may be serious and long-lasting if not treated. Blindness, bone abnormalities, brain damage, cancer, heart illness, infertility, birth malformations, mental retardation, and now even death are all possible outcomes of these conditions (Aggarwal, Sharma & Chhabra, 2009).

STDs may be diagnosed using a combination of a patient's medical history, a physical examination, and laboratory testing. Workshop attendees discussed the use of self-obtained vaginal swabs for the diagnosis of sexually transmitted diseases (STDs). However, many individuals who are infected with an STD show no symptoms at all. To investigate why so many patients with STDs show no symptoms, researchers at the National Institute of Allergy and Infectious Diseases (NIAID) are studying the immune system (Aijaz & Mehraj 2020). These investigations may potentially provide light on the mechanisms behind STD medication resistance, as well as those related with subsequent infections and coinfections (such syphilis and HIV/AIDS) (Agha, 2014).

Just as the symptoms of STDs may vary widely, so too can the treatments available for them. Antibiotics and antifungal drugs are among the many potential therapies for the bacteria and fungi that cause sexually transmitted diseases, and the National Institute of Allergy and Infectious Diseases (NIAID) is committed to seeing their development and licencing. Infectious syphilis is never a good thing. Neglecting to treat even a treatable condition might have devastating results. Among the many STDs, HIV is the most concerning since there is solid scientific evidence showing that the risk of contracting and spreading HIV is greatly raised in the presence of STDs (Agha, 2014).

The National Institute of Allergy and Infectious Diseases (NIAID) is now conducting animal studies and human clinical trials on potential novel vaccinations and treatments for sexually transmitted diseases (STDs) including herpes and gonorrhoea, respectively. The outcomes of this study have the potential to pave the way for more expedited, less risky, and more efficient medical interventions (Ahmed, 2013). Some of the possible health issues for infected mothers and their newborns include pelvic inflammatory disease, infertility, tubal or aberrant birth, squamous cell carcinoma, and postpartum or neurological infections. result from sexually transmitted diseases (Saleem, Adrien, & Razaque, (2008).

The virus that causes AIDS is called human immunodeficiency virus (HIV). HIV attacks and kills CD4+ T cells, which play a crucial role in the immune system. People with HIV who have these cells killed are at a higher risk for developing other infections, diseases, and difficulties. Important scientific discoveries into the virus's biology, the immune response to HIV infection, and potential targets for preventative and therapeutic medicines have been uncovered via an HIV basic research programme sponsored by the National Institute of Allergy and

Communicable Diseases (NIAID) (Saleem, Adrien, & Razaque, (2008).

Infection with the bacteria *Chlamydia trachomatis* results in the sexually transmitted illness chlamydia. Cervicitis in females, urethritis and underlying condition in both sexes: these are all possible outcomes. Chlamydial infections in females may have devastating effects, including as prostatitis (PID), tubal variable infertility, ectopic pregnancy, and persistent pelvic discomfort. Chlamydia vaccine development and therapy research are ongoing initiatives financed by the National Institute of Allergy and Infectious Diseases (NIAID).

A transmittable illness (STD), genital herpes is caused by either herpes simplex virus type 1 (HSV-1) or HSV-2 (HSV-2). Genital herpes and genital herpes are subjects of NIAID-funded study (HSV). Better therapies for genital herpes, which affects millions of individuals worldwide, are now the subject of ongoing research. Some researchers are examining the chemistry of HSV while others are conducting clinical trials to determine the most effective ways to utilise current treatments. Researchers at the NIAID have pinpointed which genes and activities (proteins) are essential for the virus to proliferate. They think that medications that interfere with these viral receptors might eventually lead to the development of more potent therapies.

Gonorrhoea is a bacterial STD spread through sexual contact. It is caused by the bacterium *Neisseria gonorrhoeae*. *Neisseria gonorrhoeae* may infect the brain, uterus, and body of the uterus of females, as well as the urethra of both sexes. *N. gonorrhoeae* can infect the genital mucosa, as well as the pharynx, nasopharynx, conjunctiva, and rectal mucosa. The NIAID is responsible for funding a comprehensive investigation of Dermatophytes (gonococci). Researchers have been analysing this phenomena in an effort to figure out how gonococci penetrate cells while evading the human immune system.

The Human Papillomavirus (Among sexually transmitted diseases, HPV is by far the most common (STI). Despite its similarities to HIV and HSV, HPV is really its own virus (herpes). Most persons who engage in sexual activity, both sexes, will get HPV at some point in their lives. There are a wide variety of HPV strains that may cause cancer in humans. It's possible to get genital warts and cancer if you have a specific kind. However, vaccinations have the potential to ward against certain illnesses. Human papillomavirus (HPV) research is funded and conducted by the Institute of Allergy and Communicable Diseases (NIAID). Topics of study include HPV's role in human development, the impact of behaviour and age on HPV transmission, and potential treatments.

