ROLE OF PERCEIVED SOCIAL STIGMA, PERCEIVED FAMILY SUPPORT AND PSYCHOLOGICAL PROBLEMS AMONG HIV/AIDS INDIVIDUALS IN PAKISTAN

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2022

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PhD Dissertation

Submitted to the Department of Psychology (Male Campus),

International Islamic University Islamabad

in partial fulfilment of the requirements

for the award of degree of

DOCTOR OF PHILOSOPHY

IN

PSYCHOLOGY

BY

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Declaration

I, **Mr. Muhammad Imran**, Registration No**. 36-FSS/PHDPSY/F14** student of **PhD** in the Subject of Psychology, session 2014-2021, herby declared that my PhD dissertation titled **"**Role of perceived social stigma, perceived family support and psychological problems among HIV/AIDS individuals in Pakistan" is my own work and has not been printed, published or submitted elsewhere as publication or dissertation for taking any degree to any university or research center in Pakistan or abroad.

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Signature:

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Dated:

RESEARCH COMPLETION CERTIFICATE

It is certified that the research work contained in this Ph.D. Dissertation Titled "**Role of Perceived Social Stigma, Perceived Family Support and Psychological Problems among HIV/AIDS Individuals in Pakistan"** has been carried out and completed by **Mr. Muhammad Imran**, Registration No. **36-FSS/PHDPSY/F14** has been approved for submission to International Islamic University Islamabad, Pakistan.

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Acknowledgements

All Thanks to Almighty Allah, the Most Beneficent, and the Most Merciful, who Guides His Creature in darkness and helps in difficulties. All respects for His Last Holy Prophet (Peace Be Upon Him) who help me recognize my Creator.

All the praises and thanks to Allah who empowered me and gave me strength to complete this thesis. I feel very blessed and highly thankful for his countless blessings.

I am thankful to my respected supervisor Dr. Mazhar Iqbal Bhatti (Assistant Professor) at the Department of Psychology, International Islamic University, Islamabad) for his precious guidelines, insightful knowledge, moral support and deep concern which polished the shape of this thesis.

I would like to pay special thanks to my all teachers, particularly Dr Asghar Ali Shah-Chairman Department of Psychology for their continuous academic and emotional support in my research work throughout this period. I am indebted to pay my profound thanks and regards to my parents & family; without their support and encouragement this task would be impossible to complete.

Muhammad Imran

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LIST OF ABBREVIATIONS

HIV	Human-immunodeficiency Virus
AIDS	Acquired Immunodeficiency Syndrome
EMRO	East Mediterranean Regional Office
WHO	World Health Organization
UNAIDS	Joint United Nations Program on HIV/AIDS
NIH	National Institute of Health, Islamabad
NACP	National Aids Control Program
PTSD	Post Traumatic Stress Disorder
SPSS	Statistical Package for Social Sciences
DASS	Depression Anxiety Stress Scale
PPSS	Perceived Public Stigma Scale
PFSS	Perceived Family Support Scale
USAIDS	U.S. Agency for International Development

Abstract

The purpose of this study was to investigate the role of perceived social support from family and perceived social stigma in predicting psychological problems (i.e., depression, anxiety, and stress) among HIV/AIDS patients. Mediation of perceived social stigma between perceived family support and psychological problems was also found out. The study also examined the role of demographic factors like age, gender and education for the social stigma associated with HIV/Aids. To achieve the objective of the study quantitative cross-sectional research design was employed where data were collected through purposive sampling technique. The sample of the study included 200 patients diagnosed with HIV/AIDS. Sample was obtained from the District Head Quarters Hospital, Sargodha (HIV/AIDS Ward), Nishtar Hospital, Multan, and Nai Zindagi Medical Center, Islamabad. Urdu version of Depression, Anxiety, Stress Scale (DASS) (Aslam, 2007), Urdu version of Perceived Discrimination Devaluation Scale (Shah, Khalily, Ahmad, and Hallahan, 2019), and Perceived Family Support Scale (Aftab, 2000) were administered to measure scores on main study variables. Findings of the study revealed that perceived social stigma has significant positive relationship with depression (r = .54, p < .01), anxiety (r = .45, p < .01), and stress (r = .56, p < .01). Additionally, perceives social support from the family was negatively related with depression (r = -.71, p < .01), anxiety (r = -.68, p < .01), and stress (r = -.72, p < .01). Perceived social stigma is also negatively related with perceived family support (r = -.51, p < .01). The results also show that perceived social stigma mediated the relationship between perceived social support from family and depression (β = -.09, CI = -.16, -.04), anxiety (β = -.04, CI = -.09, -.005), and stress (β = -.07, CI = -.12, -.04). Furthermore, participants who have high level of education showed lower perceived social stigma (F = 14.91, p < .05). Higher age groups showed higher perceived social

stigma than lower age groups (F = 45.28, p < .05). It was also found that female HIV/AIDS patients suffer higher level of depression (t = 4.05, p < .05), anxiety (t = 4.83, p < .05), and stress (t = 4.03, p < .05) as compared to males. Females also showed higher levels of perceived social stigma than males (t = 2.01, p < .05) This study provides an insight into HIV associated problems in a local context. Being a collectivist society, these finding have meaningful implications in Pakistani society where family system and social cohesion are given prime importance. Limitations and future aspects of the study are discussed considering the relevant literature.

Chapter I

Introduction

Across the globe, there are more than 37 million people living with the HIV, with annual incidence reaching 2 million in the year 2015. Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) has remained a crucial public health issue that has cost more than 1 million deaths as revealed by WHO, (2016). Literature has revealed that there has been a gradual increase (10%) in the number of people living with HIV/AIDS in Asia and the Pacific (Murphy et al., 2021; WHO, 2003). The Eastern Mediterranean Region Office-EMRO has witnessed a sheer increase in the AIDS epidemics, identified as one of the top regions with AIDS patients (Mokdad, 2018). Alongside, the mortalities caused by the AIDS has also increased despite of the advancement in the treatment plans. Similar trends have been observed in Pakistan regarding the spread and ineffectiveness of treatment of HIV/AIDS.

In the last thirty years, HIV/AIDS has remained a major threat for individuals and communities and this impact was most evident in the low and middle-income countries. A study has revealed that 68% of the total HIV/AIDS patients across the globe come from the low and middle-income countries despite of the fact that these countries make up only 13% of the total world population. HIV/AIDS has been found to have devastating impacts on the economic and social development of these countries (Shao & Williamson, 2012). These impacts were profound in the Pakistan where HIV/AIDS have cost thousands of lives and negatively impacted the communal and socio-cultural development. Pakistan has been struggling to control the pandemic not because of the medical reasons but also socio-psychological reasons (Ansari et al., 2013). Keeping in view these facts, it is imminent to explore what are the main factors

that are hampering the prolific outcomes of the treatment and intervention plans in Pakistan.

A report published by World Health Organization-East Mediterranean Office WHO EMRO, (2017) indicated that Pakistan has contributed around 80% of the total AIDS cases with serious social and psychological adversities in the HIV/AIDS and their families. The statistics are quite alarming and requires immediate attention to prevent the spread. In Pakistan, 165,000 individuals are living with the HIV/AIDS. Among them only 24331 (14.7%) HIV-positive individuals are registered with the National AIDS Control Program (NACP) in accordance with the statistics of June, 2019. The number of patients receiving antiretroviral therapy is 17149 (70.5%), after being registered to NACP. Among these 7182 (29.5%) did not attend the follow-up therapies for different reasons. The most significant of all were found to be lack of awareness, social support, and social stigma associated with the disease (Ahmed, Hashmi, & Khan, 2019).

Another reason that has hampered the effectiveness of treatment plans and interventions of HIV/AIDS are the unaddressed psychological problems related with the disease. National Aids Control Program-NACP is the main institute dealing with the HIV/AIDS patients in Pakistan. Unfortunately, the institute is more observant and dedicated to medical reasons behind the escalating adversities and spread of disease. Literature has clearly indicated that social and psychological factors need to be addressed as they have turned the HIV/AIDS into a pandemic (Yousaf, Zia, Babar, & Ashfaq, 2011). The main focus of the NACP is physical health whereas psychological health is negated at all levels that potentially increases the psychological problems among the targeted population (Ahmed, Hashmi, & Khan, 2019). On the whole, the prevention and control of HIV/AIDS in Pakistan is not effective and requires attention.

Background

Pakistan is registering highest rate of AIDS patients mainly because of the HIV-positive who inject drugs. Such individuals have increased the spread of the virus to the general population by means of sexual networks and other bridging populations (Khan, Rehan, Qayyum, & Khan, 2008). Despite the fact that antiretroviral therapy is present in Pakistan the spread is quite alarming. Other challenges in dealing with the epidemic includes lack of social support, access to services, sexual and gender-based violence, and social stigmatization related to disease (Bhurgri, 2006; Yousaf, Zia, Babar, & Ashfaq, 2011). Past literature has revealed that with effective social support and by mitigating the social stigmatization related with HIV/AIDS the treatment plans and preventive measures could have borne effective results (Kontomanolis et al., 2017). Keeping in view this fact, current study will emphasize on the impact of social stigmatization and perceived social support from the family in reference to people living with HIV/AIDS.

HIV/AIDS has progressed in adverse way and now it is recognized as a medical as well as social issue. HIV/AIDS patients have been subjected to social stigmatization by their colleagues, community, family and friends (Kalichman et al., 2009; Kontomanolis et al., 2017; Mahajan et al., 2008). HIV-related social stigma imposes adverse impacts on the physical and psychological well-being of the targeted population. Fear of social stigma refrain HIV/positive individuals to seek health care services and disclose their HIV status (Rueda, et al., 2016; Sayles, Wong, Kinsler, Martin & Cunningham, 2009). Social Stigmatization also prevents the effectiveness of the treatment plans associated with the disease under scrutiny (Ma & Loke, 2020). All these facts, aggravates the spread of HIV-virus. Social stigmatization related to HIV/AIDS is quite prevalent in Pakistan and is recognized as one of the main reasons

behind the spread of the disease (Hussain et al., 2018; Khan & Bilal, 2019). Thus, it is important to address the issue of social stigma related to HIV/AIDS for prolific results.

The adversities caused by HIV/AIDS could be buffered by means of increase in the social support. Family support is referred as the primary source of social support for the people living with the HIV/AIDS (Xu et al., 2017). AIDS patients with high level of perceived social support from the family tend to reduce the risks behavior associated with the disease, take medications regularly, prevents disease transmission, and are found to have positive outcomes of the treatment (Mi et al., 2020; Okonkwo, Larkan, & Galligan, 2016). Perceived social support from family have found to be inversely related with the negative impacts of the social stigmatization among the HIV-patients (Shrestha et al., 2019). Moreover, the physical and psychological outcomes enhance with the high perceived social support among the targeted population (Garrido-Hernansaiz et al., 2016). Keeping in view this, the significance of the perceived social support from the family, it will be investigated in relation to other study variables in indigenous context.

HIV/AIDS results in considerable psychological problems along with physical complications (Tesfaye & Bune, 2014). Depression and anxiety disorder the most prevalent psychological burdens borne by the HIV/AIDS patients (Unnikrishnan, Jagannath, Ramapuram, Achappa, & Madi, 2012; Charles et al., 2012; Pappin, Wouters, & Booysen, 2012). Neuropsychiatric disorder that includes somatoform are also prevalent in targeted population (Mahajan, 2008). Along with this, panic disorder, suicide ideations, loneliness, reduced motor skills, dementia, PTSD, and serious emotional problems are also observed in HIV/AIDS patients (Dejman et al., 2015; Perry & Tross, 1984). The pain of physical ailment increases many folds because of psychological problems making progress near to impossible an inducing hopelessness

(Chandra, Desai, & Ranjan, 2005). Psychological problems have a direct positive relationship with the HIV/AIDS progression as revealed by many of the international studies (Parhami et al., 2013; Treisman & Angelino, 2007). In Pakistan, ample work has been done on the physical pain that HIV-positive individuals are facing. But psychological issues pertaining to the disease have acquire less attention, comparatively (Hafeez, 2018). Not more than 1% of the health budget is invested on mental health issues in developing countries such as Pakistan (Vitoria, Vella, & Ford, 2013). Identified as a less explore research area, current study will reflect upon the relationship between HIV/AIDS and psychological problems among the people living with the HIV virus. Following section will reflect upon the relationships among the study variables based on the past literature.

Literature Review

This section has identified, evaluated, and synthesized the relevant literature addressing the topic under scrutiny. Literature review has brought in limelight how knowledge has evolved in the targeted research area over the period of time. In the following section, the current state of thinking pertaining to perceived social stigma, perceived family support, and psychological problems in HIV/AIDS patients have revealed. Additionally, the emerging trends have also been identified along with the gaps in the literature. The literature review has been based upon the journal articles, books, reports, conference proceedings and authentic websites.

Human Immunodeficiency Virus (HIV).

HIV stands for human immunodeficiency virus – a virus that targets the immune system of an individual and weakens the natural defense against the infections and certain types of cancers that a healthy individual could have fight off but not the one with

HIV-positive status. This virus is life threatening as it destroys and impairs the normal functioning of immune cells. As a result, HIV-positive individual become immunodeficient with the passage of time (Moss, 2013).

The advance stage of HIV is referred as acquired immunodeficiency syndrome often abbreviated as AIDS. The progress of HIV to AIDS could take many years depending on the individual and level of treatment. AIDS referred to the development of certain cancers, sever infections, and long-term clinical manifestations. A person cannot get rid of this disease once infected as there is no vaccine yet (Brookmeyer, 2010). But the life of an individual infected with the disease could be increased and enhanced by reducing the adversities associated with the disease.

The first case of HIV/AIDS was found in 1981 and generally there were three concepts defining the HIV-epidemic that were fear, ignorance, and stigma. HIV-epidemic raged across the globe being cause of death of thousands of people in that era. The people diagnosed took few weeks to cover the distance between the HIV-positive diagnosis and the death. The failed to manage the diagnosis of the disease, facing debilitating HIV/AIDS, was out of question with little or no hope, social support, and increase stigmatization (Sharma et al., 2015). Starting with physical symptoms it ended upon the critical psychological symptoms. Things have changed with the passage of time and intervention plans and treatment programs have been formulated. Now, its nearly more than 30 years that HIV/AIDS has attacked us leaving 70 million infected individuals and nearly 35 million have lost their life at the hands of HIV/AIDS epidemic. Progress has been made in dealing with the HIV/AIDS in the modern world where 22 million out of 35 million individuals diagnosed with the disease are under treatment. Yet, WHO has revealed that despite of 3 decades with HIV/AIDS the spread is still not under control and interventions are yet not generalizable. Cultural sensitivity

and indigenous factors are found to significantly hamper the treatment and intervention plans (WHO, 2021).

According to the recent statistics, WHO revealed that the HIV/AIDS has taken the shape of a pandemic as cases have been reported all over the world. Despite of significant positive interventions and treatment plans, the disease is yet not under control. WHO has revealed that HIV/AIDS has been the cause of death for more than 36.3 million individuals. It was reported that there is no cure to the disease but there are numerous intervention plans, diagnosis, preventions, and treatment plans, the chronic health conditions are thought to be manageable, enabling HIVAIDS patients to live longer and healthy lives. Yet, a constant increase in the number of HIV/AIDS patients has been observed. In 2020, 1.5 million individuals were reported HIV-positive and nearly 1 million died of the disease (De Cock, Jaffe, & Curran, 2012). The most effected regions were found to be African and Asian with higher number of HIV/AIDS growing cases. Statistics indicate that there are serious short comings in the preventive measures (Streatfield et al., 2014).

HIV/AIDS make life miserable as the person suffers physical and psychological pain constantly. Physically, other than the aforementioned severe diseases people living with HIV/AIDS would suffer weight loss, diarrhea, cough, and swollen lymph nodes. A person also gets prone to many bacterial diseases and infections (Mondal & Shitan, 2013). Psychologically, a person suffers mild to severe depressive symptoms, anxiety, stress, and other neuropsychological problems. Severe emotional, cognitive, behavioral, and social dysfunctionality is reported by the HIV/AIDS patients (Remien et al., 2019). Unlike, other life-threatening diseases, the burden is triple folded as the infected individual has to bear physical, psychological and social adversities.

The physical and psychological adversities and pains are often related with the social factors. Literature reveals that the acquisition and transmission of the disease involves serious moral, cultural, social, and religious reservations. Despite of the fact that HIV/AIDS is transmitted through different modes that includes contaminated needles and injected equipment's, receiving unsafe blood transfusion, precarious tissue transplantation, medical procedures that involve unsterile piercing and cutting (Kurth et al., 2011). Yet, the emphasizes remains on the sexual transmission of the disease through sexually transmitted diseases such as herpes, syphilis, bacterial vaginosis etc. and through unprotected intercourse (Mondal & Shitan, 2013). For that matter, the disease is often taken as the results of involvement in the immoral sexual practices, offering ample grounds to judge a person on moral grounds. It is often taken as the result of deviance from the socio-cultural norms. All these aspects, endorse discriminatory behavior towards the HIV/AIDS patients irrespective of the cause of the infection. This refrains the HIV- infected individual from the communal and social support in many areas, especially those with less awareness and literacy rate such as in Pakistan.

Literature reveals that the main barriers in achieving the 95-95-95 targets set by the UNAIDS is the non-responsive behavior of the individuals. In this vein, a report published by WHO indicated that there is dire need to redouble the efforts to mitigate the increasing number of HIV/AIDS cases by stimulating the public health response and cooperation (Ehrenkranz et al., 2021). As guided by the past literature, social factors such as HIV-related stigmatization and lack of social support are the main hurdles that refrain the responsive attitude of the general public while increasing the physical and psychological adversities for the infected patients (McInnes & Rushton, 2010). Align with the fact that the physical symptoms pertaining to the HIV/AIDS have

acquired significant attention across the globe, but the psychological aspects remained less explored. For that matter, current study will emphasize on the psychological problems that the HIV/AIDS patients face in reference to the social aspects that mainly include perceived social support from family and perceived social stigma

Perceived Social Stigma. People living with HIV/AIDS have been the target of social stigma since the first case was diagnosed. They have been stigmatized and discriminated at every front it is to be the workplace, social settings, or their house. Stigmatization has refrain them from living a safe and secure life. Social stigma associated with HIV/AIDS has become a global problem. More than 42 million HIV/AIDS patients have been targeted by social stigma and its impacts are far more adverse than we could understand. Social stigma related to HIV/AIDS is prevalent in developing as well as developed countries. Literature reveals that people face severe social stigmatization and are punished just for revealing their HIV- status. Social stigmatization associated with disease is the main issue that HIV/AIDS patients are facing and failure to cope with it has led to serious consequences. Thus, requiring attention from the researchers and policy makers.

In the past few decades, the HIV/AIDS related social stigmatization has escalated in all parts of the world, presenting a serious challenge to the prevention, treatment, and caring units associated with the epidemic. HIV/AIDS related social stigma has acquired immense attention from the practitioners and researchers as the societal and individual reaction towards the people living with HIV/AIDS arise from stigma (Parker & Aggleton, 2003; Ulasi,. Et al., 2009). Fear and blame is assigned to the HIV/AIDS patients that offer grounds for the derivation of negative social, political, and behavioral responses (Malcolm et al., 1998). In this vein, people living with HIV/AIDS not only suffered through severe medical complications but also face

serious social impediments (Deacon, 2006). Stigmatization could be reflected in societal responses such as forcible government policies and coercive laws to apathy and hatred towards the HIV/AIDS patients. The internalization of such coercive responses from the society at an individual level potentially leads to self-exclusion from the treatment programs and related information (Malcolm et al., 1998). Such individuals were discriminated socially in every front as a result of social stigma associated with HIV/AIDS.

