"GENERAL WELLBEING OF TB-HIV CO-INFECTED PATIENTS ATTENDING ART CENTER OF BELAGAVI – A CROSS SECTIONAL STUDY"

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KAHER
KLE
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DEPT. OF M.Sc. PSYCHOLOGY

Seal & Signature of the HOD

Dr. (Mrs.) YASMIN D. NADAF Ph.D., PGDPM
Associate Professor & I/c Head,
Department of Psychology,
J.N. Medical College,
KAHER, Belagavi-590010
Date: 23/04/2024
Place: Belagavi

Seal & Signature of the Principal

Dr. (Mrs.) N.S. MAHANTASHETTI
Principal,
J.N. Medical College,
KAHER, Belagavi-590010

PRINCIPAL
J.N. Medical College,
BELAGAVI- 590 010

Date: 23/04/2024.
Place: Belagavi

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Nehru Nagar, Belagavi- 590 010, Karnataka, INDIA

0831 - 2471350 0831 - 2470759 www.jnmc.edu principal@jnmc.edu

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Chairperson-Antiplagiarism Committee &
Principal,
J. N. Medical College, Belagavi.

To,

Reg. No. FM0122004
Postgraduate Student,
2022-23 Batch,
Department of Psychology,
J. N. Medical College, Belagavi.

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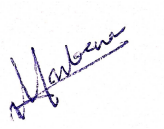

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Place: Belagavi

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ABBREVIATIONS

WHO	–	World Health Organisation
TB	–	Tuberculosis
MDR-TB	–	Multidrug-resistant Tuberculosis
HIV	–	Human Immunodeficiency Virus
AIDS	–	Acquired Immunodeficiency Syndrome
ART	–	Antiretroviral Therapy
CD4	–	Cluster Determinant 4
CMD	–	Common Mental Disorders
PTSD	–	Post Traumatic Stress Disorder
HQROL	–	Health Related Quality of Life
QOL	–	Quality of Life
ACT	–	Acceptance and Commitment Therapy
MS	–	Microsoft
SPSS	–	Statistical Package for Social Sciences
KAHER	–	KLE Academy of Higher Education and Research

ABSTRACT

TB and HIV are deadly union that advances one another more quickly. This dual challenge of chronic viral-bacterial infection encompasses two major global health concerns. The co-occurrence of both the disease presents a complex clinical scenario, posing unique challenges for diagnosis and management in turn severely impacting the overall well- being of affected individuals. Managing tuberculosis and HIV infections is critical for maintaining physical health, while dealing with mental and emotional issues which is critical for fostering psychological well-being. Social support networks are necessary for encouraging and assisting people, minimizing isolation and developing a sense of belonging.

The present study was aimed to study the General Wellbeing of TB-HIV Co-infected patients (n=175) from Belagavi District. General Wellbeing of TB-HIV Co-infected patients was measured by using a standardized questionnaire on Well-being Index by (Prof) Dr. Vijayalaxmi Chouhan and Dr.Varsha Sharma. Percentage method, Chi- square test and Independent t test were applied for statistical analysis. Results revealed that majority of TB-HIV co-infected patients exhibited average to below average levels of general well-being, there was significant association between demographic variables except age and levels of general well-being, there was significant difference in well-being status between male and female TB-HIV co-infected patients.

Key Words: General well-being and TB-HIV co-infected patients

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INTRODUCTION

"Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". **World Health Organisation (1948)**

American Psychological Association (APA) in 2018, stated that well-being is a state of happiness and contentment with low levels of distress, overall good physical and mental health and outlook, or good quality of life.

The Human Immunodeficiency Virus is a retrovirus that targets the immune system; especially the CD4 cells, essential for body to defend itself against foreign bodies or infections. As the virus weakens the immunity and makes individuals more vulnerable to opportunistic infections, one among them is tuberculosis.

TB and HIV are deadly union that advances one another more quickly. If there is no appropriate treatment, then 60% of TB patients and all HIV-positive TB are predicted to suffer death. About 1,67,000 people died due to this chronic condition in 2022. Compared to those without HIV, the ones living with this chronic disease had a 16 times higher risk of developing TB illness.