An infection or inflammation of the female genitalia is referred to as pelvic inflammatory disease (PID). There is a risk of damage to reproductive organs such the ovaries, fallopian tubes, and uterus. Scarring on these organs may cause infertility, tubal (ectopic) pregnancies, persistent pelvic discomfort, pus (sores containing pus), and other major issues. In the United States, PID is the most avoidable cause of infertility. Antibiotics, hormones, and immune system stimulants are all being studied by scientists thanks to funding from the National Institute of Allergy and Infectious Diseases (NIAID). The results of these research may provide light on how to lessen the likelihood of infertility and other PID-related problems. (Alam, 2014)

Sores or ulcers in the vaginal area are the first sign of syphilis, a sexually transmitted bacterial illness. Syphilis may cause more severe symptoms if left untreated. Scientists with funding from the National Institute of Allergy and Infectious Diseases are working on new tests that might also improve the ability to identify syphilis and determine the severity of an infection. The development of a diagnostic test

that might be performed without drawing blood is a major area of focus. (Afsar, 2016)

Disturbances to the vaginal tract due to factors including infection, swelling, or changes in the vaginal microbiome are together known as vaginitis. Bacterial vaginosis (in 40-45 percent of cases), vulvovaginal candidiasis (20-25 percent), and trichomoniasis (5 percent or less) are the three most prevalent infections detected among women with all of these symptoms (15-20 percent). More than one illness might be present in a given patient. It's also typical to get recurrent vaginitis. Researchers are looking at vaginitis in an effort to better understand its connection to endometriosis and other difficulties of pregnancy. Knowledge of vaginal microflora, yeast reproduction, and the *T. vaginalis* genetic code have all improved thanks to NIAID-funded studies. The genome of *T. vaginalis* has been sequenced by other researchers supported by NIAID (Adrian, 2018).

Researchers in rural Pakistan found that Thai teenagers had above-average understanding about HIV. Students between the ages of 15 and 21 made up the sample, and 99.5% of them had heard about HIV. The majority (almost 90%) knew that there were three primary entry points for the disease. Some students in the same research did not realize that STDs may lead to infertility, and overall, students' understanding of STDs was lower than their knowledge of HIV. There was no statistically significant difference in HIV/STD knowledge between the sexes (Agha, 2014).

All participants in a comparable survey were aware of HIV, but knowledge of other sexually transmitted diseases (STDs) was far lower. In a shocking display of ignorance about the gravity of sexually transmitted diseases, 16% of teenagers surveyed believed that AIDS could be cured. Ninety percent of the teens surveyed believed that they could learn more about STDs. Seventy-eight percent preferred learning this in a classroom setting. The rate of undesired

pregnancies and the prevalence of sexually transmitted diseases in Pakistan may be reduced with better sexual education. However, due to its social taboo status, sexual education is difficult to implement effectively in Thailand. Teachers may be hesitant to include it in lessons because of lack of confidence in its educational value (Agha, 2014).

Teenage boys' and young men's understanding of STDs and safe sexual practises was studied. Of those polled, 92% reported some familiarity with sexually transmitted diseases (STDs) include syphilis, gonorrhoea, chlamydia, skin infection, herpes, genital warts, trichomoniasis, and HIV/AIDS. The HIV/AIDS epidemic (known by 89%) and syphilis (59% of the population) were the two most well-known diseases. Only 13% of respondents were knowledgeable about infections like chlamydia and trichomoniasis. 95 percent or more of those polled were aware of at least one mode of STD transmission (Adrian, 2018).

Researchers in Khairpur, Pakistan found that many young people still knew little to nothing about sexually transmitted diseases (STDs) despite receiving proper instruction in the subject from schools, parents, and peers. Adolescents whose education came mostly from their families and friends fared better than their peers whose education came primarily from the media. Most teenagers knew a lot about HIV, but they knew far less about other dangerous STDs.

If engaging in sexual risk-taking in the past may serve as a deterrent for future risk-taking, this was the subject of a research. Both women who had and had not received an STD diagnosis were questioned again, separated by a period of six months (Gu et al., 2022). Women who had previously received an STD diagnosis were shown to be at the same risk of contracting a new STD as those who had never had an STD diagnosis. These women's views toward sexual risk taking did not alter after contracting an illness, and they continued to take unnecessary

risks. The authors indicate that this runs counter to the Health Belief Model, which states that receiving a diagnosis of an STD should lead to a reduction in health risk behaviour and, thus, a reduced chance of acquiring a new STD (Alary, 2017).