Reflecting upon the stigma, Goffman (1963) referred it as a phenomenon that make a person unacceptable in a society. It could be a real or a perceived attribute that makes an HIV patient vulnerable to discrimination and social hatred (Seale, 2004; Herek & Capitanio, 1998). Stigma is also defined as a social process that emerges as a result of labelling, status loss, stereotyping, discrimination, and separation in a power situation endorsing it (Link & Phelan, 2001). Stigma is a social term that is conceptualized in terms of what is considered as *deviance.* In this context, a stigmatized individual is the one with an *undesirable and unacceptable difference* in relation to social values and norms (Goffman, 1963).

Literature indicates that the HIV/AIDS related social stigma is inflicted through adverse attitudes, behaviors, and beliefs towards the people who are perceived to be HIV/AIDS infected. HIV/AIDS related stigma indicates the unfavorable beliefs, attitudes, and policies directed toward the people living with HIV/AIDS and their immediate family, social groups, associates, and communities. This stigma has its roots in prejudice based on gender, race, sexual orientation, and race. Organizations dealing with the HIV/AIDS patients have to answer questions regarding the stigma associated with the disease (Earnshaw & Chaudoir, 2009).

A vast number of studies have explored the relationship between the diseases and social stigmatization. The results indicated that there are certain diseases that are more stigmatized and the patients also have high level of perceived social stigma. Highly stigmatized diseases were found to share some common attributes (Herek, 1999; Jones, 1984). Literature reveals that diseases for which patient is considered as responsible for being infected are most stigmatized. Secondly, diseases that are both progressive and also incurable are also more prone to social stigmatization. Thirdly, the disease with limited knowledge and understanding in the general public with elevated myths and stereotypes are more stigmatized. Lastly, the one with symptoms that cannot be concealed (Jones, 1984). All the mentioned attributes best fit to HIV/AIDS making it more probe to social stigmatization and its related consequences.

HIV/AIDS patients are blamed for being infected by the virus and are often judged on moral grounds. Also, the disease is yet not curable. There is no vaccine that could treat the virus. This aspect further mends the path for social stigma. Additionally, people lack knowledge about the spread, infection, and treatment of HIV/AIDS. People believe more on stereotypes and myths associated with the disease. HIV/AIDS related symptoms are quite evident, repulsive, and ugly resulting in disruptive social interactions (Herek, 2002). Keeping in view these facts, it has been found that HIV/AIDS is highly prone to stigmatization. Yet, the actual and perceived stigmatization impacts differently to HIV/AIDS patients.

HIV/AIDS related social stigma is manifested in different ways. Broadly speaking, HIV/AIDS related stigmatization is manifested by persistent self-blame and self-deprecation. In this case, the infected person falls victim of self-stigma that leads to deteriorating physical and psychological health. Second type of social stigma

manifestation is enacted stigma that mainly occurs when an individual is vigorously discriminated because of his/her HIV-status (Ma, Chan, & Loke, 2019). Most important and effective among these is perceived social stigma for HIV/AIDS patients. Perceived social stigma refers to the fear that people living with HIV/AIDS are equipped with. Fear that if they disclose about their HIV/AIDS status family, friends, colleagues, and community will immediately reject them and he or she has to face serious physical and psychological consequences that aggravate with progress in the disease (Chi, Li, Zhao, & Zhao, 2014). From the literature, it has been found that among these types of social stigma manifestation the most influential and life threatening has been perceived social discuss.

Empirical studies have indicated that actual experience of social stigma among the HIV/AIDS individuals is far less than those who have perceived the stigma. It was found that among the people living with HIV/AIDS only 26% of the individuals have experiences actual stigma. Contrarily, perceived social stigma or fear of stigmatization was found to be 97% (Thomas et al., 2005). Comparatively, perceived social stigma have a high potential to negatively affect the quality of life of HIV/AIDS patients. Moreover, the environment adversities were also found to escalate more sharply due to perceived social stigma rather the actual stigma (Nthomang et al., 2009). Perceived social stigma has also been associated with low self-esteem and confidence among the HIV/AIDS infected individuals (Trani, et al., 2020). Additionally, perceived social stigma diminishes the determination to live among the people living with the HIV/AIDS epidemic. This relationship is less evident in those who have actually experienced stigmatization (Campbell & Deacon, 2006.). Keeping in view these facts, current study has emphasized on the perceived social stigma in relation to HIV/AIDS.

It is important to address the adversities that are caused by stigmatization in HIV patients who are already suffering the worse.

Previous studies reporting affecting factors on perceived social stigma have revealed that gender, age, background factors, level of stereotypes, and social support can potentially increase the level of perceived stigmatization among the HIV/AIDS patients (Stangl, Brady, & Fritz, 2012). Additionally, it was found that HIV/AIDS related stigmatization is the result of complex interaction among the self, contextual, and social factors. Focusing on the social factors, availability of accurate information, accessibility of healthcare, cultural and political issues, and social support are the main predictors of perceived social stigmatization among the HIV/AIDS patients. Whereas, life conditions, health status, drug abuse, time since diagnosis, and family circumstances are the main contextual factors associated with perceived social stigma among the targeted population. Moreover, self-factors such as spirituality, religiosity, presence of stress, anxiety, and depression, coping skills, level of education, and self-esteem are the significant influencing factors promoting level of perceived social stigma among the people living with HIV/AIDS (Brouard & Wills, 2006)

Literature has revealed that there are numerous interrelated factors as well that endorse HIV/AIDS related social stigma in the society. Firstly, HIV/AIDS is strongly associated with the behaviors that are strongly condemned by the social norms and are already stigmatized that includes sex work, homosexuality, and injection drug use. Secondly, HIV/AIDS is perceived as a life-threatening disease as a result many tend to keep distance from those infected with the disease. Thirdly, the stigmatization enhances because of the common notion that an individual infected with HIV/AIDS is solely responsible for the acquisition of the disease and thus, s/he has to bear the

consequences. Lastly, the religious and moral belief system compel people to assume that the person with HIV/AIDS is morally corrupt and deserves punishment (De Bruyn, 1998). Such notions endorse HIV/AIDS related social stigma in a society.

Furthermore, individual and socioeconomic factors also impact the HIV/AIDS related social stigma. In this vein, younger individuals were found to be less stigmatizing towards the HIV/AIDS patients (Herek, 1999). Moreover, level of education, class, residential area has also been found to be related with stigmatizing attitudes towards the HIV/AIDS patients. Lower education and income level has been found to be strongly associated with the social stigma pertaining to HIV/AIDS. Social stigma related to the disease under scrutiny also vary across culture, settings, and form of stigma (Aggleton, Yankah, & Crewe, 2011; Lim et al., 2013).

Stigmatization is strongly associated with the HIV patients, a process that discredits and devalue them that results in social inequality and stress at the individual level (Hamra, Ross, Karuri, Orrs, & D'Agostino, 2005; Herek, 1999; Kontomanolis, Michalopoulos, Gkasdaris, & Fasoulakis, 2017; Thomas et al., 2005). HIV related stigmatization has serious consequences for the people living with this virus. In many cases, empirical studies have revealed that such individuals are refrained by seeking regular medical care that they direly need. The negative behavior from the people around discourages HIV patients from adhering to the antiretroviral (ARV) therapy (Malcolm et al., 1998; Vanable, Carey, Blair, & Littlewood, 2006). A study conducted in Thailand revealed that the HIV patients are often isolated and this fear of isolation result in delay in access to care (Vanlandingham, Im-em, & Saengtienchai, 2005). Social isolation and hatred is strongly observed by the HIV patients.

Past studies have indicated that HIV related stigmatization immersed soon after the spread of disease. Social isolation is the eminent outcome of the HIV. People living with this disease were considered as outcasts and untouchable (Adewuya et al., 2009). Studies indicated that people feel uncomfortable in the presence of HIV patients. In many cases, they were not allowed to attend any social gatherings (Lee, Kochman & Sikkema, 2002). A study has indicated that stigma leads to numerous psychological outcomes in HIV patients. Dlamini et al. (2007) revealed that the most frightening element in the life of HIV patients is the neglect from the community they are living in. Studies have supported the notion that miseries of the HIV patients increase many folds because of the stigmatization (Kontomanolis, Michalopoulos, Gkasdaris, & Fasoulakis, 2017; Olapegba, 2010). HIV turns out be a complete trauma for the people living with it, killing them physically and psychologically.

Stigmatization is a menace that not only impacts the individuals infected with it but also their family, friends, and most importantly their partners. Research has revealed that patients infected with HIV found stigmatization far heavier than the disease itself. The psychological pain inflicted by the stigmatization in HIV patients seem to be unbearable for them, especially in Muslim countries (Shaik, 2017). In order to reduce the burden and sufferings of the people living with HIV many of the international organizations such as United Nations and human activists exerted efforts and resources. Emphasizing on the issue of stigmatization, empirical researches have highlighted that it is not only the community that discriminates the HIV positive but also the caregivers and physicians (Doka, Danjin, & Dongs, 2017). Despite of the grave impacts of stigmatization on the HIV patients, it is less explored in indigenous context.

Stigma is a highly undesirable attribute that an individual possesses as it negatively impacts a person's social standing and status in the society. It is not just the

HIV-positives who are stigmatized and face discrimination from the society. There are other groups that involve homosexuals and sex workers who also face fierce rejection from the society based on stigmatization. Yet, a study revealed that HIV-related stigma lies at the top of many other stigmas (Ahsan Ullah, 2011). There is a sheer rejection and hatred for the individuals living with HIV.

Stigmatization defies HIV-positive individuals from their basic human rights, unfairly. Many of the HIV- positive individuals reported that HIV related stigma has negatively affected their life by seizing numerous opportunities and rights. It was revealed that this discrimination is specifically because of the HIV-stigmatization (Fauk, Ward, Hawke, & Mwanri, 2021). A study also indicated that adversities caused by the structural inequity is further aggravated by the fierce emotional rejection as reported by the HIV positive individuals (Kumar et al., 2017). In this vein, stigma is seeming to be lying on the extreme end of discrimination continuum.

Another aspect that is brought in limelight in relation to HIV stigmatization is the stereotypes that are deeply inculcated in the society. The stereotypes against the people living with HIV result in prejudice and hatred as in many cases such people are judged on moral grounds. Such individuals feel isolated from the larger group as they are shamed for the disease they acquired (Gupta, 2018). Furthermore, a study indicated that stigmatization increases when HIV is given a sexual and moral connotation. In this vein, even a church turns out to be stigmatizing environment snatching away the right to enter the church from HIV-positive individuals. Align with this, a study indicated that stigmatizing attitudes towards the HIV individuals arise from the people's false beliefs such that people living with HIV must have indulged in immoral activities and also it is only the immoral people who get infected by HIV. Correspondingly, it is a prevalent belief that HIV could be acquired even through the casual contact with the

patient (Mahamboro et al., 2020). Such beliefs promote stigmatization and discrimination towards the HIV positive individuals.

The implications related to stigmatization is found to be very grave and powerful. A study indicated that HIV infection is most commonly associated with specific sexual activities that are unacceptable in accordance to the social and moral norms. Thus, there seem to be powerful implications to deal the matter. In many of the Arab countries HIV-positive is associated with extramarital sex or out of wedlock sexual activities (Haroun et al., 2016). The punishment in both the cases is exile from the society or the death.

In many cases, it has been found that people are well-aware that there could be several reasons of getting infected by HIV/AIDS, yet stigmatization prevails. A study indicated that in most of the HIV cases the family members, hospital staff, caregivers, nurses, and majority of the community members were aware of the fact that HIV cannot be transmitted through casual contact. Yet, they were found reluctant to challenge their false beliefs and break stigma (Ahsan Ullah, 2011; Paxton et al., 2005). Study also revealed that people were reluctant in sharing their utensils and drinking glasses or sitting closer to them. Such attitude was the result of stigmatization which seem to be more prominent in Asian countries. Literature revealed that in Thailand, India, Philippines, and Indonesia around 54% of the people living with HIV indicated that they have been stigmatized, isolated, and refrained from enjoying their basic human rights (Ahsan Ullah, 2011).

Literature has also revealed that level of stigmatization varies with gender. A study indicated that female HIV-patients faced higher level of stigmatization and related consequences as compared to males (Asiedu & Myers-Bowman, 2014; Geary

et al., 2014). Ramjee and Daniels, (2013) also supported the notion that the burden of stigmatization is heavier for the women as compared to their counterparts. Likewise, a study conducted in Uganda and India also revealed that the level of stigmatization for the women increases two-folds. They are not just stigmatized for being HIV positive but also for being a woman who is considered as honor of the entire family (Malavé, Ramakrishna, Heylen, Bharat, & Ekstrand, 2014; Nattabi, Li, Thompson, Orach, & Earnest, 2011). An empirical research indicated that women are sent away by their families and if they are married they are not own by their husband or her own family. Also, it was found that they are denied their possessions. In this vein, a study also indicated that stigmatization borne more serious consequences for married women than unmarried women (Halli et al., 2017; Iqbal et al., 2019). On the whole, fear of stigmatization compels many women with HIV-positive to hide their identity and refrain them from seeking health care from health care professionals.

Furthermore, the gendered aspect of social stigma associated with HIV/AIDS revealed that the adolescent and young women are affected disproportionately by the epidemic (UNAIDS, 2019). These women are blamed for bringing disease and shame to the family. In most cases, they are denied accommodation, abandoned and subjected to violence (Reis, Guerra, & Lencastre, 2013; Udobong, Udonwa, Charles, Adat, & Udonwa, 2015). For women, the social stigma associated with the disease aggravates because of deeply rooted patriarchal norms, forced marriages, and violence against women (Barnes & Murphy, 2009; Russell & Seeley, 2010). In many cases, women living with HIV/AIDS were restricted of travel opportunities. They also acquire lower social status while losing their social identity, livelihood, and housing (Mahajan et al., 2008; Nyblade, 20056; Reis, Galvao, & Gir, 2013; UNAIDS, 2019). These aspects make the HIV-positive women more vulnerable to stigmatizing attitudes.

Pakistan has also been facing the issue of stigmatization in HIV positive individuals. The stated issue seems to be aggravated with the rapid spread of the HIV/AIDS which has turned to be an epidemic. In Pakistan, HIV/AIDS is most common in sex workers, intravenous drug users, and individuals receiving blood transfusions as supported by Rai, Warraich, Ali, & Nerurkar, 2007). Pakistan is struggling to control the spread of disease. There are cases where Pakistani workers were deported from the international firms because of being HIV positive (Kayani, Sheikh, Khan, Mithani, & Khurshid, 1994). Statistics revealed that approximately 96,00 individuals are living with HIV/AIDS in Pakistan, despite of the fact that its prevalence is low (Rodrigo & Rajapakse, 2009). The stereotypes and false beliefs pertaining to the stigmatization of HIV-patients is quite evident in Pakistani society that hampers the effected patients to seek health care or medicines. The social stigma associated with HIV/AIDS has restricted the control of the epidemic in Pakistan. Thus, requiring attention from the researchers and policy makers.

There are numerous factors that are promoting social stigma associated with HIV/AIDS in Pakistan. One of the main factors is lack of knowledge about the epidemic and illiteracy (Adewuya et al., 2009). The country under scrutiny scores very low on the human development index that includes literacy rate as well (Kazi, Abdul, & Mohammed, 2000). This aspect makes Pakistan more vulnerable to HIV/AIDS stigmas. Moreover, literature has also revealed that in South Asia there is a strong negative perception towards HIV/AIDS and those living with it that in-turn intensifies the associated stigmas. This disease is taken as a dirty disease and evaluated more on the moral continuum rather on medical Bhattacharya (2004). Such perceptions play an effective role in hampering the social development of the country. Yet, the social stigma associated with the epidemic seems to be under-researched in Pakistan.

The negative impacts of the social stigma associated with HIV/AIDS can be buffered with the social support. In this vein, family social support seems to be the most effective having potential to enhance the effectiveness of the treatment programs and hope towards life while mitigating the adversities caused by stigmatization. The perceived social stigma can be reduced by the effective and persistent family support. Keeping in view this fact, current study has emphasized on the role of perceived family support as a buffering factor.

Perceived Family Social Support. The term social support was originally conceptualized by the social scientists in 1970s (Berkman & Syme, 1979). Most commonly used definition of social support is given by Taylor, Welch, Kim, and Sherman, (2007) that states that perceived social support is the perception and the experiences that one is cared, valued, esteemed, and loved by his/her immediate family, friends, and closed ones. Lin, Ensel, Simeone, and Kuo, (1979) further elaborated the concept of social support and revealed that social support includes acquisition of information, material support, health advice, emotional support, or even moral support from people whom an individual considers worthy such as friends, family, relatives, and spouse. Furthermore, literature reveals that all the social relationships does not worth the social support but only those that are considered or perceived as appropriate and reliable sources to fulfill an individual's needs. That is to say, it is perceived social support that determines that existing social relationships are of any significance and support to a person (Roohafza et al., 2014). Thus, current study has emphasized on perceived social support.

The study shows that social stigma can be minimized by the effect of social support. the model has been used for reasoning lines takes account for these facts. If social support aids for minimizing the social stigma along with this the mental health

improvement, the social stigma is to be mediator. But considering that how much social stigma is affected by social support. There will be a bigger improvement of mental health if perceived family support effects the perceived social stigma in an easy way (Herek, 2002). So, it has been seen that if a person come across a variety of diseases there is a strong impact of social support on that person's mental health.

Perceived social support is considered as the most important moderating factor in coping and dealing with the stressful life events. Family, friends, neighbors, and colleagues stand among the potential courses of perceived social support but perceived social support from the family is considered as the primary source of social support and is highly valued by an individual who is suffering from difficult situation (Streeter & Franklin, 1992). Keeping in view the significance of perceived family support, current study will emphasize on it in relation to other study variables that are perceived social stigma and psychological problems.

Family plays a crucial role in enhancing the health of its ill members by offering them care and support for preventing disease. In reference to HIV/AIDS, family support lies at the core to prevent the transmission of disease, educating individuals, and endorsing behaviors that reduce the risks related to HIV/AIDS among those living with it (Amiya et al., 2014). In accordance with American Psychological Association, family is the de facto caretaker for the individuals living with HIV/AIDS (Badahdah, 2016). Richter et al., (2009) states that HIV/AIDS is a family disease as without support from the family effectiveness of prevention could not be prolific. UNAIDS has also emphasized on the role of family in controlling the adversities of HIV/AIDS (Mohanan & Kamath, 2009; Webster, 2019). Recent researches on HIV/AIDS have revealed that best intervention and prevention strategies were those that have involved the couples and family centered approaches. Such interventions enhanced the positive outcomes of

HIV/AIDS treatment and care (Myer et al., 2014). Keeping in view these facts, it is evident that perceived family support is significantly positively related with the effective treatment and improved quality of life of people living with HIV/AIDS patients.

Family has been recognized as natural and most dominating grouping in a society providing its members with tangible and intangible support required for well-being and positive growth (Belsey, 2005). The term family has been defined in many dimensions. Levine (1990) reflected that family is based on individuals sharing deep, personal, and honest connections no matter if they are together by birth, adoption, declared commitment, or a legal marriage, entitled to offer support at the time of need to possible extent. In this context, family support has acquired immense attention from the researchers investigating HIV/AIDS, considering it as a buffering factor mitigating the related adversities.

Conceptualizing the perceived social support from the family, House, Landis, and Umberson (1988) highlighted that it includes four main types of social support that are widely used in the researchers conducted today. An individual suffering from life threatening disease such as HIV/AIDS would have looked forward to acquire informational support from the family member involving education and guidance to manage health-related problems and personal problems. Secondly, he/she may look forward to instrumental support –also known as tangible support- that includes the provision of tangible support such as financial aid, time, labor, material goods, or any direct assistance. In case of HIV/AIDS and low and middle-income countries it mainly includes food and shelter security or some loan. In reference to HIV/AIDS, emotional support is direly needed by the people suffering from it. It includes the provision of affection, care, love, empathy, listening, encouragement, and trust from the family

members. Lastly, appraisal support- also referred as affiliative support and social integration- includes social relationships that an individual has with those who have mutual interests (Tumwine, Aggleton, & Bell, 2020). In the current case, it includes HIV/AIDS patients that targeted population rely on for the sake of affirmation and feedback. All these aspects reveal that perceived social support from family could play an effective role in treating HIV/AIDS patients.