High rate of HIV-associated tuberculosis in the WHO African Region suggests a significant intersection between these two diseases. The statistics in 2022 highlights that only 54% of patients were receiving necessary antiretroviral medication. **WHO (2023**)

This dual challenge of chronic viral-bacterial infection encompasses two major global health concerns. The co-occurrence of both the disease presents a complex clinical scenario, posing unique challenges for diagnosis and management in turn severely impacting the overall well-being of affected individuals.

Tuberculosis

Following the worldwide pandemic, it emerged as the second leading cause of death from contagious diseases in 2022. Additionally, it stood as the primary mortality factor for individuals with HIV.

In 2022, roughly 2.2 million tuberculosis cases were linked to malnourishment. This suggests a notable connection between inadequate nutrition and the incidence of TB. HIV infection contributed to around 0.89 million cases, while alcohol use disorders and smoking were responsible for approximately 0.73 million and 0.70 million cases, respectively. Additionally, diabetes was associated with up to 0.37 million TB cases worldwide.

Overall, it's estimated that around 10.6 million individuals worldwide were affected from TB in 2022. Out of these, about 5.8 million, 3.5 million and 1.3 million were males, females and children respectively. Among all cases, around 6.3% were HIV positive.

Worldwide tuberculosis cases were majorly concentrated in eight countries, primarily India, which accounted for 27% of cases. Other significant contributors included Nigeria, China, Bangladesh, Pakistan, the Philippines and the Democratic Republic of the Congo.

Indonesia and India together accounted for 56% of the increase in newly diagnosed cases, from 2021 to 2022, making them the two nations that contributed most to the worldwide recovery in this regard. **WHO, Global Tuberculosis Report (2023**)

Symptoms:

- Persistent coughing, at times with blood
- Chest discomfort
- Lethargy
- Exhaustion
- Loss of weight
- Fever
- Night time sweating

The following circumstances may make a person more vulnerable to TB

- Diabetes
- Compromised immunity due to AIDS, HIV, etc.
- Being undernourished
- Using tobacco.

While tuberculosis primarily impacts the lungs, it can extend its effects to various organs, including the skin, brain, spine, and kidneys. **WHO (2023)**

Types of TB

The two primary categories are:

1. Pulmonary - The predominant variant that targets the lungs.
2. Extra pulmonary - It involves the areas other than lungs, like bones or organs- Lymphadenitis, Skeletal, Miliary, Meningitis and Genitourinary TB with signs varying based on the affected body part.

HIV

This remains a serious global public health issue, having taken lives of 40.4 million (32.9 –51.3 million) to date and persisting in its spread across all countries. Despite previous declines, numerous nations have reported increasing rates of new infections. By the conclusion of 2022, an estimated 39.0 million (33.1 – 45.7 million) were living with this virus, across the world. 6,30,000 (4,80,000 – 8,80,000) deaths were attributed to HIV related causes. **HIV statistics, globally and by WHO region (2023)**

From India, patients were around 24.67 lakhs in 2022. Karnataka, Maharashtra and Andhra Pradesh had the higher percentage of PLHIV, followed by Uttar Pradesh, Tamil Nadu, Telangana, Bihar and Gujarat.

CD4 T cells which are also known as helper T cells that express cluster determinant 4 molecules. The retrovirus targets and infects CD4 T cells specifically. During the acute phase of infection, HIV replicates rapidly, causing significant depletion and demise of CD4 T cells. Laboratory norms indicate a typical CD4 count ranging from500 – 1400 cells/ microlitres. However, according to Centers for Disease Control and Prevention guidelines, AIDS is characterized by an absolute count falling below 200 cells, indicating an advanced disease stage marked by heightened susceptibility to opportunistic infections. **Raymund Li et al. (2023)**

As immune power declines due to HIV infection, individuals face heightened vulnerablity to other infections and malignancies like cervical cancer, B-cell lymphomas and Kaposi’s sarcoma or disease such as tuberculosis. Antiretroviral therapy (ART) serves as prevention and treatment, without treatment, HIV may progress to AIDS.

Symptoms and Indicators

In initial months, the disease spreads very quick, but many aren't aware of their condition. After infection, for few weeks the signs might not appear; some may experience symptoms of flu, such as soar throat, headaches, rashes, or a fever. Other indicators that can accompany are decrease in weight, diarrhea, cough, fever and swollen lymph nodes. Cryptococcus meningitis and severe TB will also affect HIV infected person, when treatment isn't received.

Transmission of HIV

It is spread through penetrative vaginal or anal sex, transfusion of blood, reuse of contaminated needles in healthcare settings and mother - infant contact during pregnancy, childbirth and breastfeeding.