79% of male and 75 % of female were concerned about HIV/AIDS, according to a research conducted at secondary schools in Pakistan. Students were able to name gonorrhoea and syphilis as other STDs in addition to HIV/AIDS, but they failed to demonstrate a deep understanding of STDs or their symptoms when given specific questions. The students' resistance to using condoms to prevent sexually transmitted diseases was striking. Female students were reluctant to buy condoms for fear of being labelled "bad girls," while male students said they wouldn't take a condom from a female classmate because "the females is not to be trusted."

Condom use among Pakistani women was shown to be reduced in the study period of 2001-2006 by De Coninck and Marrone compared to the period of 1995-2000. The authors postulate that this is due to the widespread availability of antiretroviral medications, which may have alleviated people's fears of contracting HIV/AIDS. Thus, the authors argue, it is crucial to once again strengthen condom usage efforts to halt the spread of HIV and other STDs (Ahmed, 2013).

An individual's level of self-awareness is a significant predictor of their propensity to participate in sexually risky behaviours. If an adolescent reports using a condom during their most recent sexual encounter, it's a good indicator that they are less likely to engage in risky conduct related to the spread of the AIDS virus.

The research on the bridging population provides clues about the much risky behaviour that belong to this group, as well as the crucial role that their surroundings play in establishing this definition. No demographic in Pakistan is immediately obvious as the bridging population based on our

current knowledge of risk factors. Several Pakistani research point to a possible overlap in dangerous habits that makes it difficult to precisely identify the transitioning population. Men who have sex with men (MSM) but also marry or have sexual relations with women who are not sex workers are one such group. Many males of all ages reported having sexual relationships with other guys, according to a research that looked at the cultural norms and practises around sex among British and American men of Southeast Asian heritage. Most of these men who responded were already in committed relationships (Alam, 2014).

To be considered part of the migratory population, a person must be separated from his or her spouse and/or biological family for an extended length of time. These people often leave rural regions for metropolitan ones, typically in search of better economic prospects. It has been known for a long time that migration and other forms of social mobility contribute to the spread of HIV. Risky activities, such as drug use or sexual activity, are stigmatized among migrants because they are seen to be a reaction to the isolation and pressures of a new environment in which they may not have enough supervision or social support. A number of research focusing on migrant males have hinted at the possibility of a group or norms impact that may encourage migrant men to engage in hazardous conduct. In one study conducted in Cambodia, for instance, it was shown that military personnel were just more likely to go to sex workers as a group than individually to acquire sex services (Adrian, 2018),

When analysing the bridging population and their risky behaviours, occupational position is an essential consideration. Migrants and nomadic males are often classified according to their professions, such as cab drivers and long-distance truckers in the Philippines, or middle-class and rich merchants in China, or building and

manufacturing workers in the United States. (Ahmed, 2013).

3. Methodology

Methodology describes the study techniques that will be employed in this research. It involves the study design, the study population, the sample size, piloting of the research instrument, data collection, data analysis, ethical considerations and the validity and reliability of the design.

3.1 Research Design:

A systematic literature review approach has been used for which synthetic approach is adopted by using thematic analysis. Present research study design makes the research progress manageable and it allows the findings of early data analysis to understand the importance of Knowledge and awareness about STDs among men and women in Pakistan. Furthermore, the researcher also discusses how and why he selected this specific methodology and how he will apply it during the research process.

3.2 Search Strategy

A systematic review was conducted on electronic data bases that include PubMed, Google Scholar, EMBASE, CINAHL and Med Line by using keywords of the study. The researchers have included qualitative and quantitative research studies of male and female participants of reproductive age focusing on STDs knowledge and awareness in Pakistan. Therefore, a narrative synthesis approach has been used with thematic analysis method. Research studies between 2006 -2022 are included based on inclusion and exclusion criteria.

3.3 Eligibility Criteria

Regarding the eligibility criteria of the present research study the researchers have divided it in two parts that includes.

3.3.1 Inclusion Criteria:

The researchers have included qualitative and quantitative research studies of male and female participants of reproductive age focusing on STDs knowledge and awareness in Pakistan. All those studies are included who are associated with the knowledge and awareness of STDs among men and women in Pakistan. However, publications of any language were decided to be chosen for the present study keeping in view the context of Pakistani men and women.

3.3.2 Exclusion Criteria:

The researchers have excluded those studies in which results of the study are not relevant to the men and women awareness and knowledge about STDs in Pakistan. Studies which are not relevant to the awareness and knowledge have been excluded. All those studies that are having clinical evidences and experiments have been also excluded. Studies conducted other than awareness and knowledge regarding STDs were discarded. I have also excluded those which were conducted on intervention of any population.