Social support from the family lies at the core of productive psychosocial management. Optimal psychosocial management of people living with HIV/AIDS requires social support from the close and loves ones (Modabbernia, Ashrafi, Malekzadeh, & Poustchi, 2013). Social support refers to interpersonal processes involving emotional comforting, giving advice, offering tangible support, discussing problems to find solution, and including one in need in their social network (Hobman, Restubog, Bordia, & Tang, 2009). These are the components of social support that HIV-patients look forward to during their fight with the disease. Research indicated that familial social support is most important for the speedy recovery of the HIV-patients. A significant positive relationship between psychological well-being of HIV-patients and familial social support has been found as perceived family support enhances the mental state of individuals suffering through the epidemic (Caress, Luker, Chalmers, & Salmon, 2009; Vermaas, 2010). Moreover, a person suffering from HIV/AIDS or other chronic diseases tend to behave differently because of their catastrophic experiences (Yeh, & Bull, 2012). As part of a family, HIV/individuals expect aid, assistance, and support from their family and on fulfillment of their expectations their subjective-well-being enhances to a significant extent (Pinquart & Sorensen 2000; Thomas, 2010). HIV/AIDS patients with high level of perceived social support have been found to live

a long and better life in comparison to those with low perceived social support from family.

In reference to family support, study supported that perceived family support plays a crucial role in the effectiveness of preventive and treatment programs in HIV/AIDS individuals. Vermas (2010) indicated that perceived family support has a significant negative relationship between the stress among the HIV/AIDS victims. Moreover, perceived family support is recognized as a protective factor that enhances the psychological well-being by mitigating the psychological problems pertaining to the disease. Fuller-Iglesias, Webster, and Antonucci, (2015) (2015) highlighted that the well-being of individuals suffering from chronic diseases such as AIDS requires support from their immediate family to respond prolifically towards the treatment programs. Similar relationship was found by the Gonzalez et al., (2004) as well among the people living with HIV/AIDS. Asante, (2012) found that people with significant perceived family support tend to score lower on psychological problems as compared to the one without it amid a catastrophic trauma. Perceived social support is felt and understood by the patients of HIV/AIDS. They internalize this support that in turn enhances their psychological well-being and boost their will-power to respond to the treatment plan (Sun, Zhang, & Fu, 2007).

In reference to HIV/AIDS, a study indicated that in order to cope with the pain and sufferings associated with the disease family support is required (Davey, Foster, Milton, & Duncan, 2009). In this context, people living with HIV/AIDS with high perceived family support has been found to be having fewer physical symptoms. On the other hand, loss of family support had resulted in increased strain in the life of HIV/AIDS individuals (Poudel, Buchanan, Amiya, & Poudel-Tandukar, 2015). Perceived family support has been found to increase the positive health outcomes by

enhancing the coping mechanisms of the individuals. This indicates that perceived social support from the immediate family enhances the coping skills of an individual's suffering from HIV/AIDS. Increase level of perceived social support assist in dealing with the stressful environment that HIV-positive individuals have been facing (Field & Schuldberg, 2011). Inadequate perceived family support is also related with poor physical outcomes in the people living with HIV/AIDS (Okonkwo, Larkan, & Galligan, 2016).

The lives of many living with HIV/AIDS has improved as a result of perceived family support (Amiya et al., 2014; Lewis et al., 2012). Perceived family support has been found to mitigating the stress-inducing crisis in the lives of HIV/AIDS patients (McDowell & Serovich, 2007). Moreover, literature has strongly supported the notion that perceived family support potentially decrease the hopelessness and physical distress among the HIV-positive individuals. Depression has also been significantly reduced as a result of increase perceived family support among the HIV/AIDS patients (Wouters, Masquillier, & le Roux Booysen, 2016).). Keeping in view these facts, it can be said that perceived family support is direly needed to treat the HIV/AIDS patients, physically and psychologically.

Perceived social support has been found to be more effective in dealing with HIV/AIDS patients as compared to actual family support received by the infected individuals. McDowell and Serovich, (2007) revealed that perceived family support strongly predicted the positive mental health outcomes while actual family support was less related to positive impacts, comparatively. This relationship is more evident among the women population living with HIV/AIDS. The level of satisfaction is greater for the perceived social support as compared to the actual social support among the HIV/AIDS patients (Semple, 1996). Also, perceived social support dominated the

effectiveness of large social network. Gay HIV/AIDS patients with large social networks were less satisfied with their social support as compared to women with familial social support (Serovich, Kimberly, Mosack, & Lewis, 2001). This indicates that it is not the actual rather perceived social support that is mainly related with the positive outcomes among the HIV individuals.

Coping with HIV/AIDS is facilitated by the perceived social support. A reason behind this is that that perceived social support that includes familial support tend to minimize the negative impacts of perceived social stigma among the HIV/AIDS individuals (Galvan, Maxwell Davis, Banks, & Bing, 2008). There is an inverse relationship between the perceived family support and perceived social stigma among the individuals living with HIUV/AIDS (Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009). Similarly, a study conducted by Ross and Srisaeng (2005) in Thailand with the HIV-positive pregnant women has revealed that the higher perceived social support from the families has resulted in lower level of perceived social stigma. In this vein, perceived family support is important in mitigating the adverse impacts of perceived social stigmatization as previously discussed.

Perceived social support from the families have a moderating effect that tend to address the mental health needs of the HIV/AIDS patients. Perceived familial social support tend to extant a promising mechanism that assist in addressing the psychosocial needs of individuals infected with HIV/AIDS (Okonkwo, Larkan, & Galligan, 2016). Also, familial social support has a significant positive impact on the mood of HIV/AIDS individuals. Literature has revealed that the perceived social support from family potentially reduce the suicide risk conferred by the HIV infected individuals. Also, the psychological adjustment has also been enhanced among the HIV/AIDS patients as a result of increased social support from their families (Casale, Boyes,

Pantelic, Toska, & Cluver, 2019). Consequently, the significance of the perceived family support among the HIV/AIDSS infected individuals is quite evident from the literature.

There are different types of social support and among them family support is most important for productive results during HIV/AIDS therapies and treatment programs. Social support from the family play facilitates an individual in adapting with the disease that is HIV/AIDS (Beka & Shaka, 2018). A study indicated that the physical impacts of the HIV/AIDS result in numerous psychopathological impacts. In such times, the social support observed from the family is direly needed. It could be instrumental involving preparing meals, administering medication, and taking care of the finances. Lack of effective support from the family has a significant positive relationship with the suicide among the patients with chronic diseases such as HIV/AIDS (Amiya et al., 2014). Likewise, suicide ideations have also been strongly linked with the less family cohesion in an international study (Demi, Bakeman, Sowell, Moneyham, & Seals,1998).

A large number of studies have revealed the significance of family support in programs related to HIV/AIDS patients. It was found that the support from the family members and partners significantly improved the adherence and effectiveness of therapy which is direly needed (Edwards, 2006). Also, a study conducted with HIV-infected adults revealed that the psychological adjustment increases with the social support from the family along with spiritual support that in-turn reduces psychological distress among the targeted patients. Social support from the family is also associated with emotional well-being (Olowookere et al., 2015). This reveals that social support from the family lies at the core of physical and psychological well-being of the individuals suffering from HIV/AIDS.

Studies conducted in rehabilitation centers also indicated that familial social support is must for the health improvement of the HIV/AIDS patients. Low level of family support was found to have a significant relationship with loneliness, unemployment, deteriorating quality of life, omitting antiviral therapy, increase in physical symptoms, and psychiatric comorbidities (Blasiole et al., 2006). Positive effects on the whole improved with the perceived family support among the HIV-infected individuals (Li et al., 2014). Less frequent contact and interaction with family members were found to be related with the more negative events in the life of HIV/AIDS patients (Chu & Selwyn, 2011).

Many of the empirical studies have indicated that adherence to antiretroviral therapy is the result of effective family support among the people living with HIV/AIDS. Family ties promotes the healthy behaviors among the HIV-positive individuals while assuring adherence to the antiviral therapy. HIV-positive individuals with support tend to have positive coping strategies implied to adapt with the illness while losing hope towards a better life. HIV-positive status has the potential to harbor fear of rejection and death among the individuals. The fear of rejection, stigmatization, and isolation escalates (Gilbert & Walker, 2010). Such fears reduce the adherence with the antiviral therapy. But with the strong family support the fears are replaced by the positive thoughts and hope of life. Family support offers grounds to the HIV-positive individuals to discuss and disclose their fears and personal problems. Contrarily, individuals with low level of family support or with increase fear of loss of family do not share their health status or information related to the antiretroviral therapy (Adejumo, 2011). Moreover, a study has also found an inverse negative relationship between family support and health outcomes of the individuals dealing with HIV/AIDS. It was revealed that the fear of stigmatization and discrimination from the family

members negatively impact the health status of the HIV-positive individuals even if the monetary support has been provided by the immediate family (Yadav, 2010).

Researches has referred HIV/AIDS as a family disease because of the fact that if one member is diagnosed with HIV the effect radiates through the entire family (Bor et al., 1993; Pequegnat et al., 2001; Rotheram-Borus, Flannery, Rice, & Lester, 2005). In this vein, the first lines of defense required by individual with HIV/AIDS is found to be the family support. Support from the family at the time of facing hardship is related with the more pronounced adherence with the mediation among the HIV/AIDS patients (Song, Lee, Rotheram, Borus, & Swendeman, 2006). Also, a positive support from the family also encourages open communication, decrease substance abuse, and risk behaviors among the young adults fighting with the diseases (Goode et al., 2003; Hosek, Harper, Domanico, 2005). For the youth, family support is the main pillar supporting the treatment and preventive measures pertaining to HIV/AIDS. Young adults in their early twenties struggles to follow the medications regime. Taking medicines several times, a day is reported to be tiresome and problematic in the targeted population. Family support has offered the HIV victims care and concern, they required such as offering food and drink with the medicines and reminding them of the medicine and therapy routine (Hosek et al., 2005; Lyon et al., 2003; Song et al., 2006).

As previously discussed, that perceived social stigma significantly hampers the physical and psychological health of individuals living with HIV/AIDS. Literature reveals that adversities caused by the perceived social stigma could be reduced by increasing the social support from the family and closed ones. Perceived social support is inversely related with the perceived social stigma among the individuals with HIV/AIDS (Galvan, Maxwell Davis, Banks, & Bing, 2008). The results of an

international study also revealed that HIV-positive individuals with higher social support from the family reported lower level of perceived social stigma Ross and Srisaeng (2005). Moreover, with decline in perceived social support the perceived negative reactions from the community increased among the people living with the HIV/AIDS (Vanlandingham, Im-Em, & Saengtienchai, 2005). The impact of perceived stigma on psychological health of HIV-positive individuals was indirectly mediated by the social support from the family. The fear of social isolation as a result of stigmatization after being diagnosed with HIV/AIDS is also reduced by the social support from the family. Mental Health challenges due to perceived stigma are also mitigated by the perceived familial social support among the HIV patients (Gohain & Halliday, 2014).

In context of Pakistan, family lies at the core of social life and family support the strongest assistance to face the hardships whether they are health related, financial crises, emotional breakdown, physical disabilities, or other. In Pakistani culture, people are closely knitted into family bonds where family is considered as symbol of identity and honor. The socio-cultural roots of the country make family members interdependent on each other. Individuality or independence are exchanged with the sustenance of family bonds. These practices make family and family support an important aspect of an individual life (Muzaffar, N2017). Unlike, western countries in eastern countries its family bonding that is considered as the most appropriate social relationship to rely on at the time of uncertainty and hard times (Hernández-Padilla et al., 2021). In this vein, it is assumed that perceived family support could play a significant positive role in the life of people living with HIV/AIDS.

Apart from this, current study holds significant value in the Pakistani perspective. Literature has clearly reflected that family support could play a significant

positive role in enhancing the family growth, health and functioning (Muzaffar, 2017). In this vein, current study has focused on the significance of perceived social support from the family in the lives of HIV/AIDS patients. Studies employing value interdependence theory have indicated that in Asian countries –that includes Pakistan- social support from the family has proven to be a protective factor against the hardships of life. While, studying social relationships and interactions, it has been found that communities where interdependence is high the outcomes depend on the behavior and actions of other members of the group (Rusbult & Van Lange, 2008). Align with this notion, the functioning and health related outcomes of the HIV/AIDS is significantly dependent on the attitude of the family members. Indigenously role of perceived social support from the family is less explored in context of HIV/AIDS patients. Thus, current study would reflect upon these lines.

A study has indicated that with progress of chronic disease such as HIV/AIDS the responsibility of the caregivers also increases. The family members have to invest greater resources to fulfil the patient needs. In many cases, the severity of illness has been strongly associated with the negative family functioning that in turn reduces the perceived social support from the family (Goren, Montgomery, Kahle-Wrobleski, Nakamura, & Ueda, 2016). As the individual progress from HIV positive to AIDS, there is high risk of low family cohesion with increased level of conflicts with the family members that could potentially reduce the perceived family support offering ample space for the development of psychological problems (Pedersen & Revenson, 2005). Current study would investigate the impact and level of perceived family support available to HIV/AIDS patients in Pakistan.

On the whole, it can be stated that perceived social support from the family play a significant role in the life of individuals living with the HIV/AIDS. Keeping in view

this fact, current study has aimed to investigate how perceived social support is related with perceived social stigma and psychological problems in indigenous context.

Psychological Problems. People living with severe medical problems often been diagnosed with the psychological stressors or problems. This relationship is also evident among the HIV/AIDS patients (Dejman et al., 2015; Psaros et al., 2011). Psychological problems refer to range of symptoms and experiences that an individual encounter in his/her personal life that are mostly found to be confusing, painful, troubling, and far from the normal or standard/acceptable behavior (Tesfaye & Bune, 2014; Tesfaw et al., 2016). Psychological problems are marked by the atypical thought patterns, feelings, and behavior in an individual that negatively impact routine life chores. There are different situations that instigate and increase the chances of psychological problems in individuals living with HIV/AIDS.

A report published by US Department of Health and Human Service revealed that there are range of factors that increase the risks of development of psychological problems in HIV/AIDS patients. Emergence of psychological problems in HIV/AIDS patients could be the result of failure to get access to the mental health services because of lack of resources, awareness, or fear of stigmatization. Along with this, social shocks that include loss of employment or the worries about being able to operate effectively at the workplace also result in psychological problems in HIV/AIDS patients (National Institute of Mental Health, 2021). The burden of disclosing the HIV-status is another issue leading to psychological distress (Geary et al., 2014). The report revealed that loss of social support from the friends and family and social stigma and discrimination associated with the HIV/AIDS lies at the core of all the psychological problems (Mi et al., 2020). Lack of effective monetary resources add to the adversities (National

Institute of Mental Health, 2021*)*. These are the main factors that are related with the psychological problems among the HIV/AIDS infected population.

Psychological problems are of different nature, but they are found to occur in the life of people living with HIV/AIDS irrespective of their gender, ethnicity, social status, and class (Yi et al., 2015). Such problems impact their health status by refraining them to seek healthcare services which negatively impact the quality of life of targeted population (Herrmann et al., 2013). Psychological problems are diagnosed in individuals with HIV/AIDS in all parts of the world. This, require attention from the researchers and practitioners.

A survey conducted at national level in South Africa by using Composite International Diagnostic Inventory revealed that the 54% of the HIV/AIDS patients has a clinically significant psychological disorder (Freeman, Nkomo, Kafaar, & Kelly, 2007; Yi et al., 2015). Moreover, an empirical study revealed that prevalence of psychological problems among the HIV/AIDS patients is two to three times greater than those who are HIV/negative (U.S. Department of Health and Human Services, National Institutes of Health, 2019). The HIV-positive individuals not only have to bear the burden of physical ailment but also psychological problems.

Literature reveals that it is important to deal with the psychological problems pertaining to the HIV/AIDS. The reason behind this is that psychological problems refrain the HIV-positive individual from following the medication regime. The retention to antiretroviral therapy is reduced among the HIV patients diagnosed with clinically significant psychological problems (Cichowitz, Maraba, Hamilton, Charalambous, & Hoffmann, 2017). Also, ineffective or adverse antiviral- related clinical outcomes have been found in the HIV-positive individuals who are having

psychological problems (Nel & Kagee, 2011). A study has also indicated that progress from HIV to AIDS escalates among the HIV-positive individuals suffering from psychological problems, comparatively (Remien et al., 2019). Keeping in view these facts, it is important to address the psychological problems in HIV/AIDS patients.

Biological factors also increase the vulnerability of the development of the psychological problems in people living with HIV/AIDS. The immune system of HIV-positive individuals gets compromised that increase the vulnerability of developing psychological problems. Frequent sufferings because of opportunistic infections make them emotionally and physically weak that further increase the vulnerability of psychological problems (Cook et al., 2004). Along with this death of a significant other due to AIDS also negatively impact the mental state of individuals with HIV/AIDS (Freeman, Nkomo, Kafaar, & Kelly, 2007). Along with this sociodemographic factor also impact the development of psychological problems among the people living with HIV/AIDS. Empirical studies have demonstrated that psychological problems are more prevalent in HIV-AIDS individuals who are older in age. Moreover, female with HIV-positive report greater number of psychological problems as compared to their counterparts (Yi et al., 2015). Low education also adds to the vulnerability of getting caught by psychological problems (Bjellan et al., 2008). Most importantly, the increase rate of unemployment among the HIV/AIDS patients has been significantly positively related with the psychological problems (Olley, Seedat, Nei, & Stein, 2004). HIV/AIDS infections result in challenging life for the individuals and negatively impacts their mental health with the on-set of different psychological problems.

Depression, Anxiety Disorders, and Stress. Of the many psychological problems diagnosed in HIV/AIDS patients the most prevalent were depression, anxiety

disorders, and stress (Pence, Miller, Whetten, Eron, & Gaynes, 2006; Remien et al., 2019). An empirical study has revealed that the prevalence rate of stress related psychological problems is 72%, for anxiety disorders it is 70%, and for depression it is 55%, among the HIV/AIDS pateints. These psychological problems are found to be prevalent in symptomatic and asymptomatic patients of HIV/AIDS (LeRoy & Barnes, 2005; Rizwan & Irshad, 2012). For these reasons, current study will emphasize on the prevalence of the aforementioned psychological problems among the HIV/AIDS patients in Pakistan.

The most common and prevalent psychological problem has been found to be depression. Depression refers to a mental disorder that presents with loss of interest, feelings of guilt, depressed mood, low energy level, low self-worth, irregular sleep patterns, loss of appetite, and poor concentration and cognitive capabilities (Tesfaw et al., 2016). Prevalence of depression among the HIV-positive men and women is twice as high as the general population (Wang et al., 2018). 14% of the HIV-positive individuals suffer through major depressive disorder while more than 50% suffer from range of depressive symptoms (Rizwan & Irshad, 2012). A study revealed that the depressive symptoms prevail in the life of an individual with HIV-positive status. In this vein, 22% - 45% of the HIV/AIDS patients have been diagnosed with major depressive symptoms as compared to 5% to 17% in a general population (American Psychiatric Association, 2012). There are certain groups that are at higher risk for depression that includes bisexual and gay men, transgender, drug injectors, and women of all races, especially adolescents and young women (UNAIDS, 2019). Depression in HIV/AIDS patients could also be the result of brain dysfunction because of the virus and HIV-medications.

Empirical studies have indicated that HIV/AIDS related depression could be the result of side-effects of medication regime taken by the infected individuals. The list of medicines that increase the risk for depression include Interleukin (depression and disorientation), Steroids (Mania), Efavirenz (decreased concentration, nightmares and depression), Stavudine (Manic episodes and asthenia), Zidovudine (Mania and depression), Interferon (Neurasthenia fatigue syndrome, depression), Zalcitabine (depression and cognitive impairment), and Vinblastine (depression and cognitive impairment) (American Psychiatric Association, 2012). These medicines enhance the chances of development of depressive symptoms from mild to severe level depending upon the stage of the HIV/AIDS and medication regime.