Likelihood of transmitting the viral infection to a child is very less if the mother is receiving antiretroviral therapy at the period of both pregnancy and breastfeeding.

Factors at risk

- Condom-free anal or vaginal sex
- Unsafe injections, blood transfusions, tissue transplants, medical procedures involving unsterile cutting, piercing and accidental needle injuries.
- Experiencing another sexually transmitted infection i.e. herpes, gonorrhea and bacterial vaginosis.
- Engage in harmful alcohol and drug use in context of sexual behavior. **WHO (2023**)

Due to compromised immunity, disease severity and treatment complexities strains and exhausts the person mentally and physically. In addition, social stigma, financial strain and long term health complications influences the well-being of affected individuals.

GENERAL WELL-BEING

Within human circumstances, achieving well-being is a basic goal. General well-being, is the condition of being at peace, healthy and content, encompasses an assessment of a person's physical, emotional, psychological and social dimensions.

Seligman (2011), defined well-being as combination of eudemonia, hedonic and cognitive happiness.

Essentially, overall well-being includes not only the absence of suffering or disease but also the existence of pleasant emotions, satisfying relationships, a sense of direction in life and the capacity to bounce back from setbacks.

Mental wellness is the vital and major aspect of health. As per WHO statement, mental health carries substantial significance extending more than just the absence of mental illnesses or impairments.

Aspects of well-being

1. *Emotional well being*

It involves a positive balance of pleasant to unpleasant affect and a cognitive appraisal of satisfaction with life in general. **Keyes (2003)**

For patients, dealing with HIV and tuberculosis can cause emotional difficulties, which include guilt, terror, worry, shame and despair. The ambiguity

surrounding the concurrent treatment of tuberculosis and HIV can increase these feelings.

TB and HIV patients may experience emotional obstacles such as suicide ideation, psycho-emotional collapse and significant family or social issues. These issues can be worsened by stigma and discrimination surrounding this condition, resulting in isolation, job loss and financial devastation. **Cameia et al. (2020)**

2. Psychological well being

It is "a dynamic state characterized by a reasonable amount of harmony between an individual's abilities, needs and expectations, and environmental demands and opportunities". **Levi (1987)**

The co-infected patients were more prone to develop CMD (Common Mental Disorders) than non-co-infected. Other study found that TB and HIV have a combined impact on psychological health with depression and stigma being major factors. **A Deribew et al. (2010)**

3. Social well being

According to this includes five dimensions:

- Social integration - Evaluation of the quality of one's relationship with society and community.
- Social contribution - Belief that one's life has meaning and value to the society.
- Social coherence - Sense of social world as understandable and predictable.

- Social actualization - The belief that one can continue to grow and develop in the social world.
- Social acceptance - Comfort and acceptance of other people. **Keyes (1998)**

Social relationships can also contribute to stress if they are negative, demanding, challenging, or draining. **Offer and Fischer (2017)**

Both disorders have caused the sufferer to stay away from their loved ones and making them isolate themselves. It also lead to loss of employment and excluded from their communities as well as families. **George et al. (2020)**

4. Spiritual well being

This refers to a person's subjective experience of being spiritually fulfilled, at peace and related to a higher purpose or meaning in life. It includes emotions of inner peace, harmony and a sense of purpose and meaning in a person's existence.

People living with HIV/AIDS embrace spirituality to cope, redefine their lives and find meaning and purpose in the midst of a typically devastating situation.

Research suggests that HIV/AIDS patients who report greater levels of spirituality experience good overall well-being, including greater life satisfaction, improved functional health condition and higher health related quality of life. These positive outcomes remain significant even when other factors like age and HIV symptoms are taken into account. **Sian Cotton et al. (2006)**

5. Self awareness

The self-awareness dimension of overall well-being relates to an individual's capacity to identify as well as understand their own thoughts, feelings, behaviors and overall identity. It entails being aware of own strengths, weaknesses, ambitions and values as well as how these aspects affect one's communication with others and actions. It is critical in developing psychological resilience, personal growth and overall life satisfaction.

6. Physical well being

It is the ability to participate in social and physical tasks having no physical limitations, pain or health problems.

A good psychological state was substantially linked with physical symptoms that are foot pain, headache, muscle weakness, chest pain and other symptoms like dizziness and struggles falling asleep.