3.3.3 Selection Criteria

The researchers have independently evaluated all relevant research studies for the inclusion in present research study by screening selected studies abstract; objectives, research question, methods, results and discussion. Furthermore, the study design of the included literature and earlier published scholarly work is comprised of observational and randomised control trials. The main objective of the systematic review is to obtain evidence. Therefore, a narrative synthesis approach has been used with thematic analysis method which is a suitable method for the included qualitative and quantitative studies synthesis. Moreover, themes of the study are identified which are in line with the research objectives. However, thematic analysis of the study has been conducted irrespective of conducting meta-analysis because thematic analysis method is a suitable method for the qualitative and quantities studies because it

explains the behaviours and observations of people. As a pilot study, initially abstracts, objectives, questions, Methodology, results and discussion and findings were screened out for the present research study. During the process of screening relevant research articles, the researcher set an inclusion and exclusion criteria to select the relevant research studies for conducting a systematic review.

3.4 Data Analysis

I have included qualitative and quantitative research studies of male and female participants of reproductive age focusing on STDs knowledge and awareness in Pakistan. Therefore, a narrative synthesis approach has been used with thematic analysis method which is a suitable method for the included qualitative and quantitative studies synthesis. Moreover, themes of the study are identified which are in line with the research objectives. However, thematic analysis of the study has been conducted irrespective of conducting meta-analysis because thematic analysis method is a suitable method for the qualitative and quantities studies. Codes of the qualitative and quantitative studies are identified and tabulated separately.

3.5 Ethical Considerations

The relevant research study are selected based on inclusion and exclusion criteria. Themes of the studies are identified in line with the research objectives and codes were given in spreadsheet by using excel sheet. The researchers have ensured the scientific integrity for the present study. The researchers have cited the published articles and papers properly. All the material cited in the present study are based on true in nature. There is as such no biased approach from the researcher. The proper citations are considered for the present study and irrelevant material and information are excluded from the study. All the data has been analyzed with an un-biased approach (Alegre & Pasemer, 2018).

Furthermore, the researchers have also analyzed the data, necessary information, findings and recommendations with integrity and responsibility.

4. Results & Discussion

4.1 Knowledge and misconception about STDs among men and women in Pakistan:

Sexually transmitted diseases (STDs) are a global health concern, including in Pakistan, where they are a significant cause of morbidity and mortality. In Pakistan, both men and women have knowledge and misconceptions about STDs. This paper aims to discuss the knowledge and misconceptions about STDs among men and women in Pakistan.

Knowledge about STDs in Pakistan is generally low, with only 22% of men and 10% of women aware of the modes of transmission of STDs, according to a study conducted by Awan et al. (2017). Moreover, some common misconceptions about STDs include that they only occur in promiscuous individuals or that washing after sex can prevent the transmission of STDs. Furthermore, there is a belief that STDs are only transmitted through vaginal intercourse, and that oral and anal sex are safe.

A study conducted by Lohana et al. (2020) found that men in Pakistan have better knowledge about STDs than women, with 49% of men and only 28% of women aware of the symptoms of STDs. Furthermore, men are more likely to seek treatment for STDs than women due to the social stigma associated with STDs, which disproportionately affects women. Women are also more likely to be blamed for the transmission of STDs, even in cases where their partner was the carrier (Jabeen et al., 2018).

The lack of knowledge and misconceptions about STDs in Pakistan can have severe consequences. The low level of awareness leads to late diagnosis and treatment of STDs, which can result in long-term complications such as infertility, chronic pelvic pain, and increased risk of HIV infection. Furthermore, the social stigma surrounding STDs and the gender-based discrimination that women face can discourage women from seeking treatment, leading to further spread of STDs.

In conclusion, both men and women in Pakistan have inadequate knowledge and misconceptions about STDs, which can have severe consequences. The government of Pakistan should implement public health campaigns to increase awareness about STDs and encourage people to seek early diagnosis and treatment. Moreover, there is a need to address the gender-based discrimination that women face when seeking treatment for STDs.

4.2 Sources of information on STD and women's information needs in Pakistan:

Sexually transmitted diseases (STDs) are a global public health issue, with women being disproportionately affected due to their anatomy and socio-cultural factors. Women's information needs on STDs vary, depending on their age, education, socio-economic status, and sexual behaviors. This paper aims to discuss the sources of information on STDs and women's information needs. Sexually transmitted diseases (STDs) are also a significant public health issue in Pakistan, with women being disproportionately affected due to socio-cultural factors and lack of access to information. This paper also aims to discuss the sources of information on STDs and women's information needs in Pakistan.

Sources of information on STDs for women in Pakistan are diverse, including health care providers, community health workers, media, and educational materials. A study by Khawaja et al.

(2017) found that health care providers were the primary source of information on STDs for women in Pakistan. However, the study also highlighted that many health care providers had limited knowledge on STDs, resulting in inaccurate information being provided to women.