Depression significantly hampers their capabilities of carrying their routine life. While others report mild symptoms of depression. Their coping skills impedes with the clinically significant depression, reducing the adaptation with the illness (Yi et al., 2015). Depression is more common among the AIDS patients, as such individuals adjust with the fact that death is approaching them, and they are no longer healthy. Also, level of depression aggravates with the increase level of internalized shame pertaining to the associated risk behaviors and also because of the fear that other people will know their involvement in risky behavior (World Health Organization, 2008). Such scenario aggravates the trauma of being HIV/ADS positive.

Additional common psychological disorder that is strongly associated with HIV/AIDS patients is Anxiety-Disorder. Anxiety refers to a subjective, vague, non-specific feeling of restlessness, tension, fear, irrational thoughts and situation avoidance, apprehension, and feeling of impending doom (Tesfaw et al., 2016). Anxiety is strongly associated with the chronic diseases that includes AIDS (Gullich et al., 2013). Moreover, anxiety disorders are more common in women infected with

HIV/AIDS as compared to men (Hodo, 2006). There are range of anxiety symptoms experienced by HIV-positive individuals across the spectrum of anxiety disorders.

In this vein, the most prevalent anxiety disorders have been found to be adjustment disorder manifesting as anxiety disorder and is common after being diagnosed with the disease. Other than this, agoraphobia and social phobia is commonly observed in HIV/AIDS patients (Ursoiu, Moleriu, Lungeanu, & Puschită, 2018). Generalized anxiety disorder and acute stress disorder has also been reported in HIV/AIDS patients and these are most common among those who are under medication (Beer, Tie, Padilla, & Shouse, 2019). Moreover, a study revealed that the prevalence of obsessive-compulsive disorder is higher among the individuals who are HIV-positive as compared to those who do not have the virus (Mathai, Obondo, Mutavi, & Kumar, 2018). Statistics revealed that the prevalence of anxiety disorder among the HIV-positive individuals is 15.8% as compared to the general population who has nearly 2.1% of prevalence (American Psychiatric Association, 2012b).

Literature reveals that panic disorder is also quite evident in the HIV/AIDS patients (Ursoiu, Moleriu, Lungeanu, & Puschită, 2018). In this vein, a study indicated that nearly 10.5% of the HIV-positive individuals were diagnosed of panic disorder as compared to general population with prevalence of 2.5%. Panic disorder among the targeted population has also been related with the opportunistic infections, cocaine use disorder, and also major depressive disorder. Panic disorder is found to be higher among the HIV-positive women as compared to men (American Psychiatric Association, 2012b)

Another psychological problem that is more evident in the HIV/AIDS patients is the post-traumatic stress disorder (PTSD). The prevalence rate of PTSD has been

found to be above 62% which is quite alarming. In many cases, progression of HIV has been associated with the diagnosable PTSD (Martin & Kagee, 2011). PTSD hinders their treatment plan and well-being making their lives more challenging. In HIV-positive individuals PTSD has found to be the result of a trauma, physical, or sexual abuse. This indicates that the past negative experiences aggravate and emerge as a result of HIV/AIDS.

HIV-positive individuals are vulnerable to develop HIV-associated dementia that increases the level of stress among the HIV/AIDS patients to many folds. It occurs when the HIV virus spreads to the brain resulting in encephalopathy, a disease that hamper the normal brain functioning. People with HIV-associated dementia suffer memory loss, difficulty in concentration and thinking, decrease motor skills, and also lack clarity in speaking (Bolokadze et al., 2008) Literature reveals that the HIV-positive individuals receiving antiretroviral therapy suffer less dementia symptoms as this treatment prevent the spread of the AIDS virus. Yet, in later stages of AIDS virus people are more vulnerable of developing HIV-associated neurocognitive disorder even if they are receiving antiretroviral therapy (McArthur, 2004). On the whole, AIDS virus damages multiple organs including the brain resulting in serious psychological problems with significantly increased level of stress.

Psychological problems related to HIV/AIDS patients include emotional, cognitive, behavioral, and vegetative problems. HIV/AIDS positive individuals show persistent crying and sadness revealing their emotional disturbance (Singer & Thames, 2016). Cognitively, they are found to be more pessimistic and well-equipped with negative beliefs about their life and health. Moreover, recurrent thoughts of death, suicide ideations, and guilt is also quite evident leading them to serious psychological problems that mainly includes depression disorder. Apart from this, their psychological

problems are reflected in their behavior as well. They are found to have low level of motivation towards the treatment and medication and towards life activities (American Psychiatric Association, 2012a). Anhedonia is another psychological problem that is prevalent in AIDS victims. Anhedonia individuals do not feel happiness even in normal pleasurable activities. They loss their interest even in things and events that they were excited about, previously (Preau et al., 2007). Another aspect that leads to serious psychological problems in the targeted population is vegetative issues. In many cases of HIV/AIDS, patients suffer from disturbed sleep, menstruation, bowel function, improper bladder activities, and eating patterns (Koen, Uys, Niehaus, & Emsley, 2007). As a result, they struggle to maintain their life that leads social retardation, sense of worthlessness, lower self-esteem, and demoralization.

Loneliness is another psychological problem that HIV-positive individuals experience. In a comparative study, it was found that the HIV-positive individuals are more vulnerable of developing fear of loneliness. The experiences of loneliness have also been found to be higher among the AIDS infected individuals as compare to general population with limited resources (Hardy & Vance, 2009). HIV/AIDS also lead to suicide as a result of poor psychological health. Literature reveals that the people living with the HIV/AIDS experience fatigue, anxieties, stress, extreme mental pressure, isolation, and hopelessness that make them frustrated. The increase level of frustration strengthens the will to commit suicide. Moreover, the crucial disruptions in sleep, decision making, appetite, concentration, appetite, sexual desire, and loss of interest in pleasurable activities, all enhance the desire to commit suicide. Greater guilt, worthlessness, valueless, and escape from others also result in problematic psychological disorder (Basavaraj, Navya, & Rashmi, 2010). Thus, it can be stated that

psychological problems require as much attention as the medical complications among the HIV/AIDS individuals.

Gender Differences in HIV/AIDS related Psychological Problems. Literature reveals significant gender differences pertaining to the prevalence of psychological problems among the HIV/AIDS patients. In this regard, HIV-positive females tend to score higher on diagnostic measures evaluating psychological distress (Carr & Gramling, 2004). Studies conducted in Nigeria (Dahlui et al., 2015), Cape town, (Simbayi et al., 2007), Uganda (MacLachlan et al., 2009) and Ethiopia (Mohammed, Mengistie, Dessie, & Godana, 2015) also support the notion that HIV-positive women are more vulnerable of developing psychological problems as compared to men being infected by the virus (Gupta, 2000). Studies indicated that females are more prone to develop psychological problems because of their biological impacts. Females suffer serious imbalance in their hormones that mainly include progesterone and estrogen. Imbalance in these hormones could potentially lead to depression and anxiety disorder. Moreover, females are found to be less capable of dealing or coping with a traumatic situation that makes them more vulnerable of experiencing adjustment problems (Riggs, Vosvick, & Stallings, 2007). This aspect also enhances their chances of getting panic at the face of an uncertain scenario. All these aspects indicate that HIV-positive women are more prone to develop psychological problems as compared to HIV-positive men.

HIV-related Psychological Problems and Perceived Social Support from Family. A study indicated that majority of the psychological problems emerge in the HIV/AIDS patients because of lack of social support and increase level of social stigma (Piot et al., 2015). One study revealed that in the sample of 361 individuals 37% suffered psychological problems because of lack of social support from friends and family and as a result of social stigmatization associated with the disease. Psychological problems have also been associated with loss of perceived social support from family (Öktem, 2015). Family is considered as the primary source of social support for the AIDS patients. Lack of social support from the family members potentially lead to psychiatric comorbidities and illnesses. Absence of perceived social support

from family decrease the coping skills of the individuals suffering from HIV/AIDS to handle the stressing events associated with the disease (Xu et al., 2017). Consequently, the vulnerability of the psychological problems significantly increases with the loss of perceived social support from the family. Perceived social support have also been found to buffer the effect of mental illnesses among the HIV-positive individuals. Poor health outcomes are higher among the HIV-positive individuals with low perceived social support (Amiya et al., 2014). All these aspects revealed that the loss of perceived social support from the family significantly increase the vulnerability of psychological problems for the HIV/AIDS patients.

HIV-related Psychological Problems and Perceived Social Stigma. The burden of AIDS-related psychological problems significantly increases because of the social stigma associated with the epidemic. AIDS-related social stigma negatively impacts the mental health of the HIV/AIDS infected individuals (Rueda et al., 2016). A study conducted in India revealed that the social stigma is hard to endure for already weak individuals that ultimately leads them to depressive symptoms. Moreover, stress, anxiety, and PTSD is predicted by the social stigmatization among the HIV/AIDS patients (Garrido-Hernansaiz et al., 2016). The relationship between psychological problems and perceived stigma have been found in different parts of the world among the AIDS patients. Empirical study conducted in India, Thailand, Zimbabwe, South Africa, and Ethiopia revealed that the psychological problems are significantly positively related with the perceived social stigma among the targeted population.

Keeping in view the prevalence of the psychological problems among the people living in HIV/AIDS, it is important to address the issue in indigenous context. In Pakistan, physical health has remained focus of attention of the health care units with little or no emphasis on the psychological problems. Psychological problems associated with the treatment are ignored that hamper the effectiveness of the HIV/AIDS therapies. In this vein, current study will explore the extent to which HIV/AIDS patients suffer

from psychological problems in Pakistan in order to design better intervention plan and enhance the effectiveness of the treatment and intervention plan.

Rationale of the Study

The HIV epidemic in Pakistan has turned out to be graver as compared to other Asian countries. It has moved from low prevalence to concentrated epidemic in a short period of time (Pakistan Global 2015; WHO 2016). Concentrated epidemics refers to presence of 5% or higher HIV incidence among the most vulnerable groups that are injecting drug users and commercial sex workers in Pakistan (Bokhari et al. 2007; Farid-ul-Hasnain, Johansson, and Krantz 2009). Pakistan is facing serious challenges in preventing and controlling the spread of AIDS. In this vein, the most prominent are HIV/AIDS related stigma, lack of national commitment, and absence of reliable data indicating the trend of the disease among the targeted population (Alonzo and Reynolds 1995; Pitpitan et al. 2012). Along with this, the risk behaviors associated with the HIV/AIDS transmission have also escalated in Pakistan (EMRO, 2017). Keeping in view all these facts, it is important to explore factors that are mainly contributing to the adversities and spread of the epidemic in the country. Current study will work on these lines adding significant knowledge and understanding to the challenges that HIV/AIDS patients are facing in the country.

Moreover, there are large number of international studies reflecting upon the psychological problems that the HIV/AIDS patients are facing. Unfortunately, indigenously psychological health has been less in focus. Thus, the psychological problems of the people living with HIV/AIDS will be addressed. This would be a significant contribution to the past literature and based upon the results of the study better and effective intervention could be planned in indigenous context.

Additionally, there is a dire need to explore how social stigma is impacting the HIV/AIDS patients. The level, extent and type of stigmatization will also be investigated. The relationship between the social stigma and psychological health will be scrutinized to reflect the seriousness of the issue. There is a scarce literature addressing the issues of social stigma in Pakistani society and its health impacts in the life span of the HIV/AIDS patients. Stigmatization is a menace that escalates the progress of HIV-virus to AIDS. Also, it hampers the disclosure of the HIV-positive status, seeking health care, taking medications and treatment. Such circumstances increase the spread of the disease as HIV-positive individuals do not refrain themselves from the risk's behavior associated with the disease. Social stigma requires attention in Pakistan to control and prevent the disease and to promote awareness. In the light of the result of the study, the level and extent and impacts of social stigma will be revealed in indigenous context revealing the severity of the situation and offering grounds to better address the issue. Result of the study will bring in limelight the social issue pertaining to the HIV/AIDS.

In many studies, focus has been kept on the negativities inflicted by the HIV/AIDS in the lives of the HIV-positive individuals. Current study not only address the challenges inflicted by the epidemic in the people with HIV/AIDS but also scrutinized the buffering factors such as perceived social support. Keeping in view, the socio-cultural significance of the social support from the family at the time of the adversity or during a chronic disease, current study has emphasized on the perceived social support from the family. The results of the study will reveal if the perceived social support from the family reduce the mental health challenges for the HIV/AIDS patients. Moreover, it will also reflect the effectiveness of the social support from the family in dealing with the social stigma associated with disease. If perceived social

support of the family is found to be effective in dealing with the HIV/AIDS trauma in indigenous context, focus could be laid on the family therapy as a part of intervention plan.

Most importantly, current study will acquire first-hand information from the HIV/AIDS patients rather than relying on the information from the indirect sources. This will enable to get most reliable and valid information to address the social issues pertaining to the HIV/AIDS among the patients. To offer more profound results, emphasizes will be kept on the gender differences as well in reference to the psychological problems, social stigma, and perceived family support as a buffering factor. This will reveal the gendered wise challenges faced by the HIV/AIDS patients and accordingly interventions could be planned. Furthermore, the results of the study will also bring in limelight the most vulnerable population in reference to the pandemic and those groups having increase potential to spread the disease. On the whole, current study has numerous theoretical and practical implications.

The literature suggests that social support has stronger impact on mental health conditions of patients suffering from variety of diseases, that is the reason social support was taken as a main independent variable (Parker & Aggleton, 2003; Ulasi,. Et al., 2009).

Social support also has an impact in reducing perceived social stigma. The line of reasoning, adopted for my model takes account these facts. If social support helps in reduction of stigma as well as improvement of mental health, so perceived social stigma can be a mediator. It all depends on how much an influence perceived family support has on perceived social stigma. If perceived social stigma is harder to change, then perceived family support might have a weaker effect on mental health. Similarly, if

perceived social stigma is easily affected by perceived family support, then there will be greater improvement of mental health (Herek, 2002).

Objectives

In reference to the rationale of the study, following are the main objectives of the study:

- To explore how HIV/Aids leads to Social Stigma
- To investigate the influences of demographic factors (Age, Gender and Education) on Social Stigma associated to HIV/Aids
- To examine the gender difference on the prevalence of psychological problems associated with HIV/Aids
- To determine the role of Perceived social stigma leading to psychological problems
- To find out how the Family support can help combat the social stigma as well as psychological problems

Hypotheses

Following are the main hypothesis to be tested to achieve the objectives of the study:

1. There is a positive relationship between perceived social stigma and psychological problems (stress, anxiety, and depression).
2. Perceived Family support is negatively correlated with perceived social stigma in HIV/Aids patients.
3. Perceived Family support is negatively correlated with psychological problems in HIV/Aids patients

4. More educated HIV/AIDS patients have lower perceived social stigma than the less educated individuals.
5. Females living with HIV/AIDS experience more perceived social stigma than males.
6. Older HIV/AIDS patients are less affected by perceived social stigma than young patients.
7. Females are more psychologically affected by HIV/Aids than male Patients.
8. Perceived Social stigma acts as a mediator between perceived family support and psychological problems.

Conceptual Framework

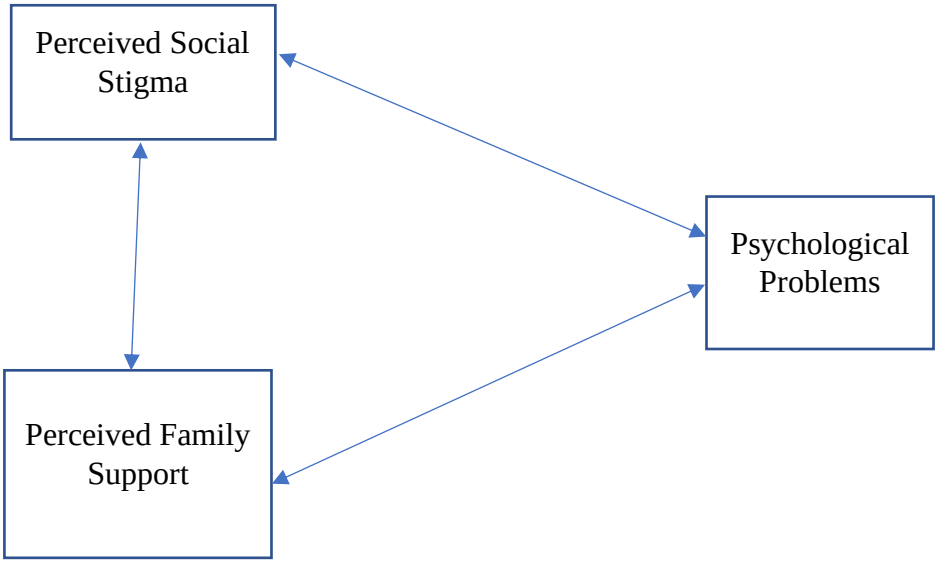

Figure 1(a): Inter correlation among Perceived Social Stigma, Perceived Family Support & Psychological Problems.

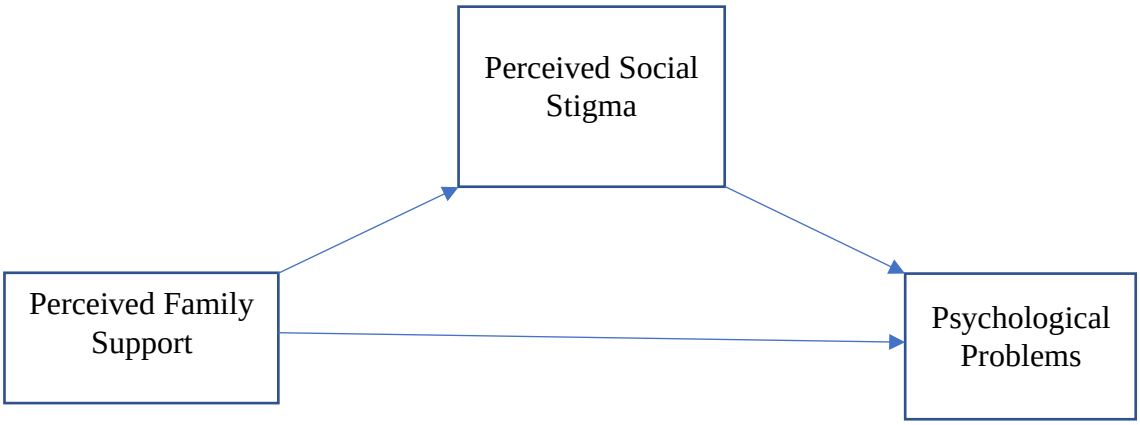

Figure 1(b): Mediating role of Perceived Social Stigma between Perceived Family Support and Psychological Problems

Chapter II

Method

In this chapter, the techniques and research designs employed by the researcher will be discussed keeping in view the research objectives. The sample, sampling techniques, data collection and data analysis techniques will be discussed in detail. It will be short snap of the entire research process. One could have an idea of the authenticity of the research process and the extent to which it will be reliable and valid. The significance of the research is reflected by the methodology used in the research. Following section will discuss in detail the research methodology for the current study.

Research Design

Current study is based on cross-sectional study design where the researcher has to address the research question by collecting and analyzing data in a specific period of time rather extending it on a large period of time as is the case in longitudinal study. Align with this, researcher had to complete the study is a defined time frame and in limited resources. Thus, making cross sectional study design most appropriate for the current study.

Sample

The sample of the study is based upon HIV/AIDS patients from District Headquarters Hospital Sargodha. Sample is gender inclusive that is both male and female sample has been part of the study. The age and education level of the participants were kept in focus. The sample size was 200 where 104 were males and 96 were females participants.