Physical activity predicts better QOL in TB/HIV coinfected . This could be explained by the fact that exercise reduces the likelihood of developing depression, hence enhancing overall health and psychological thinking. Several investigations undertaken in developed countries supported this finding. **Nabei et al. (2024)**

In HIV-positive patients, physical and mental health are linked together. Achieving optimal physical health during HIV therapy is vital for maintaining mental health and general well-being.

Individuals infected with tuberculosis and human immunodeficiency virus encompasses multidimensional well-being that includes physical, mental, emotional, social and functional components. Managing tuberculosis and HIV infections is

critical for maintaining physical health, while dealing with mental and emotional issues which is critical for fostering psychological well-being. Social support networks are necessary for encouraging and assisting people, minimizing isolation and developing a sense of belonging.

TB and HIV affected people face an elevated risk of psychological issues which are stress, depression, anxiety, disturbance in sleep, aggression and suicidal thoughts compared to non-coinfected individuals, highlighting the urgent need for interventions that address these issues within this vulnerable population. Effective strategies focusing on mental health screening, support and treatment are essential to mitigate the impact of mental health problems and improve overall wellbeing.

REVIEW OF LITERATURE

Amare Deribew, Markos Tesfaye et al. (2009) have conducted research on "Tuberculosis and HIV co-infection: its impact on quality of life". (n=591 out of whom 124 were with TB-HIV) in Oromiya, Ethiopia. The research discovered that low income, depression, and insufficient family support were indicators of diminished quality of life in individuals co-infected with TB and HIV. Those lacking adequate income and family backing may experience poorer nutritional and immune statuses, ultimately impacting their quality of life. The study concluded that TB control initiatives ought to devise plans to enhance the quality of life for TB/HIV patients. Addressing depression and self-stigmatization through interventions is crucial for improving quality of life. Educating and counseling patient families is essential to maximize their support and enhance quality of life.

Karl Perltzer, Pamela Naidoo et al. (2012) have carried out a research on "Prevalence of post-traumatic stress symptoms and associated factors in tuberculosis (TB), TB retreatment and/or TB-HIV co-infected primary public health-care patients in three districts in South Africa" A study conducted on 4,900 adult patients in South Africa's high TB burden districts revealed a 29.6% prevalence of PTSD symptoms. Patients screening positive for PTSD symptoms and psychological distress were more likely to receive antidepressant medication. Poverty, urban residency, psychological distress, suicide attempts, substance use before sex, unprotected sex, TB-HIV co-infection, and the presence of other chronic conditions were identified as predictors of PTSD symptoms. Researchers recommended strengthening healthcare systems to enhance mental health care delivery, emphasizing existing programs targeting TB and HIV prevention and treatment.

Tilahun Hailu, Mezgebu Yitayal et al. (2022) have conducted a study on "Health-Related Quality of Life and Associated Factors Among Adult HIV Mono-Infected and TB/HIV Co-Infected Patients in Public Health Facilities in Northeast Ethiopia: A Comparative Cross-Sectional Study" on 434 mono-infected and 143 TB/HIV infected patients. The results indicated that co-infected patients experienced significantly lower HRQOL scores across various domains—physical, social, psychological, environmental, level of independence, and spiritual—compared to those with HIV alone. It was further concluded that healthcare providers need to prioritize TB/HIV co-infected patients to enhance their quality of life. Additionally, management strategies should involve collaboration with psychiatric facilities due to the higher prevalence of depression and stigma.

Amare Deribew, Kebede deribe et al. (2013)studied "Change in quality of life: a follow up study among patients with HIV infection with and without TB in Ethiopia " on 465 HIV- infected patients without TB and 124 TB/HIV. This research demonstrated a significant statistical enhancement in physical, social, psychological,environmental and spiritual quality of life after six months compared to baseline for both patient groups ($P < 0.0001$). The improvement in all QoL dimensions was more pronounced in co-infected participants than in HIV without TB. Severe CMD was strongly linked with poorer physical QoL among both TB/HIV co-infected individuals ($P = 0.000$; $\beta = -2.84$) and HIV patients without TB ($P = 0.000$; $\beta = -2.34$). The researchers concluded that health ministries, in partnership with stakeholders, should integrate mental health services into TB/HIV programs and train healthcare providers to promptly identify and address CMD to enhance QoL.