Sources of information on STDs for women are diverse, including health care providers, social media, websites, and educational materials. A study by Poon et al. (2019) found that health care providers were the primary source of information for women, followed by the internet and educational materials. Women valued the information provided by health care providers, as they were perceived to be trustworthy and knowledgeable.

Social media platforms such as Facebook, Twitter, and Instagram are increasingly being used to disseminate information on STDs to women. A study by Rice et al. (2021) found that social media platforms were effective in reaching women, particularly those from marginalized communities. Moreover, social media was found to be an accessible and convenient source of information for women, enabling them to access information in their own time and at their own pace.

Websites such as the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) provide comprehensive information on STDs, including their symptoms, modes of transmission, and prevention measures. These websites are accessible to women globally and are regularly updated with the latest research findings.

Whereas, Community health workers, also known as Lady Health Workers (LHWs), are an essential source of information on STDs for women in rural areas of Pakistan. LHWs provide health education, counseling, and screening

services to women and their families. A study by Iqbal et al. (2019) found that LHWs were effective in increasing women's knowledge and awareness of STDs. Media, including television, radio, and newspapers, are also commonly used to disseminate information on STDs to women in Pakistan. A study by Malik et al. (2019) found that women in Pakistan preferred to receive information on STDs through television dramas, as they found it to be an entertaining and engaging way of learning.

Educational materials such as brochures, posters, and pamphlets are commonly used to provide information on STDs in health care settings. These materials are typically provided to women during health care visits and are useful in reinforcing the information provided by health care providers. Moreover, educational materials can be taken home, enabling women to share the information with their partners and peers.

In conclusion, women's information needs on STDs in Pakistan are similar to those in other countries and are affected by socio-cultural factors and lack of access to information. Health care providers, community health workers, media, and educational materials are the primary sources of information on STDs for women in Pakistan. To ensure that women have access to accurate and comprehensive information on STDs, it is crucial to train health care providers and LHWs on STDs and to increase the availability and accessibility of educational materials.

4.3 Cultural barriers regarding STDs knowledge and awareness among men and women of Pakistan:

Sexually transmitted diseases (STDs) are a significant public health issue in Pakistan, with men and women facing several cultural barriers that impede their knowledge and awareness of

STDs. This paper aims to discuss the cultural barriers regarding STDs knowledge and awareness among men and women of Pakistan.

One significant cultural barrier to STDs knowledge and awareness among men and women in Pakistan is the stigma associated with discussing sexual health. Sexuality is considered a taboo subject in Pakistan, and discussions around sexual health are often met with shame and embarrassment (Kamal, 2017). As a result, individuals may be hesitant to seek information on STDs, leading to a lack of knowledge and awareness.

Another cultural barrier to STDs knowledge and awareness among men and women in Pakistan is the limited role of women in decision-making regarding their sexual health. Patriarchal norms and values dictate that men are the primary decision-makers in the family, including decisions regarding sexual health (Bibi et al., 2019). Women are often not empowered to seek information on STDs or take preventive measures to protect themselves, leading to increased risk of STD transmission.

Religious and moral beliefs also play a significant role in STDs knowledge and awareness among men and women in Pakistan. Islam is the predominant religion in Pakistan, and premarital sex is considered a sin in Islam (Kamal, 2017). As a result, discussions around sexual health, including STDs, may be considered immoral or inappropriate, leading to a lack of knowledge and awareness.

Additionally, access to education and healthcare is limited in many parts of Pakistan, particularly in rural areas. Lack of education and access to healthcare leads to a lack of knowledge and awareness of STDs among both men and women (Bibi et al., 2019). Women, in particular, face

barriers to accessing healthcare due to gender discrimination and limited mobility.

In conclusion, cultural barriers such as stigma surrounding discussions around sexual health, patriarchal norms, religious and moral beliefs, and limited access to education and healthcare impede knowledge and awareness of STDs among men and women in Pakistan. Addressing these barriers is crucial in increasing knowledge and awareness of STDs and promoting preventive measures to reduce the spread of STDs in Pakistan.

4.4 The sexual health care services availability for men and women about STDs in Pakistan:

Access to sexual healthcare services is essential for the prevention, diagnosis, and treatment of sexually transmitted diseases (STDs). However, in Pakistan, men and women face numerous challenges in accessing sexual healthcare services, particularly regarding STDs. This paper aims to discuss the availability of sexual health care services for men and women regarding STDs in Pakistan.

The availability of sexual health care services for men and women regarding STDs in Pakistan is limited due to several factors. One of the primary reasons for this is the lack of government investment in sexual health care services (Rashid et al., 2018). The government's low priority towards sexual health care services is reflected in the low budget allocation and inadequate infrastructure in the public sector health facilities.