Sampling Technique

The primary goal of the sampling is to gather data that could represent the population and potentially answer the research question. It is often not viable to gather data from the entire population, thus, a subset of the population or sample is taken to estimate the population responses. In order to collect the sample of the study convenient sampling technique was used where participants who were at the proximal distance and easy to access where approached by the researcher. This technique has eased the process of data collection for the researcher but also increased the chances of researcher bias that could hamper the reliability of the results of the study.

Inclusion/Exclusion Criteria

As an inclusion criterion, it was assured that the participants are clinically diagnosed with HIV/AIDS and are under treatment. It was assured that they were not having any previous history of serious psychological or medical illnesses. Family history were also scrutinized to assure that there was no history of mental illnesses in the family or before the person was infected with the disease.

Those individuals with serious psychological problems and family or personal history of psychological disorders were not included in the study as it could hamper to establish the relationship among the variables.

Operational Definitions of Variables

Perceived Social Stigma

In the current study, the operational definition of perceived social stigma has been drawn from Goffman theory of stigmatization while emphasizing on the micro and meso- level effects social stigma on the HIV/AIDS patients. By adopting the

psychological and sociological approach perceived social stigma has been defined as *a type of stigma in which a person internalizes the beliefs that the society hold prejudice against them and devalue them for their human differences as a result of which they have to face discrimination and status loss* (Clair, Daniel, & Lamont, 2016; Corrigan & Rao, 2012).

Perceived Family Support

Study has taken into account the extent to which an individual considers his/her family members supportive and offering hand in dealing with the disease, rather than taking into account the actual support that the family members would have been offering. In this vein, perceived social support has been defined as how people living with HIV/AIDS perceive their immediate family members as sources available providing them with material, psychological, and overall support to cope with the adversities associated with HIV/AIDS (Siedlecki, Salthouse, Oishi, & Jeswani, 2014).

In Pakistani culture there are many similarities towards Bio, Psycho, Social defects among individuals, that's why the researcher used this scale. Majority of items are similar measuring social support among family members suffering the HIV/AIDs.

Psychological Problems

The study has emphasized on the severe as well as mild psychological symptoms that people living with HIV/AIDS would have been dealing with. Unlike previous studies, current study has remained open in addressing the psychological issues that the targeted population has been facing. The emphasizes has not been limited to the patients who were clinically diagnosed with mental disorders. In this context, Psychological problems have been defined as *"a board concept that incorporates both more severe psychological symptoms and less serious mental strains that could*

negatively impact an individual's emotional regulation, cognition, or behavior leading to impairment in social, individuals, occupation, and other areas of functioning" (Granlund et al., 2021).

Instruments

Demographic Sheet

The socio-demographic variables were assessed by using a demographic sheet that evaluates the level of education, gender, age, and residential area of the participants of the study.

Depression, Anxiety, Stress Scale (DASS)

In order to measure the psychological problems in the HIV/AIDS patients DASS has been used which was originally developed by Lovibond and Lovibond in 1995. It has three self-report scales that are designed to assess the negative emotional states pertaining to depression, anxiety, and stress. It does not measure the conventional emotional states rather it emphasizes on the measuring the clinically significant emotional states that could potentially lead to depression, stress, and anxiety. In total, there are 42- items in the DASS where depression, anxiety and stress are measured by 14-items each. The depression evaluates the symptoms of dysphoria, devaluation, self-deprecation, hopelessness, loss of interest, and anhedonia. Moreover, Anxiety scale mainly includes situational anxiety, autonomic arousal, and subjective experience of anxiousness. Lastly, the stress scale potentially measures the extent to which an individual finds it difficult to relax, nervous arousal, level of agitation, irritability, impatient, and over-reaction.

The participants were asked to record their responses on 4-point response set where *not at all* is coded as 0 and *all the time* as 3. Scores for each set that are

depression, anxiety and stress were calculated by summing up the scores for the relevant items. Higher scores on the scale indicate that the person is facing more psychological problems.

DASS has been translated into multiple languages and has revealed higher internal consistency. Studies have revealed that the measure is highly valid and reliable. For the current study, the Urdu translation of the DASS has been used. It has been revealed that the translated measure is highly reliable as evident from their Cronbach alpha reliability indices that were .84, .82, and .87 for depression, anxiety, and stress scales, respectively (Aslam, 2007). The items in the translated version were in the same order as it was in the original scale. The potential range of scores vary between 0 to 126.

Discrimination Devaluation Scale

One of the widely used measure to evaluate the perceived social stigma is Perceived Public Stigma Scale (PDDS). The scale is developed by Link, (1987) to assess the perceived social stigma among the patients living with severe mental disorder or other diseases. The scale reflects upon the feelings that a person diagnosed with severe disease feels when being stigmatized socially. The measure is capable of predicting properties such as internalization of community attitudes associated with disease, effect on social interaction, and self-perception of stigma (Martínez et al., 2016).

The measure includes a 6-point Likert scale to record the answer ranging from Strongly agree-1 to strongly disagree-6. Higher scores indicate higher level of perceived social stigma and its effects in an individual. For the current study the

translated version of Shah, Khalily, Ahmad, and Hallahan, (2019) was used keeping in view the ease and comprehension of targeted population.

Perceived Family Support Scale

This scale is developed by Aftab, (2000) while keeping into account the family dimensions in Pakistani context. The scale has specifically emphasized on the social support that an individual acquires from his/her immediate family members at the time of adversity. The scale is based upon the 30 items with a 4-point Likert scale to record the responses of the participants. 1 is coded as never, 2 as sometimes, 3 as most of the time, and 4 as all the time. Higher scores on the scale indicates that the individual has higher level of perceived family support. The scale has addressed the perceived family support rather than the actual support that an individual receives from his/her family members.

All the scales used in the study were in Urdu language as the targeted population were not capable of reading and comprehending the English level. In order to avoid misinterpretation Urdu version of the instruments were used after it was assured that level of difficulty of the instruments is suitable for the potential participants of the study.

Procedure

In order to conduct study permission was acquired from the concern authority of District Headquarter Hospital Sargodha. Researcher personally approached them shared the primary purpose of the study along with the procedure. The questionnaire was shared, and queries were addressed. The Ethical issues pertaining to the data were also clarified and researcher assured them there will be no psychological harm to the participants of the study. The data acquired will be used only for the research purpose

and it will not be shared with any third party without their consent. Anonymity and confidentiality were the main issues that the researcher has to confront. The institute was assured that rights of anonymity and confidentiality will be respected at all the stages of the research and will not be disclosed with the participant consent. It was also assured that only those participants will be approached who will give their written consent to take part in the study.

Researcher reached out the potential participants and after debriefing the purpose of the study and the process of the data collection, only those individuals who gave their consent to be a part of the study were given the questionnaire. It was assured that participants are in familiar and comfortable settings. The questionnaire was read out by the researcher and instructions were explained. Participants were encouraged to ask questions if they face any difficulty in answering a question. Ample time were given to participants to answer the study questionnaire. In the end, they were thanked for their cooperation and time.

Quantitative Research Design. In order to achieve the objectives of the study, current study has employed the quantitative research design. It is the research method where data collected is numeric/quantitative in nature. The acquired data is collected and analyzed by subjecting the data to statistical or mathematical techniques. Quantitative research design has been preferred by the researcher as it reduces the subjective interpretation of the results that could potentially hamper the validity and reliability of the findings of the study. Additionally, it was preferred to collect large data in short period of time. Most importantly, in the COVID-19 scenario, quantitative research design assisted researcher to reach out the larger population through different online platforms. All these aspects have completed the researcher to employ

quantitative research design rather qualitative which requires expertise to interpret the data.

Data Collection- Survey Method

In the current study, numeric data has been collected by conducting survey with the targeted population. Researcher has individually approached the potential participants and after debriefing the purpose of the study seek their consent for the participation in the study. Survey method is most appropriate method of data collection when the researcher intends to have an insight over the opinions, beliefs, and understanding of the majority about the topic under scrutiny as is the case in the current study. It is a standard tool for data collection for quantitative studies in the academia (Klandermans & Smith, 2002). It is preferred for collecting quantifiable data because it requires limited resources and time which is comparatively an easy approach for data collection. Moreover, it offers firsthand knowledge and information about the issue in hand. For all these reasons, researcher has preferred to employ survey for collection of quantitative data.

Questionnaire based survey has been conducted to explore the relationships between the study variables. Questionnaire was short and in accordance to the comprehension level of the participants as guided by Roopa and Rani, (2012). Questions included directly addressed the study variables offering the most relevant information. This approach was preferred as it assisted in gathering most relevant data by taping directly into the issue in hand in a short time and limited resources. The questionnaire used includes statements/items that were numerically rated. The items included in the questionnaire were non-threatening and non-leading. Questionnaire

used was in paper form and was administered by a professional. It is widely used research technique in social and behavioral sciences (Singleton & Singleton, 1988).

Data Analysis

To analyze and interpret the quantitative data acquired from the questionnaire-based survey statistical analysis techniques were used. The data were analyzed through Statistical Package for the Social Sciences (SPSS). Initially, data were cleaned to rule out incomplete forms followed by other analysis.

Data Cleaning. The acquired numeric data was cleaned before conducting higher statistical analysis. Data cleaning allowed minimal chances of misinterpretation and enhanced the validity and reliability of the results of the study. The incomplete questionnaire forms were discarded while cleaning the data (Chu, Ilyas, Krishnan, & Wang, 2016). Moreover, questionnaires with a clear response pattern and those forming outliers were eliminated from further analysis. Once the data were cleaned it was subjected to SPSS for further analysis. Data were manually cleaned by scrutinizing every single questionnaire filled by the respondents. It is important to clean the data as failure to do this could lead to irrelevant or incorrect interpretations. Data cleaning enhances the efficiency of the results of the study and assist in inferring more valid and reliable results.

Descriptive Analysis. was performed to get a clear idea of the distribution of the data and to detect any outliers in it. Mean values were calculated for the variables of the study and to get an insight for the measure of dispersion standard deviation and variance were calculated. Also, associated among the study variables were also assessed through correlation analysis. Descriptive analysis confirmed the suitability of the data

for further analysis. This analysis revealed those aspects of the phenomenon that were most affecting the targeted population as indicated by frequencies and percentages.

t-test. were conducted to assess the effect of gender on the study variables. The difference between the mean scores of male and female participants were calculated along with its effect size (Cohen's d). This has highlighted not only the gender effect among the study variables but the extent to which gender plays the role.

One-way ANOVA. was performed to assess the impact of level of education that was divided into four groups – uneducated, under certificate, HSSC, degree holder- on perceived social stigma. The effect size was also calculated to determine the extent to which level of education impacts perceived social support variable.

Factorial ANOVA. is also performed to reveal the interaction effect of level of education and age on a dependent variable. The analysis will also reveal the individual effect of each independent variable on the dependent variable.

Mediation Analysis. was also performed to calculate if perceived social stigma has mediated the relationship between the perceived family support and psychological problems faced by the individuals living with HIV/AIDS. The analysis would have revealed if the mediator has partially or fully mediated the relationship between the variables.

Regression Analysis. has been conducted to highlight the main predictors of the psychological problems among the targeted population. The contribution of each predictor was assessed by looking into the variance added in the dependent variable.

Reliability Analysis. the reliability of each of the instrument was also calculated by mean of Cronbach Alpha and item-total correlation. Reliability analysis revealed the internal consistency of the measures indicating if the measures are suitable for

conducting the analysis. Additionally, item-total correlation revealed the extent to which the items in an instrument are related to the total. revealing the items that measure the construct under scrutiny.

Pearson Product Correlation. was also performed to evaluate the extent to which variables of the study relate to each other. This analysis has also revealed the direction of the relation along with its strength. The results acquired from the statistical analysis were presented in tabular and graphical form to make them more comprehended and reader friendly.

Ethical Consideration

There are set of principles that a researcher has to follow while conducting research. Keeping in view the different research approaches employed in the study following are the main ethical standards that the researcher will keep in focus throughout its research process:

Confidentiality. The first and the foremost ethical rule that researcher is bound to follow is that the information provided by the participants must be kept confidential. It must not be shared with any third party or disclosed. The information acquired must be used only for the research purposes. It was assured by the researcher that information acquired remains confidential throughout the study process.

Anonymity

The right to anonymity must be respected throughout the research process. Researcher did not disclose the participants name or identify throughout the research process.

Consent

In order to assure that the participants have willingly took part in the study a verbal and written consent will be assured. Participants were allowed to cancel their participation in the study at any time if felt uncomfortable or threatened. The purpose and process of the study was debriefed to the participants and their queries were addressed**.** After that those who gave their consent were included in the data collection process.

Non-discriminatory

Keeping in focus the diversity in the targeted population, it was assured that the researcher remains unbiased throughout the research. The researcher biasness was kept at minimal to assure the reliability of the results. A standard procedure/guideline was followed during the data collection and analysis. Every participant was respected. As sampling technique implied was convenient in nature that has high potential for researcher bias. To deal with the error the researcher bias was kept minimal by assuring that participants selection is made irrespective of their race, social class, financial status, age, and gender. The group seem to be quite diverse assuring that researcher has not shown any biasness based on sociodemographic factors.

No Harm policy

No individual was harmed throughout the study purpose. The safety protocols were strictly followed during the data collection process. The study was conducted in an environment that is perceived as safe and sound by the participants. It was assured that environment is non-threatening and so is the content for the participants. Also, researcher made sure that no participants get exhausted from the study process.

Chapter III

Results

Table 1

Descriptive Statistics, Cronbach alpha reliability coefficients of Perceived Public Stigma Scale and Perceived Family Support Scale (N = 200)

Scales	Items	α	*M*	*SD*	Skewness	Kurtosis	Range	
							Potential	Actual
PPSS	12	.91	29.90	11.28	.17	-.66	12-72	12-66
PFSS	30	.88	80.62	12.49	-.41	.26	30-120	46-108

Note. PPSS = Perceived Public Stigma Scale; PFSS = Perceived Family Support Scale

Table 1 reveals that internal consistency of the measures used in the study are high as indicated by their alpha coefficients. The reliability coefficients show good reliability indices for both the scales that are PPSS and PFSS. Moreover, the mean score of the participants on PPSS was 29.90 (*SD* = 11.28) indicating that majority of the participants scored low on the scale. Whereas, for PFSS the average scores are found to be 80.62 (*SD* = 12.49) indicating that perceived family support was fairly good for most of the participants in the study. Additionally, values of the standard deviation indicate that dispersion of the scores around the mean is low for the PPSS as compared to PFSS. Furthermore, the value of skewness and kurtosis is also in acceptable range indicating that data is normally distributed.

Table 2

Descriptive Statistics and Cronbach alpha coefficients of Depression, Anxiety, Stress Scale and subscales (N = 200)

Scales	Items	α	*M*	*SD*	Skewness	Kurtosis	Range	
							Potential	Actual
Depression	14	.91	16.77	9.30	.24	-1.06	0-42	1-42
Anxiety	14	.83	17.13	7.15	.12	-.85	0-42	1-34
Stress	14	.81	19.20	7.19	.25	-.66	0-42	6-38

Note. DASS = Depression, Anxiety, Stress Scale

Table 2 reveals the descriptive statistics and internal consistency of the three measures that are depression, anxiety, and stress that reflect the presence of psychological problems in the sample of the study. Results reveal that reliability coefficients for all the three measures are good ranging between .81 to .91. Table 2 depicts that the mean score is higher for the stress symptoms (*M*= 19.20, *SD*= 7.19) as compared to depression (*M*= 16.77, *SD*= 9.30) and anxiety (*M*= 17.13, *SD*= 7.15). Moreover, dispersion of the scores is highest for the depression scale. Additionally, the values of skewness and kurtosis are within range that is -2 to +2 indicating that data is normally distributed.

Table 3

Item-total correlation for the items of Perceived Public Stigma Scale and Perceived Family Support Scale (N = 200)

	Perceived Public Stigma Scale			Perceived Family Support Scale				
Sr. No.	Item No.	Item-total Correlation	Sr. No.	Item No.	Item-total correlation	Sr. No.	Item No.	Item-total correlation
1	1	.77*	1	1	.55	16	16	.47*
2	2	.84*	2	2	.61	17	17	.52*
3	3	.80*	3	4	.51	18	18	.44*
4	4	.78*	4	5	.53	19	19	.33*
5	5	.52*	5	7	.39	20	20	.42*
6	6	.66*	6	8	.50	21	21	.42*
7	7	.60*	7	9	.54	22	22	.48*
8	8	.79*	8	10	.53	23	23	.45*
9	9	.52*	9	11	.42	24	24	.51*
10	10	.72*	10	13	.39	25	25	.51*
11	11	.63*	11	14	.37	26	26	.56*
12	12	.68*	12	18	.40	27	27	.43*
			13	20	.60	28	28	.45*
			14	21	.45	29	29	.49*
			15	22	.52	30	30	.51*

*$p < .01$

Table 3 indicates correlation of every item with the total scores for the PPSS and PFSS. Results revealed that item-total correlation for the PPSS range between .52 to .84 which indicates that all the items could be retained for further analysis. Table 3 also reveals the item-total correlation for the PFSS indicating that all the items are significantly related to the total. From the results, it has been deduced that measures used are parsimonious and relevant to the construct of the study.

Table 4

Item-total correlation for the items of Depression, Anxiety, Stress subscales (N = 200)

	Depression			Anxiety				Stress
Sr. No.	Item No.	Item-total Correlation	Sr. No.	Item No.	Item-total correlation	Sr. No.	Item No.	Item-total correlation
1	3	.57**	1	2	.49**	1	1	.61**
2	5	.55**	2	4	.50**	2	6	.47**
3	10	.77**	3	7	.58**	3	8	.38**
4	13	.63**	4	9	-.10	4	11	.62**
5	16	.73**	5	15	.49**	5	12	.61**
6	17	.78**	6	19	.64**	6	14	.49**
7	21	.81**	7	20	.63**	7	18	.59**
8	24	.67**	8	23	.67**	8	22	.58**
9	26	.57**	9	25	.61**	9	27	.50**
10	31	.80**	10	28	.64**	10	29	.57**
11	33	.62**	11	30	.50**	11	32	.40**
12	34	.69**	12	36	.77**	12	35	.44**
13	37	.78**	13	40	.65**	13	38	.70**
14	42	.66**	14	41	.64**	14	39	.57**

**$p < .01$

Table 4 shows item-total correlation indices for depression and stress subscales. Results revealed that item-total correlation for depression and stress measures is in acceptable range indicating that all the items are significantly related to the total scores. Whereas, for the anxiety subscale the item-total correlation indices revealed that all the

items are significantly related with the total scores except for the item 9. Consequently, item 9 was deleted and was not included in the further analysis.

Table 5

Pearson Correlation coefficients (zero-order correlation coefficients) between perceived social stigma and psychological problems (i.e. depression, anxiety and stress) (N = 200)

		1	2	3	4
1	Perceived Social Stigma	-	.54**	.45**	.56**
2	Depression		-	-	-
3	Anxiety			-	-
4	Stress				-

** *p<.01*

Table 5 reveals the correlation between the perceived social stigma and psychological problems. Results revealed that perceived social stigma is significantly positively related with the psychological problems in the sample of the study. That is, with increase in the level of perceived social stigma among the HIV/AIDS patients the psychological problems (depression, anxiety, and stress) will also escalate. Thus, confirming Hypothesis 1 of the study that is there is a significant positive relationship between perceived social stigma and psychological problems among the HIV/AIDS patients.

Table 6

Pearson Correlation coefficients (zero-order correlation coefficients) between perceived social stigma and perceived family support (N = 200)

		1	2
1	Perceived Social Stigma	-	-.51**
2	Perceived Family Support		-

*** p<.01*

Table 6 shows the correlation between the perceived social stigma and perceived family support. Results revealed that perceived social stigma is significantly negatively related with the perceived family support in the sample of the study. That is, with increase in the level of perceived family support among the HIV/AIDS patients the impact of perceived social stigma will reduce. Thus, confirming Hypothesis 2 of the study that is perceived family support will negatively relate with the perceived social stigma among the HIV/AIDS patients.