Amare Deribew, Markos Tesfaye et al., (2010) have investigated on "Common mental disorders in TB/HIV co-infected patients in Ethiopia" on 155

TB/HIV co-infected and 465 non co-infected HIV. The study findings indicated that CMD was present in 63.7% of TB/HIV co-infected patients and 46.7% of those without co-infection. TB/HIV co-infected individuals were 1.7 times more likely to experience CMD compared to those without co-infection (95%CI: 1.1, 2.9, OR = 1.7,). Programs addressing TB/HIV should establish protocols for screening and managing CMD among co-infected patients. Screening efforts should particularly target individuals lacking income, unemployed individuals, and day laborers.

Julia Louw, Karl Peltzer et al. (2012) have conducted a research on "Quality of Life among tuberculosis(TB), TB retreatment and/or TB/HIV co-infected primary public health care patients in three districts in South Africa" on 4,900 individuals. The study findings demonstrated notable beneficial impacts of TB-HIV co-infection on mental health functioning, emotional role, energy and fatigue, social function, and physical role domains. Conversely, detrimental effects were observed on general health, bodily pain, and physical function. The study concluded that TB and HIV collectively diminish patients' physical functioning and deteriorate their quality of life. Therefore, it is crucial for TB control programs in public health clinics to develop approaches aimed at enhancing the health quality of TB and HIV co-infected individuals.

Kalkidan Yohannes, Hirbaye Mokana et al. (2020) have studied "Prevalence of depressive symptoms and associated factors among patients with tuberculosis attending public health institutions in Gede'o zone, South Ethiopia" in 409 patients out of which 71 (17.4%) had comorbid HIV. According to the findings, patients with TB/HIV had 3.96-fold increased risk of experiencing depressive symptoms compared to patients without coinfection (95% CI 2.0, 7.84; AOR = 3.96).

Mrinalini Das, Petros Isaakidis et al., (2014) have explored “HIV, multidrug-resistant TB and depressive symptoms: when three conditions collide” in 45 HIV/MDR-TB patients in Mumbai. Results suggested that 38 participants did not experience depressive symptoms at baseline, but seven (16%) did. All patients had reassessments following a three-month follow-up. Three of the 44 participants (who reported depressed symptoms at baseline) continued to experience them. Patients were provided with tailored psychological and clinical assistance.After three months of MDR-TB treatment, but one with baseline depressed symptoms showed improvement. Researchers recommended regular monitoring of mental health status by trained counselors or clinical staff using simple, validated and cost-effective tools.

Avin Maria, Untung Sujianto et al. (2020) have investigated “The Effets of Acceptance and Commitment Therapy (ACT) on Depression in TB-HIV Co-infection Patients”(n=62) in Yogyakarta Regional Public Hospital and Sleman Regional Public Hospital. Results showed that middle-aged adults (50%) tended to have severe depression, early adult and older adult respondents were more likely to have moderate depression. The respondents who were completely jobless experienced 100% severe depression. It was also observed that, the ACT intervention group's depression rate decreased more significantly than that of the control group (p value = 0.00).It was determined that ACT helped people with TB and HIV co-infection to feel less depressed. It is advised that ACT be created as a nursing intervention that depressed patients can get.

Tegegan Mulatu Ayana, Kedir Teji Roba et al. (2019) have carried out a research on “Prevalence of psychological distress and associated factors among adult tuberculosis patients attending public health institutions in Dire Dawa and Harar cities, Eastern Ethiopia” (n=365). In the study group, prevalence of psychological

discomfort was 63.3% (95% CI: 58.1, 68.1) Psychological distress was linked to a number of factors, including living in a rural area (95% CI: 1.01,3.86; AOR: 1.98), co-infection between TB and HIV (AOR: 2.15; 95% CI:1.02, 4.56), having at least one chronic illness (95% CI:1.59,5.79 AOR: 3.04), experiencing stigma (95% CI:1.01, 2.90; AOR: 1.71), having pulmonary and MDR-TB (95%CI:1.50,4.28; AOR: 2.53) and smoking cigarettes (95% CI:1.06,6.03; AOR: 2.53;).Psychological distress was linked to co-infection of HIV and TB, experiencing stigma related to TB, and chronic illness morbidity. To avoid the negative effects on mental health, chronic diseases—including HIV/AIDS diagnosis and referrals to chronic disease units—should receive attention.