Another factor contributing to the limited availability of sexual health care services is the lack of trained medical staff. There is a shortage of trained healthcare professionals in Pakistan, particularly in rural areas (Jabeen et al., 2018). This shortage makes it difficult for men and

women to access sexual health care services, particularly in remote areas of the country.

Moreover, women face additional barriers to accessing sexual health care services in Pakistan. Gender discrimination and patriarchal norms and values limit women's mobility, making it difficult for them to visit healthcare facilities (Jabeen et al., 2018). In addition, women's limited decision-making power in the family may prevent them from seeking sexual health care services.

Despite these challenges, several organizations and non-governmental organizations (NGOs) are working towards improving the availability of sexual health care services in Pakistan. These organizations provide education, awareness, and treatment for STDs through outreach programs, mobile clinics, and online resources (Awan et al., 2017).

In conclusion, the availability of sexual health care services for men and women regarding STDs in Pakistan is limited due to several factors, including lack of government investment, shortage of trained medical staff, gender discrimination, and patriarchal norms and values. Addressing these factors is crucial to increase the availability of sexual health care services and improve the prevention, diagnosis, and treatment of STDs in Pakistan.

4.5 Discussion:

This study aimed to explore the knowledge and misconception about sexually transmitted diseases (STDs) among men and women in Pakistan and identify cultural barriers regarding STDs knowledge and awareness among men and women in Pakistan. Additionally, the availability of sexual health care services for men and women regarding STDs in Pakistan was also discussed.

The findings of the study revealed that there is a lack of knowledge and awareness among both

men and women regarding STDs in Pakistan. This lack of awareness is evident in the misconceptions and myths surrounding STDs, such as the belief that only promiscuous individuals can contract STDs (Haider et al., 2018). Additionally, the study found that there is a lack of emphasis on sexual health education in schools, universities, and other educational institutions, contributing to the lack of awareness among the population (Haider et al., 2018).

Moreover, cultural barriers limit the knowledge and awareness of STDs among men and women in Pakistan. The study found that the conservative cultural values in Pakistan make it difficult to discuss issues related to sexual health openly (Liaquat et al., 2019). Furthermore, the study revealed that gender discrimination and patriarchy also play a role in limiting women's access to sexual health care services and education (Liaquat et al., 2019).

The availability of sexual health care services for men and women regarding STDs in Pakistan is limited. The study found that there is a lack of resources and infrastructure in public health facilities, making it difficult for individuals to access sexual health care services (Hameed et al., 2019). Moreover, the shortage of trained medical staff in Pakistan contributes to the limited availability of sexual health care services for men and women regarding STDs (Hameed et al., 2019).

To address these issues, it is essential to increase awareness and knowledge regarding STDs through education campaigns and outreach programs. Moreover, it is crucial to address the cultural and societal barriers to sexual health care services and education in Pakistan. Organizations and NGOs should work towards providing accessible and affordable sexual health care services for men and women in Pakistan.

In conclusion, there is a lack of knowledge and awareness regarding STDs among men and women in Pakistan. Cultural and societal barriers, as well as limited availability of sexual health care services, contribute to this issue. Addressing these barriers through education campaigns and accessible sexual health care services is essential to improve the prevention, diagnosis, and treatment of STDs in Pakistan.

5. Conclusion & Recommendation:

5.1 Conclusion:

In conclusion, the findings of this study indicate that there is a significant lack of knowledge and awareness regarding sexually transmitted diseases (STDs) among both men and women in Pakistan. This is due to the limited emphasis on sexual health education in schools and universities, as well as the prevalence of myths and misconceptions surrounding STDs. Moreover, cultural and societal barriers, including conservative cultural values, gender discrimination, and patriarchy, limit access to sexual health care services and education for men and women in Pakistan.

The limited availability of sexual health care services in Pakistan further exacerbates the issue of STDs in the country. The lack of resources and infrastructure, as well as the shortage of trained medical staff, make it difficult for individuals to access sexual health care services. This emphasizes the need for organizations and NGOs to work towards providing accessible and affordable sexual health care services for men and women in Pakistan.

In addressing the issue of STDs in Pakistan, it is essential to prioritize sexual health education and awareness campaigns to combat the myths and misconceptions surrounding STDs. This would enable individuals to understand the

importance of early diagnosis and treatment of STDs, leading to better sexual health outcomes. Additionally, addressing cultural and societal barriers to sexual health care services and education is crucial in improving access to sexual health care services for men and women in Pakistan.

To conclude, it is necessary to prioritize sexual health education and awareness campaigns and address cultural and societal barriers to sexual health care services and education to improve knowledge and awareness regarding STDs and increase access to sexual health care services for men and women in Pakistan.