Table 7

Pearson Correlation coefficients (zero-order correlation coefficients) between perceived family support and psychological problems (i.e. depression, anxiety and stress) (N = 200)

		1	2	3	4
1	Perceive Family Support	-	-.71**	-.68**	-.72**
2	Depression		-	-	-
3	Anxiety			-	-
4	Stress				-

** *p<.01*

Table 7 reveals the correlation between the perceived family support and psychological problems. It was found that perceived family support is significantly negatively related with the psychological problems in the sample of the study. That is, with increase in the level of perceived family support among the HIV/AIDS patients the psychological problems (depression, anxiety, and stress) will decrease. Thus, confirming Hypothesis 3 of the study that is there is a significant negative relationship between perceived family support and psychological problems among the HIV/AIDS patients.

Table 8

Mean, Standard Deviation and F-values for level of education on perceived social stigma (N = 200)

	Uneducated (*n* = 79)		Under certificate level (*n* = 66)		SSC+HSSC (*n* = 37)		*Degree and above (n = 18)*				
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*P*	*Post-Hoc (Bonferroni)*
Perceived Social Stigma	33.53	10.63	31.06	10.60	25.11	11.09	17.39	5.15	14.91	.000	1>3; 1>4 2>3; 2>4

Table 8 reveals the results for one-way analysis of variance indicating that the level of education significantly impacts the perceived social stigma, (F= 14.91, p= .000) among the HIV/AIDS patients. Statistically significant mean differences were observed for Perceived Social Stigma across the four educational groups that are uneducated, under certificate, and SSC + HSSC, and degree holders. Post-Hoc analysis using the Bonferroni criterion for significance indicated that the perceived social stigma is lowest for the group who are degree holder (M= 17.39, SD= 5.15) followed by SSC+HSSC (M= 25.11, SD= 11.09) and under-certificate participants

(*M*= 31.06, *SD*= 10.60). Perceived social stigma was highest among the uneducated group (*M*= 33.53, *SD*= 10.63). Thus, the results depicted in Table 8 confirm the Hypothesis 4 of the study indicating that more educated HIV/AIDS patients would have lower perceived social stigma than the less educated individuals.

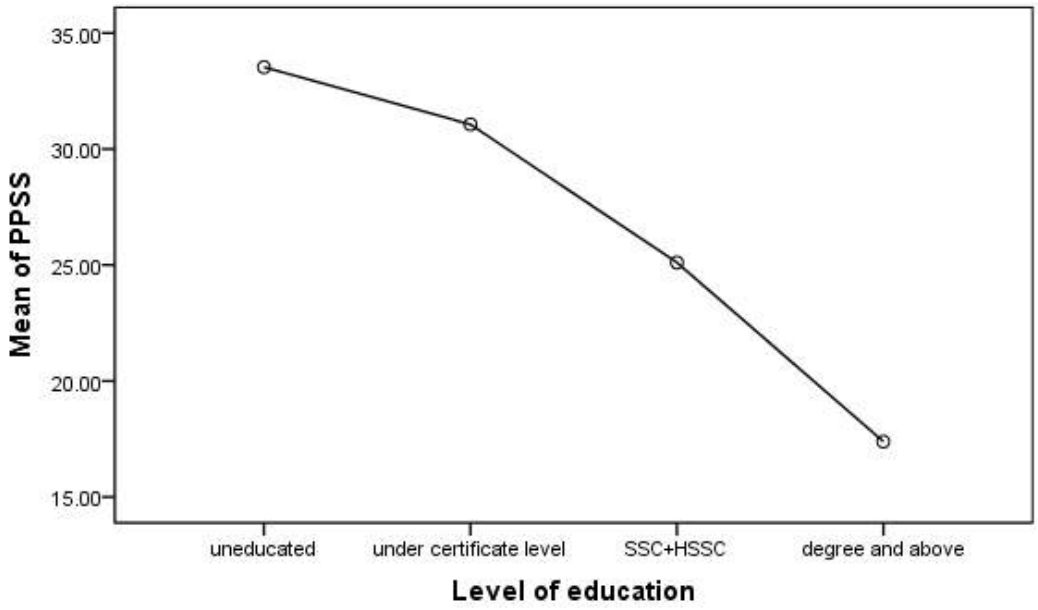

Figure 2: Graphical Presentation of effect of level of education on Perceived Social Stigma.

The plot illustrated in Figure 2 indicated that there is an inverse relationship between the level of education and perceived social stigma. There is a steep fall in the perceived social stigma with increase in the level of education This reveals that education could potentially buffer the impact of perceived social stigma.

Table 9

Mean, Standard Deviation and t-values for males and females on perceived social stigma (N = 200)

	Males (n = 104)		Females (n = 96)				
Variable	*M*	*SD*	*M*	*SD*	*t*	*P*	*Cohen's d*
Perceived Social Stigma	28.16	11.85	31.37	10.70	2.01	.046	0.28

Table 9 illustrates the effect of gender on perceived social stigma by conducting t-test. Results revealed that there is a significant difference between the mean scores of male and female participants of the study (t= 2.01, p= .04), indicating significant effect of gender on perceived social stigma. It was found that female participants have scored higher (M= 31.37, SD= 10.70) on perceived social stigma as compared to male participants (M= 28.16, SD= 11.85). The effect of gender on perceived social stigma varies from small to medium as revealed by the value of Cohen's d. The results depicted in Table 9 confirm the Hypothesis 5 of the study that is females will score higher on perceived social stigma as compared to males. Leven's test of variance equality was not significant ($p > .05$), that depicts both groups' variances were similar.

Table 10

Means, Standard Deviations and F value for level of education and age groups on perceived social stigma (N = 200).

Age		5-20 years (n = 56)		21-40 years (n = 102)		41-60 years (n = 42)				
		M	*SD*	*M*	*SD*	*M*	*S*	*F*	*p*	partial et^2
Education	Uneducated (n = 79)	22.38	5.51	32.15	9.38	41.23	8.43			
	Under certificate level (n = 66)	22.09	7.08	33.61	9.35	41.36	5.46			
	SSC+HSSC (n = 37)	18.50	8.26	36.33	10.32	39.20	5.07			
	Degree and above (n =18)	15.85	4.22	18.36	5.63	-	-			
	Total	20.48	7.03	30.11	10.29	40.02	7.32			
PPSS_Age (b/w sub. effect)								45.28	.00	.32
PPSS_Eduation (b/w sub. effect)								7.69	.00	.11
Education*Age (interaction effect)								.936	.46	.02

; Between groups *df (age)* = 2; Between groups *df (Education)* = 3; Between groups *df (interaction effect)* = 5

Table 10 depicts the results for the Factorial ANOVA which was performed to investigate the effect of age and level of education on perceived social stigma. Results revealed that there is a non-significant interaction between the effects of age and level of education (F (5) = .93, p = .46).

Whereas simple main effect analysis revealed that the age did have the statistically effect on the perceived social stigma (p = .00). Likewise, simple main effect analysis for the level of education also proved to be statistically significant on perceived social stigma (p = .00). On the whole, it is revealed that age and education of HIV/AIDS patients significantly affect the perceived social stigma but in interaction these variables have a non-significant effect on the dependent variable. From the results, it has been found that the effect size of age is far greater than that of level of education.

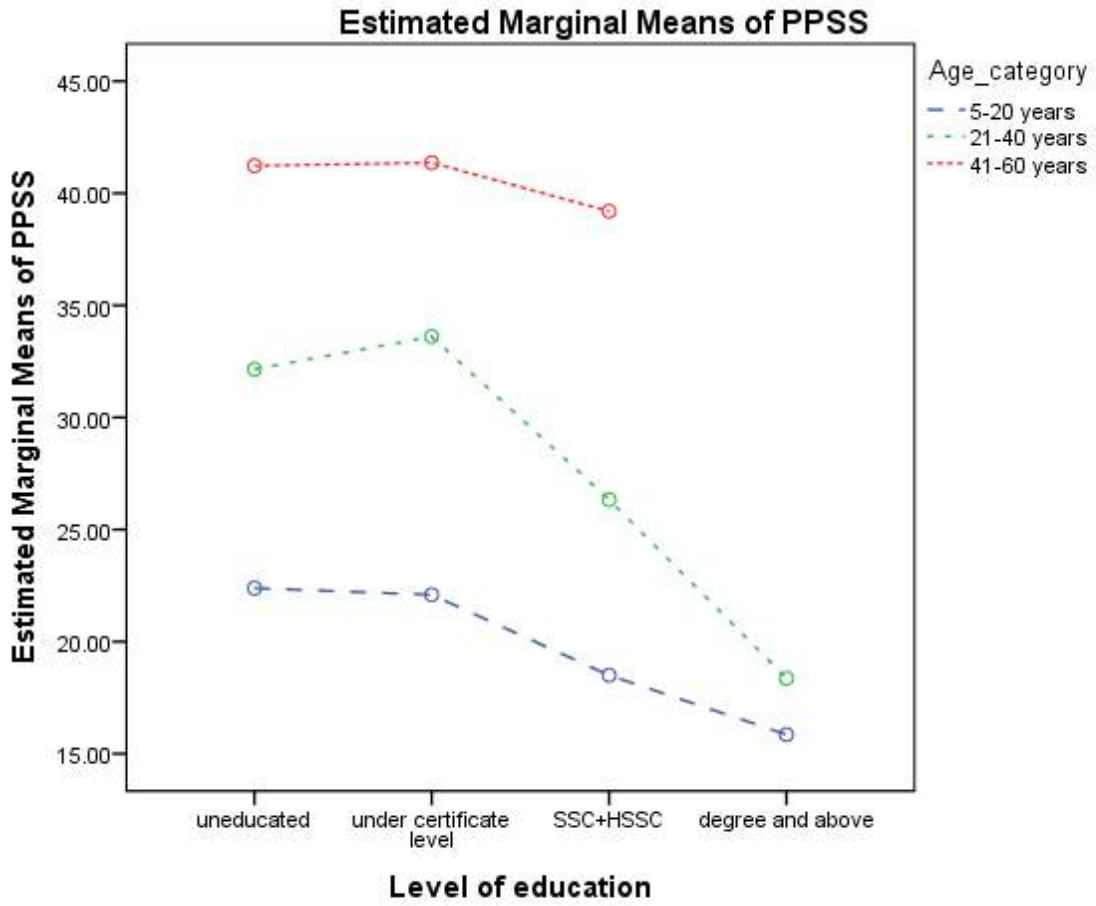

Figure 3: Comparison of different groups on Perceived Social Stigma according to Levels of education.

The plot presented in Figure 3 has indicated the main effect for the age and education, revealing that there is line for perceived social stigma fall steeply with increase in education level. Whereas, perceived social stigma is highest for the people living with HIV/AIDS with age range between 21-40 years and lowest for older population.

Table 11

Mean, Standard Deviation and t-values for males and females on Depression, Anxiety, Stress subscales (N = 200)

	Males (n = 104)		Females (n = 96)				
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	*Cohen's d*
Depression	14.31	9.63	19.45	8.17	4.05	.000	0.58
Anxiety	14.90	7.01	19.54	6.44	4.83	.000	0.67
Stress	17.30	7.44	21.26	6.32	4.03	.000	0.57

Table 11 reveals that there is a significant effect of gender on psychological problems that includes depression (t= 4.05, p= .000), anxiety (t= 4.83, p= .000), and stress (t= 4.03, p= .000), among the HIV/AIDS patients. Results revealed that female patients have faced greater psychological problems as compared to their counterparts. Female HIV/AIDS patients consistently scored higher on the depression (M= 19.45, SD= 8.17), anxiety (M= 19.54, SD= 6.44), and stress (M= 21.26, SD= 6.32), subscale as compared to male patients with comparatively low scores on depression (M= 14.31, SD= 9.63), anxiety (M= 14.90, SD= 7.01), and stress (M= 17.30 SD= 7.44). The effect of gender on psychological problems vary from medium to large as revealed by the value of eta square. The results depicted in Table 11 confirm the Hypothesis 7 of the study that is females will score higher on psychological problems as compared to males. Leven's test of equality of variance was not significant ($p > .05$) that showed that variances of both groups were similar.

Table 12

Multiple Linear Regression Analysis for Mediation by perceived social stigma for the relation between perceived family support and depression (N = 200)

	Depression			
		Model 2		
			95% *CI*	
Variables	Model 1 β	β	*LL*	*UL*
Constant	67.29**	45.86**	37.49	54.23
Perceived family support	-.47**	-.43**	-.57	-.36
Perceived social stigma (M)		.19**	-.01	.07
R^2	.26	.54		
ΔR^2		.28		
F	70.19	117.69		
ΔF		47.5		

***p < .05*

Table 12 shows the possible mediation of perceived social stigma for the effect of perceived family support on depression. There is a significant total effect (*β = -.53, p = .00*), and a significant direct effect (*β = -.43, p = .00*) of perceived family support on depression. Mediation of perceived social stigma in the model was observed with a significant indirect effect (*β = -.09, CI = -.16, -.04*).

Table 13

Multiple Linear Regression Analysis for Mediation by perceived social stigma for the relation between perceived family support and anxiety (N = 200)

	Anxiety			
		Model 2		
			95% *CI*	
Variables	Model 1 β	β	*LL*	*UL*
Constant	67.29**	42.71**	35.85	49.57
Perceived family support	-.47**	-.35**	-.42	-.28
Perceived social stigma (M)		.09**	.01	.16
R^2	.26	.48		
ΔR^2		.22		
F	70.19	91.73		
ΔF		21.54		

***p < .05*

Table 13 shows the possible mediation of perceived social stigma for the effect of perceived family support on anxiety. There is a significant total effect (*β = -.39, p = .00*), and a significant direct effect (*β = -.35, p = .00*) of perceived family support on anxiety. Mediation of perceived social stigma in the model was observed with a significant indirect effect (*β = -.04, CI = -.09, -.005*).

Table 14

Multiple Linear Regression Analysis for Mediation by perceived social stigma for the relation between perceived family support and stress (N = 200)

	Stress			
		Model 2		
			95% *CI*	
Variables	Model 1 β	B	*LL*	*UL*
Constant	67.29**	41.82**	35.50	48.13
Perceived family support	-.47**	-.34**	-.40	-.28
Perceived social stigma (M)		.16**	.09	.23
R^2	.26	.56		
ΔR^2		.30		
F	70.19	128.41		
ΔF		58.22		

***p < .05*

Table 14 shows the possible mediation of perceived social stigma for the effect of perceived family support on stress. There is a significant total effect (*β = -.41, p = .00*), and a significant direct effect (*β = -.34, p = .00*) of perceived family support on stress. Mediation of perceived social stigma in the model was observed with a significant indirect effect (*β = -.07, CI = -.12, -.04*).

Chapter IV

Discussion

HIV/AIDS has turned out to be a pandemic threatening life of thousands of people across the world (McInnes & Rushton, 2010). Developed countries have taken strict measures by deploying their resources to deal with the virus and to control the disease. These countries have emphasized on the medical as well as the psychological disturbances related to the virus (Brookmeyer, 2010). Additionally, the social issues pertaining to the disease were effectively dealt to limit the adversities associated with the disease. Yet, there are stereotypes and myths that are yet to be addressed as they potentially result in failure to acquire cure or vaccine to the disease while offering space to development of irrational thoughts and fear (Pequegnat & Bell, 2011). In advanced countries, such as US the stereotypes and myths have been controlled by promoting awareness through media, community workers and health practitioners. This has assisted them to deal with the disease with a more realistic and human approach (Ryder et al., 2012). Many countries have implied multi-dimensional approach to address the calamities that people living with HIV/AIDS have to go through. Ample attention has been paid to the psychosocial factors for more productive interventions plan. In this vein, focus has been kept on social, emotional, cultural, communal, medical, and psychological aspects pertaining to the disease (Piot, Kazatchkine, Dybul, & Lob-Levyt, 2009). Consequently, the spread of the virus has been significantly controlled in the 1st world countries.

Unfortunately, in the developing countries the virus is a nightmare being the cause of the deaths of many. The ineffective preventive measures, lack of awareness among the effected and the general public, stereotypes and myths associated with disease aggravated the scenario (DeHovitz, Uuskula, & El-Bassel, 2014; Thorne, Ferencic, Malyuta, Mimica,

& Niemiec, 2010). The adversities related to the disease has escalated in the past few years despite of the effective medical treatments in low and middle-economic countries. The spread of HIV/AIDS is alarming. Literature reveals that the main reason behind the spread of the disease and turning into a pandemic is that people are not willing to take treatment or HIV-testing. This is because of the unfavorable social, emotional, communal, and behavioral reactions that they have to borne after revealing their HIV-positive status (Westaway, Seeley, & Allison, 2007). The disease under scrutiny have deep impacts on physical as well as psychological health of an individual. It also impacts the social status of the person living with it. All these negativities associated with the disease promotes fear in the HIV/AIDS patients that potentially refrain them to come for testing or seek treatment or therapy for the disease. These effects are more pronounced in the African and Asian countries as compared to other parts of the world requiring imperative attention for the researchers and practitioners (Murphy, Shwe, Bhatia, Bakkali, & Vannakit, 2021).

Studies revealed that in the developing countries psychological problems related to the disease has increased many folds among the HIV/AIDS patients (Asante, 2012). The HIV/AIDS hampers a person infected with the virus physically, psychologically, and socially (Varni, Miller, McCuin, & Solomon, 2012). The physical symptoms are quite evident and repetitive. Whereas psychosocial impacts remain concealed as a result in many cases they remain unaddressed, specifically in the context of Pakistan where mental health is yet not considered as important element of a person's well-being (Afridi, 2008). The focus of attention in such countries has remained the physical health and medical aspects (Iqbal et al., 2019). Other factors have remained unaddressed despite of the fact that psychological and social issues directly impact the overall well-being of an individual.

Identifying it as a less explored area, current study has emphasized on the psychological problems that HIV/AIDS patients face in Pakistan. In many cases, the treatment plans have proven to be ineffective because of the hurdles caused by the psychological problems in HIV/AIDS patients (Hafeez, 2018). Keeping in view this fact, current study investigated the psychological problems that the patients of HIV/AIDS have been mainly facing in Pakistan. Along with this, the prime reasons behind the psychological problem and the main factor that could mitigate the psychological problems in HIV/AIDS patients has also been kept in focus.

Literature reveals that psychological problems in the targeted population mainly arise because of the fear of stigma associated with the disease and lack of social support from their immediate family (Bashir, 2011; Santos et al., 2018). Current study has worked on these lines in indigenous context where perceived social stigma and perceived social support from the family have been taken into account, considering them significantly related with the topic under scrutiny. Also, literature reveals that perceived family support could significantly reduce the psychological problems and impact of perceived social stigma among the HIV/AIDS (Amiya et al., 2014). In this vein, study has investigated the buffering role of perceived family social support in relation to other study variables.

In order to achieve the objectives of the study, people living with HIV/AIDS were taken to get a better insight into the psychological problems they are facing. This will offer the first-hand knowledge and information related to the HIV/AIDS patients to address the study research question. The sample included both male (n= 104) and female (n=96) participants making sample size of N=200. The researcher could not acquire large sample size because of the time constraints. Additionally, the strict lockdowns and fear of being

infected by COVID-19 hampered many of the potential participants to take part in the study. Yet, the data gathered in objective in nature assuring minimal researcher bias and subjectivity in the interpretation of the results.

In order to test the proposed hypothesis of the study, researcher has employed quantitative research technique where data was collected through questionnaire-based survey technique. It is widely used research technique in the academic settings offering valid and reliable results. Researcher has preferred this method as the study is cross-sectional in nature and it has to be completed in a fixed time frame and in limited resources and quantitative research design requires less resources and time, comparatively. The results acquired form a quantitative study is also found to be more objective, comparatively. (Park & Park, 2016). Moreover, the survey technique has assisted the researcher to collect large data in short time (Ponto, 2015). The core purpose of the study was to investigate the given phenomenon rather to explore that further validates the selection of the quantitative research method.