Amare Deribew, Yohannes HaileMichael et al. (2009) studied on "The synergy between TB and HIV co-infection on perceived stigma in Ethiopia" on 591 participants (TB or HIV) of whom 124 were co-infected. The findings of the study revealed that, compared to HIV patients who were not co-infected, respondents who were co-infected with TB and HIV were 1.4 times more likely to see themselves as stigmatized (95% CI: 1.2, 2.0, OR = 1.4]. Compared to educated people, non-literate people were twice as likely to feel highly stigmatized 95% CI: 1.2, 3.0, OR = 1.9). Depression-afflicted people were 2.3 times more likely than non-depressed people to have a high perceived stigma (95% CI: 1.5, 3.2, OR = 2.3). Compared to men, women felt stigmatized more (OR = 1.6, 95% CI: 1.2, 2.3). The researchers conclude that in order to lessen perceived stigma, behavioral change communication should concentrate on these population categories.

Bakht Pari , Khalid Rehman et al. (2021) carried out a research on "Quality of Life in co-infection of Tuberculosis(TB) and Human Immune Deficiency virus/ Acquired Immune Defieciency Syndrome (HIV/AIDS) positive patients" (n = 46) out

of which 23 were HIV positive with TB co-infected and 23 were HIV positive patients only in Peshawar. Findings showed that 15 participants (32.6%) were female and 31 participants (67.4%) were male. This comprised 18 males (78.3%) and 5 females (21.7%) who were co-infected with TB and 13 males (56.5%) and 10 female participants (43.5%) who were part of the HIV/AIDS group.Compared to HIV/AIDS positive patients alone, TB co-infection HIV/AIDS positive patients had a lower quality of life. There was an overall quality of life of less than 60%, with 8.6% of individuals being HIV/AIDS positive and 13.1% having co-infection with HIV/AIDS. The researchers came to the conclusion that there was no discernible difference in the two groups' quality of life. Though there were some differences between HIV/AIDS and TB co-infection patients in the psychological, social, and physical domains compared to HIV/AIDS alone. They identified that lack of awareness, stigmatization and early screening plus treatment were prominent issues.

E. Hayes-Larson et al. (2017) investigated “Depressive symptoms and hazardous/harmful alcohol use are prevalent and correlate with stigma among TB-HIV patients in Lesotho” on a total 371 participants. According to the findings, 30% of individuals (95% confidence interval [CI]: 25–35) said they had symptoms of moderate to severe depression. A quarter of the sample (95%CI 20–29) reported using of alcohol in an unsafe or harmful way. Only 24 participants (7%) however reported having moderate to severe depressive symptoms in addition to using alcohol in a risky or harmful manner.

Marcos Vinicius de Freitas Carvalho et al. (2022) conducted qualitative research on “Tuberculosis/HIV coinfection focused on care and quality of life” in the city of São Paulo.The participants' happiness with the medical system and the care they received was evident from the results, but they also mentioned how living in

dangerous environments reduced their quality of life. Co-infection with the human immunodeficiency virus and tuberculosis (TB) caused isolation, stigma and suffering which could result in suicidal ideation and a decreased quality of life. As per the participants' statements, professionals contribute to the preservation of quality of life by cultivating relationships and offering personalized treatment.

Dorian Fernandez, Imoleayo Salami et al. (2014). The study was conducted using data from the Nationwide Inpatient Sample covering a period from January 2002 to December 2014 on "HIV-TB Coinfection among 57 Million Pregnant Women,Obstertics Complicitions, Alcohol Use, Drug Abuse and Depression" on 110 TB-HIVindividuals. The NIS dataset is a publicly available inpatient database in the US. The study's findings showed that moms who were also co-infected with HIV or TB had nearly twice the risk of drug misuse and depression compared to mothers who were only co-infected with TB [T3]. The report also said that among the outcomes looked at in the analysis of hospital admissions related to pregnancy were alcohol consumption, drug misuse, and depression.The results highlighted how critical it is to strengthen structural and social support networks for pregnant HIV-TB co-infected women.