5.2 Recommendations:

Based on the findings of this study, the following recommendations are proposed to improve knowledge and awareness regarding sexually transmitted diseases (STDs) among men and women in Pakistan:

- **Prioritize sexual health education:** The government should prioritize sexual health education in schools and universities to educate young individuals about STDs and their prevention. This can help in dispelling myths and misconceptions regarding STDs and promote healthy sexual practices.
- **Increase access to sexual health care services:** There is a need to increase access to sexual health care services, particularly in rural areas. This can be achieved through the establishment of sexual health clinics and the deployment of trained medical staff in areas with limited access to sexual health care services.
- **Address cultural barriers:** Cultural and societal barriers limit access to sexual health care services and education for

men and women in Pakistan. Addressing these barriers requires a multi-faceted approach that involves changing cultural values, increasing women's autonomy, and promoting gender equality.

- **Collaborate with NGOs and organizations:** Collaboration with non-governmental organizations (NGOs) and other organizations can play a critical role in improving knowledge and awareness regarding STDs and increasing access to sexual health care services in Pakistan. NGOs can provide valuable support in providing sexual health education and awareness campaigns, as well as delivering sexual health care services.

In conclusion, addressing the issue of STDs in Pakistan requires a comprehensive and multi-faceted approach that involves increasing sexual health education, improving access to sexual health care services, addressing cultural barriers, and collaborating with NGOs and other organizations. By implementing these recommendations, it is possible to improve knowledge and awareness regarding STDs and promote healthy sexual practices among men and women in Pakistan.

References

1. Awan, A. B., Sajid, M., Waheed, U., & Hassan, S. (2017). Knowledge, attitudes and practices regarding sexually transmitted infections among patients visiting a tertiary care hospital in Pakistan. *Journal of Pakistan Medical Association*, 67(2), 195-198.
2. Adrian, M. (2018). "Addiction and sexually transmitted disease (STD), Human Immunodeficiency Virus (HIV), and Acquired Immune Deficiency Syndromes (AIDS): Their mutual interactions." *Substance Use and Misuse*. 41,12: 1337-1348.
3. Afsar, H.A., Mahmood M.A, Barney et al. (2006). "Community knowledge, attitude and practices regarding sexually transmitted infections in a rural district of Pakistan." *Journal of the Pakistan Medical Association*. 52: 21-24.
4. Aijaz, S., & Mehraj, J. (2020). Awareness of sexually transmitted diseases among young adults of Karachi; a cross-sectional study. *JPMA. The Journal of the Pakistan Medical Association*, 70(6), 1029-1035.
5. Aggarwal, O., Sharma, A.K., & Chhabra. (2009). "Study in sexuality of medical college students in India." *Journal of Adolescent Health*. 26:226-229.
6. Agha, A., S. Parviz, M. Younus, and Z Fatmi. (2013). "Socio-economic and demographic factors associated with injecting drug use among drug users in Karachi, Pakistan." *Journal of the Pakistan Medical Association*. 52: 511-16.
7. Agha, S. (2012). "Sexual behavior among truck drivers in Pakistan." *Culture, Health and Sexuality*. 4: 191-206.
8. Agha, S. (2014). "Potential for HIV transmission among truck drivers in Pakistan." *AIDS*. 14,15: 2404-2406.
9. Ahmed, M.A., Zafar, H.J., Brahmabhatt., et al. (2003). "HIV/AIDS Risk behaviors and correlates of injection drug use among drug users in Pakistan." *Journal of Urban Health: Bulletin of the New York Academy of Medicine*. 80,2: 321-329.
10. Akhtar, S., SP Luby, MH Rahbar. (2011). "Multivariate analysis of risk factors associated with genital ulcer disease among incarcerated males in Sindh." *Journal of the Pakistan Medical Association*. 50: 115-20.
11. Alam, N. M. Rahman, K. Gausia, et al. (2016). "Sexually transmitted infections and risk factors among truck stand workers in Dhaka, Bangladesh." *Sexually Transmitted Infections*. Epublication.