Descriptive statistics of the study revealed that all the measures used in the study were having good reliability with alpha coefficient ranging between .81 to .91. As a rule of thumb alpha coefficienct greater than .80 and less than 0.95 indicates good reliability as indicated by Ursachi, Horodnic, & Zait, (2015). Thus, the measures used for statistically approved. Additionally, the value sof skewness and kurtosis indicated that the data is normally distributed as their value were in the acceptable range that is -2 to +2 as indicated by Kallner and Theodorsson, (2020). However, data were positively skewed for all the variables except for the PFSS which was negatively skewed indicating that the data was skewed to the left. Moreover, there were negative value of kurtosis for PPSS, depression,

anxiety, and stress that reveals flatter distribution of the data for the variables. Whereas PFSS was positively skewed indicating peaked distribution of the data (Field, 2005).

Furthermore, item-total correlation depicted in Table 3 revealed that the items of the scale PPSS and PFSS are significantly related with the total scores of the scale. This indicates that all the items are measuring the same construct. The indices also reveal that the scales used are parsimonious with high internal consistency. Item-total correlation further validated the reliability of the measures. Likewise, item-total correlation was calculated for the 3 measures that are depression, anxiety, and stress subscales for evaluating the psychological problems (see Table 4). Results revealed that high correlation of the items with their total scores. Only one item of the anxiety subscale i.e., item 9 was found to have an insignificant correlation with total score of the scale and was subsequently removed to improve the reliability of the scale. The reliability of the scale marginally improved from .83 to .85 after deleting the item.

Correlational analysis was conducted to test the strength and the direction of the relationship between the study variables. In Hypothesis 1 of the study, it was hypothesized based on the detail literature review that there will be a positive relationship between the perceived social stigma and the psychological problems that is to say depression, anxiety, and stress. Results confirmed the proposed relationship indicating that the symptoms of depression, anxiety, and stress increased with increase in the level of perceived social stigma. Prior studies support the result of the study indicating that the perceived social stigma in the HIV/AIDS patients induces fear of rejection, hopelessness, loneliness, irrational thoughts and worry (Garrido-Hernansaiz, Heylen, Bharat, Ramakrishna, & Ekstrand, 2016; Herek, Saha, & Burack, 2013).). All these aspects potentially increase

depression, anxiety, and stress in the HIV/AIDS patients. Moreover, studies have also indicated that perceived social stigma refrains people living with HIV/AIDS to sustain their routine life chores and job that also increase psychological problems in them (Dejman et al., 2015).

Moreover, HIV/AIDS patients with high level of perceived social stigma accept the stigmatization from others that make them feel guilty and justify the discriminatory attitude of others towards the. This internalization of stigmatization has been strongly associated with depression in HIV/AIDS in South Asian countries (Garrido-Hernansaiz et al., 2016). Perceived social stigma is strongly positively associated with the psychological problems in the past literature and in the results of the current study for multiple reasons. Perceived social stigma in HIV/AIDS patients results in loss of self-efficacy, shame, low self-esteem and confidence and hopelessness (Joint United Nations Programme on HIV/AIDS, 2014). These negative impacts when combined with the negative effects of ART therapy it induces the psychological problems in individuals. The burden of disease increases physically and psychologically as perceived social stigma potentially lead to treatment failure (Monjok, Smesny, & Essien, 2009). Hence, results of the study are justified.

Results of the study also indicated that the perceived family support is negatively related with the perceived social stigma among the HIV/AIDS patients. Similar findings were reported in the international studies indicating that perceived family support has the potential to buffer the negative effects of the perceived social stigma (Galvan, Maxwell Davis, Banks, & Bing, 2008; Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009). A possible reason for this is that Pakistan is more of a collective culture where

individuals are closely bonded with their family and family is considered as the primary social support (Shah & Amjad, 2011). At the time of adversity and high uncertainty -as is the case with HIV/AIDS patients- the support acquired form the family could reduce the impact of pessimisms and disapprovals that targeted population perceive as a result of social stigma (Jibeen, 2016). Increase familial social support reduces the fear of rejection and loneliness associated with social stigma (Mohanan & Kamath, 2009). Consequently, HIV/AIDS patients with significant perceived family support reported low scores on perceived social stigma and vice versa. Thus, confirming the Hypothesis 2 of the study.

In Hypothesis 3 of the current study, it was proposed that there will be inverse relation between perceived family support and the psychological problems. Results confirmed the proposed hypothesis and indicated that HIV/AIDS patients with high level of perceived family support reported lower level of depressive symptoms, anxiety, and stress. Naveet et al., (2006) supports the results of the study revealing that HIV/AIDS patients with supportive family acquire monetary, emotional, moral, and social support that significantly reduce their stress and worry associated with the disease (Shrestha et al., 2014). Similarly, literature reveals that perceived family support among the HIV/AIDS patients significantly enhance their coping skills that assist them to sustain their treatment and deal with the adversities (Xu et al., 2018). Consequently, they tend to show comparatively less psychological problems. Perceived family support also reduces the irrational negative thoughts associated with the virus that potentially decrease the stress and anxiety among the targeted patients as supported by (Amiya et al., 2014).

Research indicates that family offers social support and social integration that are beneficial and constructive for good health (von dem Knesebeck, 2015). Perceived social

support from the family builds a protective influence against those who could negatively affect the personality of people suffering from the HIV/AIDS. It also assists the targeted population to develop self-respect through the support they acquire from their immediate family members while assuring sense of safety to them as supported by Günüç and Doğan, (2013). All these aspects related to perceived social support from family significantly enhance the psychological health of the individual living with HIV/AIDS as indicated by the results of the study.

Furthermore, the relationship between the level of educational qualification and perceived social stigma was also explored. Results for one-way analysis of variance revealed that HIV/AIDS patients with higher level of education reported lower level of perceived social stigma. Whereas uneducated and less educated HIV/AIDS patients scored highest on the PPSS. Results of the study are supported by the past literature where Aggleton, Yankah, and Crewe, (2011) and Lim et al., (2013) found that perceived social stigma is high among the HIV/AIDS patients having lower income and educational qualification. The main reason behind this is that educated people are more aware of the consequences of the disease and about its treatment. The myths and stereotypes associated with the disease could be addressed by them. They are in a position that they could challenge the social stigmatization regarding HIV/AIDS. As a result, the perceived social stigma is lower among the educated people living with HIV/AIDS as compared to uneducated or less educated individuals who get under pressure by the social stigmatization, reporting higher on perceived social stigma (Egbe, Nge, Ngouekam, Asonganyi, & Nsagha, 2020). In indigenous context the results could be justified by the fact that higher education is a status symbol in the Pakistani society and people refrain from

stigmatizing such individuals. Whereas, those who are uneducated or less educated are mostly from the lower socio-economic status who easily fall victim of stigmatization. Thus, confirming the Hypothesis 4 of the study.

Current study also investigates gender effect on the perceived social stigma. Align with the past literature, results of the study indicated that the females scored higher on the PPSS as compared to male participants living with HIV/AIDS in the sample of the study (Asiedu & Myers-Bowman, 2014; Geary et al., 2014; Ramjee & Daniels, 2013). Studies conducted in India and Uganda with HIV/AIDS patients have revealed that level of stigmatization whether actual or perceived is higher for the female participants as compared to male participants. The prime reason for the high level of perceived social stigma in the female HIV/AIDS patients was that they were blamed for bringing shame to the family as they are taken as symbol of family honor (Malavé, Ramakrishna, Heylen, Bharat, & Ekstrand, 2014; Nattabi, Li, Thompson, Orach, & Earnest, 2011). Moreover, morality and modesty are strongly associated with women character in the South Asian countries and HIV/AIDS is considered as result of sinful and shameful activities Females are judged and criticized on moral grounds that potentially increase the actual and perceived social stigma. Furthermore, the female population in Pakistan are easy to blame as they are suppressed with low literacy rate, comparatively. They have little or no knowledge about the facts and realities of the disease. Thus, they are more vulnerable to internalize the social stigma pertaining to disease irrespective of the fact that in many cases they are infected by their husband (Iqbal et al., 2019). Thus, confirming the Hypothesis 5 of the study.

Furthermore, study has also evaluated the impact of age on the perceived social stigma. Two-way ANOVA was conducted to analyze the effect of age and level of education on perceived social stigma among the HIV/AIDS patients. Results revealed that there is a statistically significant main effect of age on perceived social stigma. Perceived social stigma was found to be lowest for the older population between the age range 41-60 years and highest for the young adults (21 to 40 years). Findings of the study have been supported by the past literature revealing an inverse relationship between the age and perceived social stigma associated with the HIV/AIDS. That is with increase in age perceived social stigma decreases (Emlet, 2006; Emlet et al., 2015) and it is highest for the young adults in early twenties (Hosek et al., 2005; Lyon et al., 2003; Song et al., 2006; USAID, 2019).

Effect of gender was estimated for the psychosocial problems among the HIV/AIDS patients. T-test analysis revealed that there is a significant difference between the mean scores of male and female participants across the three variables that are depression, anxiety, and stress. It was found that mean scores for female participants were significantly higher than the male participants for depression, anxiety, and stress. Findings of the study conducted by the USAIDS (2019) revealed that women of all the races living with HIV/AIDS are more prone to depression as compared to man. Women are found to be at the higher risk of depression once diagnosed with the HIV/AIDS as compared to gay or male individuals living with the virus. One possible reason for this is that women have the greater tendency to internalize the shame and guilt associated with the disease. This internalization behavior leads them to depression (World Health Organization, 2008). Additionally, in support of the results of the study, Yi et al., (2015) revealed that women

face higher level of psychological problems after being diagnosed with HIV/AIDS because of lack of effective coping skills and increased dependency on male members of the family. Similarly, Hodo (2006) indicated that among the HIV/AIDS patients, female participants have scored higher on anxiety scale as compared to other groups. Moreover, the stress symptoms found to be higher among the HIV/AIDS female patients. The main reason behind this is that they face fierce rejection from the community and the family as well. In many cases, it was reported that family disown them because of the disease. Married women are divorced in the name of honor, and they are deprived of their possessions (Halli et al., 2017; Iqbal et al., 2019). All these circumstances potentially increase the level of stress associated with the HIV/AIDS for the women. In the patriarchal society –such as Pakistan- women are suppressed and this suppression further aggravate their psychological health while increasing the psychological problems for them. Results have approved the Hypothesis 7 of the study.

Lastly, multiple linear regression analysis was conducted to evaluate if perceived social stigma mediates the relationship between perceived family support and psychological problems. Results reported in Table 12, Table 13, and Table 14 revealed that perceived social stigma significantly mediated the relationship between perceived family support and the psychological problems. There was a direct relationship between the perceived social support from the family and the psychological problems that includes depression, anxiety, and stress. The independent and dependent variables were inversely related that in with increase in perceived family support psychological problems significantly decreased (Lindsey, Joe, & Nebbitt, 2010). But, with increase in perceived social stigma the relationship weakened as it has negatively affected the effectives of the

perceived family support. Findings of the study were supported by the past studies revealing that there is a direct impact of perceived social stigma on the relationship between the perceived family support and psychological problems (Gohain & Halliday, 2014). Perceived social stigma potentially decreases the positive impact of perceived family support in reducing the psychological problem (Shrestha et al., 2019).

With increase in perceived social stigmatization the perceived family support decreases because of fear of being infected, and shame and guilt associated with the disease. Family prefers to keep distance from the member of the family living with HIV/AIDS to assure that they are no more connected with the infected and thus, the discriminated attitude should not be extended to them. Consequently, individual feels more isolated, helpless, and hopeless that potentially increase the psychological problems causing emotional, cognitive, and behavioral dysfunction (Garrido-Hernansaiz, Heylen, Bharat, Ramakrishna, & Ekstrand, 2016). Another possible justification for the decrease in perceived social support with increase in perceived social stigmatization is that as people with HIV-positive progress to AIDS the symptoms associated with the disease become more repulsive and disruptive that potentially increase the difficulties for the family. Moreover, the adversity in symptoms make the disease more evident that further increase the chances of stigmatization (Herek, 1999; Jones, 1984). Thus, Hypothesis 8 has been confirmed by the results of the study and supported by the past literature.

On the whole form the results of the study, it has been deduced that the psychological problems require as much attention as the physical problems among the targeted population. Moreover, considering the negative impacts of perceived social stigmatization proper awareness are required that could inculcate in the targeted population

that social stigma is a menace and major threat to the lives of HIV/AIDS individuals. Family support need to be promoted among the targeted population as it has positive impact on their physical and mental health.

Conclusion

HIV/AIDS that turned out to be an epidemic in the developing country and Pakistan is no exception to it. The health sector of Pakistan has struggled to come up with effective measures that could potentially reduce the spread of the virus. Many of the foreign international organizations have supported the country in dealing with the menace but programs and strategies implemented didn't prove to meet the targets. Out of the many different reasons, one that has mainly impacted the effectiveness of the treatment plans and other preventive measures were the psychological problems related with the disease. The psychological problems such as depression, stress, and anxiety aggravated the adversities related with the disease and hamper many of the HIV positive individuals to seek treatment or share their HIV status. HIV/AIDS is a disease that deteriorates a person physically and psychologically. Prior studies have revealed that HIV/AIDS treatment plan implied significant attention to the physical health of the people living with the disease. Unfortunately, the psychological health of the individuals with HIV/AIDS have been ignored for significant period of time.

Empirical studies conducted in developed countries revealed that it is impossible to control and prevent the spread of HIV/AIDS virus without taking into account the psychological factors related with the disease. It was found that psychological problematic HIV/AIDS patients suffer negatively and impact the treatment plan, their physical health, and their motivation to seek health care. Consequently, foreign studies revealed that in

order to prevent the disease physical as well as psychological needs of HIV/AIDS patients has to be addressed. Unfortunately, mental health has remained an issue in the Pakistani society acquiring less attention from the practitioners, researchers, and the community. Identifying it as a gap and based on the results of the international studies, current study emphasized to investigate the prevalence of the psychological problems in the HIV/AIDS patients in Pakistan.

Along with this, study has also emphasized on the core factors instigating the psychological problems associated with the disease. From the past studies, it has been found that social stigma related with the HIV/AIDS lies at the core of psychological problems in the targeted population. Pakistani is society is quite sensitive to the myths and stereotypes associated with the HIV/AIDS. Scientific facts and medicine effect is far less than the deeply inculcated irrational thoughts. For that matter, stigmatization is prevalent in Pakistan, yet it remained unaddressed. Considering the significant negative impact of perceived social stigma on the HIV/AIDS patients, the study has evaluated its relationship with psychological problems. From the past studies, it has been revealed that social stigma related to the disease need to be addressed for prolific results. Thus, perceived social stigma has been taken as independent variable effecting the dependent variable of the study that is psychological problems in HIV/AIDS patients.

Additionally, study also scrutinized the core factor that could buffer the negative effect of the perceived social stigma and mitigate psychological problems among the HIV/AIDS patients. Many of the empirical studies emphasized on the general support as the buffering factor. In indigenous context, family is the primary care unit for an individual and collectivistic culture of the country make it more sensitive to family relations while

increasing independency on the family members at the time of adversity. Keeping in view these facts, current study has evaluated the role of perceived family support in mitigating the adversities associated with the perceived social stigma and psychological problems among the targeted population. On the whole, the study aimed to investigate the relationship between the perceived social stigma, perceived family support, and psychological problems among the HIV/AIDS patients.

The findings of the study revealed that perceived social support has significant positive relationship with the psychological problems among the HIV/AIDS patients. The depressive symptoms, anxiety, and stress symptoms were found to be high among the participants reporting increase level of perceived social stigma. HIV/AIDS related social stigma increase fear of rejection, loneliness, guilt, shame, irrational thoughts, reduced social support, and negative attitude from the community with irrational judgment on moral and religious grounds. All these aspects potentially increased the psychological problems among the HIV/AIDS affected individuals. It was found that perceived social stigma and psychological problems were higher among the female participants as compared to male. Additionally, results of the study also revealed that perceived social stigma and its adversities decline with increase in age. Contrarily, it was also found that HIV/AIDS patients with higher level of education have lower level of perceived social stigma. Most importantly, perceived social stigma mediated the relationship between the perceived family support and psychological problems, revealing the fact that it is eminent to prevent the HIV/AIDS related stigma.

Perceived family support has turned out to be a crucial factor in mitigating the psychological problems. HIV/AIDS patients with high level of perceived family support

scored lower on depression, anxiety, and stress subscales. This indicates that with increased perceived social support the tendency of psychological patients potentially decreases among the targeted population. Perceived family support act as buffering factor. Likewise, the perceived family support was found to be negatively related with the perceived social stigma among the HIV/AIDS patients.

The results of the study have numerous theoretical and practical implications that are discussed in the following section.

Future Implications & Limitations

- There are numerous practical implications of the observed relationship between perceived social stigma, perceived family support, and psychological problems associated with the HIV/AIDS. Findings of the study indicated that Perceived social stigma associated with the disease lies at the core of psychological problems as well as failure to adhere with the treatment schedules. For that matter, in the light of results of the study *community-based-interventions* must be planned in order to increase the effectiveness of the treatment plan while mitigating the adversities associated with the social stigma. In this vein, the results suggest including health care practitioners as they could play an effective role in reducing the social stigma associated with the disease.
- Additionally, results indicated that in indigenous context, family support is direly needed to reduce the negativities related to HIV/AIDS in the targeted population. Perceived family support could play an effective role in reducing the psychological problems and impact of perceived social stigma. Thus, it is suggested to take in family therapy as a part of intervention and treatment programs pertaining to HIV/AIDS. Families of the HIV/AIDS should be reached out and their fears and irrational thoughts should be addressed.

- Furthermore, it is also suggested to promote awareness programs regarding the infection, spread, and control of the HIV/AIDS. In the targeted population, the stereotypes and myths associated with the disease increase the level of stigmatization that further negatively impact the family support for the HIV/AIDS patients. Thus, awareness regarding the disease could be promoted through mainstream media, lady health workers and other health care practitioners.
- Most importantly, the results of the study suggest taking strict preventive measures to control the psychological problems in the HIV/AIDS as without taking them into account antiretroviral therapy will not be that effective. Also, by effectively dealing with psychological problems the adherence to the treatment plans could be increased to a great extent.
- From the results of the study and the past literature it has been deduced that depression, anxiety, and stress are the main psychological problems among the HIV/AIDS patients. Thus, the psychological treatment plans would emphasize on these problems.
- Along with this, the results of the study also rough in limelight the most sensitive population pertaining to perceived social stigma and psychological problems in Pakistani context. It was found that young adults - in their early twenties - living with HIV/AIDS are the main victims perceived social stigma. Moreover, the prevalence of psychological problems also varies with age. Thus, based on the results of the study age-specific intervention plans could be formulated and implemented.
- In future, practical and effective health policies could be formulated based on the results of the study that could emphasize the physical and psychological problems side by side.

Findings of the study have also added to the previous knowledge pertaining to the HIV/AIDS indicated significant theoretical implications as well.

- In the past studies, the effect of level of education on perceived social stigma was less emphasized among the HIV/AIDS patients. Results of the study indicated that literacy rate could reduce the social stigma associated with the disease as participants with higher level of education were less stigmatized as compared to those who were less educated or uneducated. By educating people the social menace that HIV/AIDS patients suffer could be significantly reduced.
- It has also revealed that the perceived social stigma in Pakistani context is mainly based on moral and religious grounds. Thus, emphasizing on these areas while planning community-awareness programs would be more effective.