Amanda Danielle SILVA , Thaylany Crysley AMORIM , Ádeny Marccy ARAGÃO et al. (2018) carried out a study on "Quality of life evaluation of coinfected patients with HIV/tuberculosis in a hospital in Northeast Brazil" on 26 patients. The psychological domain of the patients was evaluated, and the results showed some negative symptoms (mean score: 15.3 ± 2.2), including despair, unhappiness with low body weight, fear of spreading the illness to their spouse, and discouragement over the breakup. The social relations domain brought to light concerns that may affect patients' mental health, including social isolation, discontent

with the lack of respect received because of their HIV status, and fear of discrimination (mean score: 14.2 ± 2.9). Numerous studies have found that spirituality is the domain with the highest score, indicating that it positively affects the quality of life for people living with HIV/TB. Nonetheless, a few patients also expressed fear of dying and worries about the future (mean score: 15.5 ± 3.8).

Marcos Vinícius de Freitas Carvalho, Mônica Taminato et al. (2019) studied on "Tuberculosis/HIV coinfection from the perspective of quality of life: scope review" . The articles' convergent findings demonstrate that coinfection reduced quality of life more than either HIV or TB alone. However, the same research also demonstrated that poverty, chronic illnesses, mental illness, low income, education, and social and familial support all had an equally significant impact on QoL. The researchers came to the conclusion that qualitative research can be beneficial by allowing individuals who are coinfected to discuss their demands and challenges while enduring a health condition, as well as their perceptions of their quality of life. It enables the creation of plans to enhance the prevention and management of both illnesses and to advance the social, emotional, and physical well-being of this demographic.

Eric Tornu, Louisa Quarcoopome (2021) carried out a research study on "Correlates of quality of life among persons living with tuberculosis: A cross-sectional study" on 250 participants out of which TB-HIV coinfected were (11, 4.4%).The respondents' social relationship QOL and HIV infection were shown to be negatively correlated ($r = -.27$, $p < .001$), with the majority of their support coming from coworkers ($r = -.14$, $p = .035$) and religious organizations ($r = -.34$, $p < .001$). HIV infection ($r = -.18$, $p = .005$), physical QOL, and age ($r = -.25$, $p < .001$).The researchers came to the conclusion that in order to improve patients' quality of life,

healthcare professionals should include the significant others of those who are coping with pleuritis with pleural effusion, HIV, and tuberculosis.

Hailay Gesesew, Birtukan Tsehaineh et al. (2012) conducted a study on "The role of social determinants on tuberculosis/HIV co-infection mortality in southwest Ethiopia: a retrospective cohort study" (n = 272 Tb/HIV co-infected patients). The study's results showed that the risk of death for commercial sex workers was almost six times (AOR, 5.6; 95% CI, 1.2–25.8) higher than that of government employees.Compared to urban inhabitants, the link between Tb/HIV mortality was 3.4 times (AOR, 3.4; 95% CI, 1.4–8.4) greater in rural areas.Social variables such as the nature of one's work, the severity of one's illness, and living in a rural region appeared to be significantly associated with a poor prognosis. The results of this study shed light on how social variables affect the mortality rate associated with Tb/HIV co-infection. In keeping with the Alma Ata Declaration's principles of primary health care, intervention frameworks addressing Tb/HIV mortality should integrate and improve the social determinants of affected populations in addition to focusing on medical interventions to improve disease outcomes.

NEED FOR THE STUDY

General well-being in TB-HIV patients is essential for the overall health and quality of life. TB and HIV are two diseases that frequently coexist, HIV lowers the immune power by which individuals tend to be more vulnerable to TB infection that can progress to TB disease more quickly.

Emotional well-being in individuals suffering from TB/HIV co-infection is a crucial component of their overall health. Patients with co-infections with HIV and TB encounter a variety of emotional challenges such as fear of dying, hopelessness, the potential loss of their future, social and economic repercussions, loss of independence, low self-worth, isolation due to discrimination and suicidal thoughts. Furthermore, the stigma attached to HIV and TB can worsen mental state, which has an impact on their wellbeing. Mental health issues must be addressed in these patients to have better overall health outcomes. **Deribew et al. (2010)**

Individuals infected with HIV find it emotionally extremely hard due to the disease's complicated psychological effects, discrimination and stigma. Studies revealed that as compared to healthy individuals, those living with HIV frequently have a decreased level of psychological well-being, resilience and coping methods. **Rivera-Picon et al. (2022)**

In addition, immunological health outcomes in HIV-positive individuals have been connected to psychosocial factors such as HIV stigma, underscoring the significance of managing psychosocial stress to enhance the overall health and wellbeing of individuals who are affected. **Rendina et al. (2019)**