12. Alary, M. and CM Lowndes. (2014). "The central role of clients of female sex workers in the dynamics of heterosexual HIV transmission in sub-Saharan Africa." *AIDS*, 18,6: 945-947.
13. Alary, M, CM Lowndes, et al. (2013). "Sexually transmitted infections in male clients of female sex workers in Benin: risk factors and reassessment of the leucocyte esterase dipstick for screening of urethral infections." *Sexually Transmitted Infections*, 79: 388-392.
14. Bibi, S., Ahmed, R., Ahmed, M., Qureshi, S., & Siddiqui, M. A. (2019). Sociocultural barriers to the use of contraceptives and awareness of sexually transmitted infections in rural areas of Pakistan. *Journal of Ayub Medical College Abbottabad*, 31(1), 32-37.
15. Centers for Disease Control and Prevention, (2022). Sexually Transmitted Diseases (STDs). Retrieved from <https://www.cdc.gov/std/default.htm>
16. Gul, S., Anwar, A., Mubarik, M., Shah, U., Fatima, K., & Fatima, G. (2022). Sexually Transmitted Infections: Knowledge and factors affecting the treatment and P. Practices among reproductive age women. *Pakistan Journal of Medical & Health Sciences*, 16(04), 316-316.
17. Haider, S., Mustafa, G., Mehmood, J., & Farooq, F. (2018). Knowledge and Misconceptions regarding Sexually Transmitted Infections among University Students of Karachi. *Pakistan Journal of Medical & Health Sciences*, 12(4), 1544-1546.
18. Hameed, A., Ashfaq, S., Hameed, F., & Mahmood, S. (2019). Sexual and Reproductive Health in Pakistan: A Review of Literature. *Journal of Rawalpindi Medical College (JRMCC)*, 23(2), 181-185.
19. Iqbal, A., Qureshi, R. N., Syed, A. S., & Muhammad, Z. (2019). Effectiveness of Lady Health Workers (LHWs) in promoting awareness and education regarding STIs in rural areas of Pakistan. *Journal of Ayub Medical College Abbottabad*, 31(1), 78-82.
20. Jabeen, U., Yousuf, M., Khan, A., & Farooqi, J. I. (2018). Knowledge, attitudes, and practices regarding sexually transmitted infections among women in a rural district of Sindh, Pakistan. *Journal of Infection and Public Health*, 11(3), 325-329.
21. Kamal, S. (2017). Sex education and the Muslim Pakistani: Exploring issues of sexuality and taboo. *Pakistan Journal of Women's Studies: Alam-e-Niswan*, 24(2), 113-132.
22. Khawaja, M. R., Mazhar, S. B., & Majeed, F. (2017). Knowledge, attitudes and practices of healthcare providers regarding sexually transmitted infections in Karachi, Pakistan. *Journal of Pakistan Medical Association*, 67(8), 1250-1254.
23. Liaqat, A., Khan, S., & Naveed, A. (2019). Barriers to Access Sexual and Reproductive Health Services among Women in Pakistan. *International Journal of Reproductive Medicine & Sexual Health*, 2(2), 12-16.
24. Lohana, H., Farooq, F., & Aleem, S. (2020). Knowledge, attitudes, and practices of sexually transmitted infections among men and women in Pakistan. *Cureus*, 12(11), e11657.
25. Malik, S. M., Rizvi, S. H., & Farooq, M. U. (2019). Information sources for learning about sexually transmitted infections among young women in Pakistan. *The Journal of Infection in Developing Countries*, 13(04), 304-310.
26. Poon, K. K., Dang, B. N., Davila, J. A., Hartman, C., & Giordano, T. P. (2019). Sexually transmitted infection testing uptake and knowledge among female emergency department patients: a cross-sectional analysis. *Sexually Transmitted Infections*, 95(2), 103-109.

27. Rashid, H., Kiani, F., Qureshi, N. A., Aslam, M., & Hussain, R. (2018). Access to sexual and reproductive health services: A community-based study of women's knowledge, attitude, and practices in rural Punjab, Pakistan. *Journal of Public Health*, 26(2), 139-145.
28. Rice, E., Holloway, I. W., Gibbs, J., Winetrobe, H., Dunlap, S., & Rhoades, H. (2021). Acceptability of Social Media as a Tool for Sexually Transmitted Infection Prevention and Testing Outreach among Young Women Experiencing Homelessness. *Journal of Health Communication*, 26(5), 287-294.
29. Saleem, N. H., Adrien, A., & Razaque, A. (2008). Risky sexual behavior, knowledge of sexually transmitted infections and treatment utilization among a vulnerable population in Rawalpindi, Pakistan. *Southeast Asian J Trop Med Public Health*, 39(4), 642-8.
30. Mazhar, S. B., Agha, M. A., & Shaikh, M. A. (2006). Knowledge and misconceptions about sexually transmitted infections in married women-perspective from Islamabad. *J Pak Med Assoc*, 56, S44-7.
31. Raheel, H., White, F., Kadir, M. M., & Fatmi, Z. (2007). Knowledge and beliefs of adolescents regarding sexually transmitted infections and HIV/AIDS in a rural district in Pakistan. *Journal of Pakistan Medical Association*, 57(1), 8.
32. World Health Organization, (2022). Sexually Transmitted Infections (STIs). Retrieved from [https://www.who.int/news-room/q-a-detail/sexually-transmitted-infections-\(stis\)](https://www.who.int/news-room/q-a-detail/sexually-transmitted-infections-(stis))