Limitations

- The main limitation of the current study is that the sample size is too small to be the true representative of the targeted population. Thus, the results of the study are not generalizable.
- Moreover, sample was not chosen by random selection rather convenient sampling technique was preferred. As a result, the sample seems to be biased and might have over-presented or under-presented certain groups in the targeted population.
- The quantitative method assisted to acquire sample in limited resources and time, yet it refrained the participants to speak up their mind and hampered the researcher to acquire in-depth knowledge and understanding on the topic under scrutiny.
- The measures used were not effective enough to investigate the topic in indigenous context as measures used were developed in accordance with the western culture and societal

norms. In this vein, there is a possibility that results did not depict the true impact of the study variables in the Pakistani context.

- Additionally, the descriptive correlational research design has refrained the researcher to explore the cause-and-effect relationship between the study variables while limiting to make inferential statements. Align with this fact, there is yet a gap to address that is to investigate the cause-and-effect relationship among the study variables to formulate most effective health polices and preventive measures.
- Along with this, the socioeconomic status and the family history related to HIV/AIDS has a significant impact on the participants' perception about the disease and related effects. Current study did not take into account these aspects.
- The HIV-status of the participants was not clear neither their duration with the disease that hampered the effectiveness of the study results. The psychological problems and perceive stigmatization vary significantly with the people progress from HIV-positive to AIDS, which requires attention to be dealt with.
- Due to sensitivity and privacy of the chronic disease, HIV/AIDs patients are usually reluctant to disclose their medical history, family members disguise the relevant information. Along with this the concern staff of hospital didn't agree to give the information about patients due to department data's confidentiality.

Recommendations

- To better comprehend the problems that HIV/AIDS patients are facing in Pakistan, it is recommended to conduct interviews with the health care practitioners to get an in-sight into their psychological problems targeted population are delaying with rather than relying on the past literature conducted in western countries. This would offer better grounds to make interventions and health care policies.

- It is recommended to employ mixed-method approach to get detail knowledge and understanding of the topic under scrutiny. By conducting qualitative study, researcher would be in a position to scrutinize the literature gaps or less explored area. This will add significantly to the previous knowledge and information.
- To increase the generalizability of the results of the study it is suggested to increase the sample of the study to acquire a truly representative population sample. It is also recommended to select the sample through random sampling to reduce the researcher bias and to assure that every individual had the equal chances of participating in the study. This will assure to reduce the chances of over-representative or under-representation of certain groups.
- While taking into account, the socio-economic factors, it is important to scrutinize the effect of socio-economic status of the individuals living with HIV/AIDS in relation to stigmatization and perceived social mediator. It has been observed that financial status of the people living with HIV/AIDS effects their level of perceived social stigma.
- Moreover, from the results of the study it is found that it is important to address the stereotypes, myths, and fears of the family and community members pertaining to the disease. For that matter, focus group discussions could be conducted with them and

awareness programs should be carried to address their myths, stereotypes and false perceptions.

- It is also suggested to develop scales that could actually address the indigenous problems of the targeted population and then these scales could be used on larger population. This will enhance the validity of the results of the study and their effectiveness.
- From the results of the study and past literature review, it has been revealed that there are dearth of studies drawing inferences or establishing causal statements regarding the psychological problems prevalent in HIV/AIDS patients. In this vein, it is important to establish the cause-effect-relationships to eradicate the root cause of the psychological problems among the targeted population.
- It is suggested to take into account the predicting factors pertaining to perceived social stigma to identify the root cause of the issues that the people living with HIV/AIDS are facing.
- The topic under scrutiny is far from saturation point and in order to identify the gaps and work on the less explored area, it is suggested to conduct the same study but with longitudinal research approach where researcher will have an opportunity to study the commencement of the social stigma along with the other study variables with the progress in the disease. Better interventions could be planned if study would be conducted in future employing longitudinal research design.
- In this vein, role of religious scholars operating in religious places such as Mosque/Madrasas etc, could also be addressed as the results of the study revealed that stigmatization mainly arise from the false judgments based on moral or religious grounds. Religion has a great impact on the targeted population and thus, by addressing the false

beliefs with reference from the religion could have significant effect in reducing the social stigmatization pertaining to the disease and could also enhance the family support for the targeted population.

- Counselling session could assist the people living with HIV/AIDS in dealing with psychological problems and increase their adherence to the treatment antiretroviral therapy. Thus, study suggests to set clinical sessions for individuals suffering from HIV/AIDS to enhance their quality of life.
- Based on the effectiveness of the perceived social support from the family, it is recommended to explore the effectiveness of the perceived social support from family in reference to the nuclear and joint family system as these are the family systems more observed in Pakistani context. Both these systems have different impacts and implications in relation to the HIV/AIDS.

On the whole, there are countless stories of HIV/AIDS with different subject matters. Some have articulated the stories of activism, of rage, of loss, of resilience, and scientific triumph after decades of sufferings and futility. Lessons are learnt from investing into scientific researches. Yet, the stories of discrimination and stigma are yet to dealt with. Perceived social stigma and lack of social support among the HIV/AIDS patients assisted the pandemic to continue. Consequently, the expansion of HIV/AIDS has increased in the past few years in Asia, Middle East, North Africa, US, and Eastern Europe. New cases of HIV/AIDS have also been diagnosed during the pandemic restrictions and Pakistan is no exception to it. In this context, there is dire need to explore the phenomenon under scrutiny in indigenous context.

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Perceived Public Stigma Scale

بیانات	بالکل متفق	متفق	کسی حد تک متفق	غیر متفق	بالکل غیر متفق
1۔ بہت سے افراد ایسے شخص کو اپنی مرضی سے بطور قریبی دوست قبقل لرلیں جس نے ذہنی عارضہ کا علاج کروایا ہو۔					
2۔ بہت سے لوگ اس بات پر یقین رکھتے ہیں کہ جس شخص نے ذہنی عارضہ کا علاج کروایا ہو وہ اتنا ہی ذہین ہوتا ہے جتنا کہ ایک اوسط شخص۔					
3۔ بہت سے لوگ اس بات پر یقین رکھتے ہیں کہ جس شخص نے ذہنی عارضہ کا علاج کروایا ہو وہ اتنا ہی قابل اعتبار ہوتا ہے جتنا کہ ایک اوسط شخص۔					
4۔ بہت سے افراد ایسے شخص، جس نے ذہنی بیماری سے مکمل طور پر شفا حاصل کرلی ہو، کو سرکاری سکول میں چھوٹے بچوں کا استاد قبول کرلیں گے۔					
5۔ بہت سے افراد محسوس کرتے ہیں کہ ذہنی صحت کے لیے علاض کروانا ذاتی ناکامی کی علامت ہے۔					
6۔ بہت سے افراد ایسے شخص کو اپنے بچوں کی دیکھ بھال کے لیے نہیں رکھیں گے جس نے ذہنی عارضہ کا علاج کروایا ہو۔ گو کہ وہ کچھ عرصے سے ٹھیک ہو۔					
7۔ بہت سے افراد ایسے شخص کے بارے کم ہی سوچتے ہیں جس نے ذہنی عارضہ کا علاج کروایا ہو۔					
8۔ ملازمت دینے والے بہت سے افراد ایسے شخص کو جس نے ذہنی عارضہ کا علاج کروایا ہو کو کام پر رکھ لیں گے اگر وہ اسکا اہل ہو۔					
9۔ بہت سے افراد ایسے شخص کی درخواست کو جس نے ذہنی عارضہ کا علاج کروایا ہو پر دوسرے درخواست گزار کو فوقیت دیں گے۔					
10۔ میرے حلقے میں بہت سے افراد ایسے شخص کے ساتھ جس نے ذہنی عارضہ کا علاج کروایا ہو، کے ساتھ ویسا ہی برتاؤ کریں گے جیسا کہ دوسروں کے ساتھ۔					
11۔ بہت سے بالغ افراد اسے شخص سے ملنے جلنے سے ہچکچائیں گے جو شدید ذہنی مرض کی وجہ سے ہسپتال داخل رہا ہو۔					
12۔ اگر یہ معلوم ہو جائے کہ کسی شخص نے ذہنی عارضے کا علاج کروایا ہے تو اکثر افراد اس شخص کی رائے کو سنجیدگی سے نہیں لیں گے۔					

میں شعبہ نفسیات، بین الاقوامی اسلامی یونیورسٹی اسلام آباد کا طالب علم ہوں۔ میں ایچ آئی وی / ایڈز کے مریضوں پر "سماجی کلنک، خاندان کی حمایت اور نفسیاتی مسائل" کا جائزہ لے رہا ہوں"۔

اس تحقیق میں آپ کی شمولیت اور تعاون انتہائی اہمیت کا حامل ہے۔

اس تحقیق میں آپ کی شمولیت اور فراہم کردہ معلومات ہر طرح سے مخفی اور راز میں رکھی جائیں گی۔

اس تحقیق میں آپ کی شمولیت مکمل طور پر آپ کی مرضی پر منحصر ہے جس میں کسی بھی طرح کا دباؤ کا عمل دخل نہیں ہو گا۔

اگر آپ اپنی سے اس کا حصہ بننا چاہتے ہیں تو نیچے اپنے دستخط کر دیجیے۔ شکریہ

نام: _____ (ضروری نہیں) عمر: _____

جنس: _____ تعلیم: _____ ازدواجی حیثیت: _____

مالی حالات: _____

.رہائشی علاقہ (شہری) (دیہی) عرصہ: _____ پہلے کبھی کسی ماہر نفسیات یا نفسیاتی ڈاکٹر کی خدمات حاصل کی ہے (ہاں) (نہیں)

Perceived Family Support SCALE

آپ کو ایک سوال نامہ دیا جارہا ہے جس کا مقصد آپ کو بیماری کے دوران آپ کے خاندان کی طرف سے دی جانے والی معاونت کا اندازہ لگانا ہے۔ ہم نے ان مسائل کو بیانات کی شکل میں مرتب کیا ہے آپ اسے غور سے پڑھیں اور پڑھنے کے بعد بتانا ہے کہ یہ کس حد تک درست ہے اگر آپ کے گھر والے آپ کو ہر وقت پیار کرتے ہیں تو ہر وقت کے خانے میں, اگر کبھی کبھی تو کبھی کبھی پر نشان لگائیں ( ) کسی بیان کو خالی نہ چھوڑیں آپ کی یہ معلومات صیغہ راز میں رہیں گے۔

نمبر شمار سوالات	کبھی نہیں	کبھی کبھی	اکثر اوقات	ہر وقت
1۔ میرے گھر والے میرا مذاق اڑاتے ہیں				
2۔ میرے گھر والے مدد گار ثابت ہوتے ہیں				
3۔ میرے گھر والے بستر سے اٹھنے اور لیٹنے میں مدد کرواتے ہیں				
4۔ میرے گھر والے میرے مزاج کا خاص خیال رکھتے ہیں				
5۔ مجھ سے گھر والے چھوٹے موٹے کام کرواتے ہیں				
6۔ میرے گھر والے میرے کمرے کی صفائی کا خاص خیال رکھتے ہیں				
7۔ میرے گھر والے مجھے خوش رکھنے کی خصوصی کوشش کرتے ہیں				
8۔ میرے گھر والے میرے لئے فکر مند رہتے ہیں				
9۔ مجھے گھر والے کپڑے بدلنے میں مدد کرواتے ہیں				
10۔ مجھے گھر والے وقت پر کھانا دیتے ہیں				
11۔ مجھے گھر والے باقاعدہ ورزش کرواتے ہیں				
12۔ مجھے گھر والے باہر سیر کیلئے لے کر جاتے ہیں				
13۔ میرے گھر والے مجھے وقت پر دوائی دیتے ہیں				
14۔ مجھے گھر والے چلنے پھرنے میں مدد کرواتے ہیں				
15۔ مجھے گھر میں خصوصی توجہ دی جاتی ہے				

نمبر شمار سوالات	کبھی نہیں	کبھی کبھی	اکثراوقات	ہروقت
16۔ میرے گھر والے مجھے حوصلہ دیتے ہیں				
17۔ مجھے گھر والے مہمانوں سے ملوانے میں عار محسوس کرتے ہیں				
18۔ مجھے نہلانے میں گھر والے مدد کرتے ہیں				
19۔ میرے ساتھ ماں باپ زیادہ وقت گزارتے ہیں				
20۔ میرے گھر والے میرے علاج پر زیادہ خرچ کرتے ہیں				
21۔ مجھے گھر والے چیزیں پہچاننے میں مدد کرواتے ہیں				
22۔ میرے گھر والے میری جسمانی صفائی کا خیال رکھتے ہیں				
23۔ میرے گھر والے کھانا کھلانے میں مدد کرتے ہیں				
24۔ میرے ساتھ بہن بھائی زیادہ وقت گزارتے ہیں				
25۔ میرے گھر والے روزمرہ کاموں میں مجھ سے مشورہ لیتے ہیں				
26۔ میرے گھر والے مجھے امید دلاتے رہتے ہیں				
27۔ میرے گھر والے گاڑی میں بیٹھنے میں مدد کرواتے ہیں				
28۔ میرے گھر والے میری رائے کو اہمیت دیتے ہیں				
29۔ میری ورزش کیلئے گھر میں خاص سامان رکھا گیا ہے				
30۔ میرے گھر والے سیڑھیاں چڑھنے میں میری مدد کرواتے ہیں				

Annexure C

ڈی۔اے۔ایس۔ایس۔اسکیل

ہدایات:

مندرجہ ذیل فقرات کوغور سے پڑھیں اور جوفقرہ آپکی کیفیت، خیالات اوراحساسات کے مطابق ہواُس کے سامنے 3,2,1,0 میں سے کسی ایک پر دائرہ لگائیں جوآپ کے لئے شدت کے لحاظ سے پچھلے سال کی کیفیت کومناسب طور پر ظاہر کرے۔آپ کے جوابات کوصحیح یا غلط تصور نہیں کیا جائے گا۔کسی بھی فقرہ پرغوروفکر کرنے کے لیے زیادہ وقت ضائع نہ کریں۔کسی بھی جواب کے شدت کے معیار کو جاننے کے لیے پیمانہ درج ذیل ہے

0۔ یہ مجھ پر ہرگز لاگو نہیں ہوتا ہے

1۔ کبھی کبھار کسی حدتک مجھ پر لاگو ہوتا ہے

2۔ زیادہ تر وقت/ مناسب حدتک مجھ پر لاگو ہوتا ہے

3۔ اکثر اوقات/ بہت زیادہ حدتک مجھ پر لاگو ہوتا ہے

نمبر شمار	فقرات	بالکل نہیں	کبھی کبھار/کسی حدتک	زیادہ تر وقت/ مناسب حدتک	اکثر اوقات/ بہت زیادہ حدتک
1۔	میں بہت معمولی باتوں پر پریشان رہا/ رہی۔	0	1	2	3
2۔	مجھے یوں محسوس ہوتا رہا جیسے میرا منہ خشک ہو رہا ہے۔	0	1	2	3
3۔	میں ہرگز خوشگوار احساسات محسوس نہیں کر سکا/سکی۔	0	1	2	3
4۔	میں نے جسمانی تھکاوٹ محسوس کیے بغیر سانس لینے میں دقت محسوس کی۔	0	1	2	3
5۔	میں خود کو کام کرنے کے لیے مستعد نہ پا سکا/سکی۔	0	1	2	3
6۔	میں نے بعض صورتحال میں غیر مناسب رویے کا اظہار کیا۔	0	1	2	3
7۔	میں نے کپکپاہٹ محسوس کی (جیسے میں گرنے والا/ والی ہوں۔	0	1	2	3
8۔	میں نے ذہنی طور پر بہت کم سکون محسوس کیا۔	0	1	2	3
9۔	میں ایسے حالات سے بھی گزرا/ گزری جو میرے لیے بے حد پریشان کن تھے اور اُن حالات سے نکل کر میں نے خود کو بہت پرسکون پایا۔	0	1	2	3
10۔	میں نے محسوس کیا کہ میرا مستقبل تاریک ہے۔	0	1	2	3
11۔	مجھے محسوس ہوا کہ میں جلدی پریشان ہو جاتا/ جاتی ہوں۔	0	1	2	3
12۔	میں نے محسوس کیا کہ میں نے کام کرنے کے لیے بہت زیادہ ذہنی توانائی صرف کی۔	0	1	2	3
13۔	میں نے خود کو بہت غمزدہ اور افسردہ محسوس کیا۔	0	1	2	3
14۔	جب بھی مجھے کسی بھی وجہ سے انتظار کرنا پڑا میرے لیے ناقابل برداشت ہو گیا۔	0	1	2	3
15۔	مجھے دم گھٹنے اور غشی پڑنے کا احساس ہوا۔	0	1	2	3
16۔	مجھے محسوس ہوا کہ کسی بھی کام میں میری دلچسپی نہیں رہی۔	0	1	2	3
17۔	میں نے محسوس کیا کہ میری کوئی اہمیت نہیں ہے۔	0	1	2	3
18۔	مجھے محسوس ہوا کہ میں بہت حساس ہوں۔	0	1	2	3

19۔	مجھے زیادہ درجہ حرارت یا جسمانی مشقت کے بغیر بھی بے حد پسینہ آتا رہا۔	0	1	2	3
20۔	بغیر کسی مناسب وجہ کے میں خوفزدہ ہو جاتا/ جاتی تھی۔	0	1	2	3
21۔	میں نے محسوس کیا کہ زندگی کی کوئی اہمیت نہیں۔	0	1	2	3
22۔	میرے لیے غصے پر قابو پانا مشکل ہو جاتا تھا۔	0	1	2	3
23۔	میں نے کھانا نگلنے میں دقت محسوس کی۔	0	1	2	3
24۔	میں اپنے کسی بھی کام سے لطف اندوز نہیں ہوا/ ہوئی۔	0	1	2	3
25۔	بغیر کسی جسمانی مشقت کے میرے دل کی دھڑکن تیز ہو گئی۔	0	1	2	3
26۔	میں نے محسوس کیا جیسے میرا دل بیٹھ گیا ہو اور میں اداس ہوں۔	0	1	2	3
27۔	میں نے جھنجھلاہٹ اور چڑچڑاپن محسوس کیا۔	0	1	2	3
28۔	میں نے محسوس کیا جیسے میری پریشانی حد سے بڑھ گئی تھی۔	0	1	2	3
29۔	میں نے محسوس کیا کہ جب کسی وجہ سے میں پریشان ہوا/ ہوئی تو میرے لیے پرسکون ہونا مشکل ہو گیا۔	0	1	2	3
30۔	مجھے ڈر تھا کہ مجھے کسی معمولی لیکن غیر مانوس کام کی ذمہ داری سونپی جائے گی۔	0	1	2	3
31۔	میں کسی بھی کام کے بارے میں پُر جوش نہیں رہا/ رہی۔	0	1	2	3
32۔	اپنے ذمہ کام مین کسی کی مداخلت برداشت کرنا میرے لیے مشکل تھا۔	0	1	2	3
33۔	میں ذہنی تناؤ کی حالت میں رہا/ رہی۔	0	1	2	3
34۔	میں نے خود کو بے حد غیر اہم محسوس کیا۔	0	1	2	3
35۔	میرے لیے اُس چیز یا شخص کو برداشت کرنا مشکل تھا جو میرے کام میں رکاوٹ پیدا کرے۔	0	1	2	3
36۔	میں بے حد خوفزدہ رہا۔	0	1	2	3
37۔	مجھے مستقبل میں کوئی چیز ایسی نظر نہیں آتی جسکے متعلق میں پراُمید ہو سکوں۔	0	1	2	3
38۔	میں نے محسوس کیا کہ زندگی بے معنی اور بے مقصد ہے۔	0	1	2	3
39۔	میں نے خود کو ضدی محسوس کیا۔	0	1	2	3
40۔	میں ایسے حالات کے متعلق پریشان ہوا/ ہوئی جن میں میرے بے وقوف بننے اور میری بے چینی بڑھنے کا خدشہ تھا۔	0	1	2	3
41۔	میں نے اپنے جسم میں کپکپاہٹ محسوس کی۔	0	1	2	3
42۔	مجھے کسی کام کے کرنے کے لیے پہل کرنا مشکل محسوس ہوا۔	0	1	2	3