TB-HIV co-infection significantly affects mental health, with individuals facing a higher risk of common mental disorders (CMD) such as depression, anxiety, stress and suicidal ideations. Research indicates that TB/HIV co-infected patients have a greater prevalence of CMD compared to those with only HIV, highlighting the impact of this co-infection on mental well-being. **Deribew et al. (2013)**

The relationship between mental state and societal status in TB-HIV co-infected patients is influenced by various factors, including stigma, discrimination and social support. Stigma has a detrimental effect on people as it promotes despair, self-hatred and dissatisfaction. It also prevents patients from receiving the necessary medical care. **Agbeko et al. (2022)**

Mental health issues such as anxiety and depression can affect treatment adherence for both HIV and TB that lead to negative consequences such as drug resistance, loss of follow-up and increased mortality rates. **Jha et al. (2019)**

Addressing the holistic well-being of individuals suffering from HIV, particularly those co-infected with tuberculosis, necessitates a comprehensive understanding of the emotional challenges they encounter. Beyond the physical implications of their conditions, the pervasive stigma, discrimination and psychological toll significantly impact their quality of life and overall health outcomes.

Research into the general health status of TB-HIV patients is indispensable in illuminating the care gaps and psychosocial needs inherent in their journey. By rooting into these aspects, healthcare professionals and researchers can tailor interventions that not only bridge these gaps but also foster resilience and enhance treatment efficacy. This approach is pivotal in fostering a supportive environment

conducive to improved health outcomes and an enhanced sense of well-being for TB-HIV co-infected individuals.

Customized interventions designed to address the emotional facets of living with co-infection can be transformative. By acknowledging and attending to the psychosocial dimensions, healthcare providers can empower patients to navigate their circumstances with greater agency and optimism. Through targeted support mechanisms such as counseling to the patients and their family and access to mental health services, individuals can cultivate the resilience needed to confront the challenges posed by TB-HIV co-infection.

Ultimately, the goal is not merely to manage the physical manifestations of the diseases but to enable individuals to lead fulfilling and satisfying lives despite the complexities they face. By prioritizing research of the general well-being of TB-HIV patients and suggesting tailored interventions, the patients can be influenced towards positive change, enhancing health outcomes and fostering a more compassionate and inclusive healthcare landscape.

Variables:

Independent variable:

TB-HIV co-infected patients

Dependent variable:

General well being

Objectives:

1. To assess the general well-being status of TB-HIV co-infected patients.
2. To find out the association between demographic variables and general well-being.
3. To find out the difference in well-being status between male and female TB-HIV co-infected patients.

Research Question

What is the status of general well-being of TB-HIV co-infected patients attending ART center?

METHODOLOGY

3.1 RESEARCH DESIGN:

Cross-Sectional study

3.2 SAMPLE DESIGN:

Non - probability sampling

3.2.1 Sample technique:

Convenience sampling

3.2.2 Sample size:

The sample size for this study was calculated based on a previous study "Assessing quality of life and depression among people living with HIV/AIDS and TB-HIV Coinfection in Kathmandu, Nepal" (2015)

Sample was calculated using the formula

High level of depression among HIV/TB co-infected patients = 33.8 = p

Margin of error = d = 7%

$$n = \frac{z^{2*} p\,(1-p)}{d^2}$$

where,

n= number of TB-HIV coinfected patients

z= 1.96 at 5% level or 95% confidence

q= 100-p= 100-33.8 = 66.2

hence, sample size = $\frac{(1.96)^2 \times 33.8 \times 66.2}{7^2}$

n = 175

3.2.3 Inclusion Criteria :

Patients suffering from Tuberculosis-HIV co-infection.

3.2.4 Exclusion Criteria :

1. Patients suffering only from Tuberculosis and patients suffering only from HIV.
2. Those who do not give consent.

3.3 METHOD OF DATA COLLECTION AND MEASURE USED

Questionnaire Method: Well-being Index by Vijayalaxmi Chauhan and Varsha Sharma (English) was used.

3.3.1 Description of Scale

Well-being Index consists of 50 items to measure its six dimensions:

- Emotional well-being
- Psychological well-being
- Social well-being
- Spiritual well-being
- Self-awareness
- Physical well-being.

3.3.2 Reliability

The scale's reliability was assessed by measuring test-retest consistency using a sample of 100 subjects aged 13 years and above. The scale was administered twice to the same sample with a 15-day interval. The correlation coefficient obtained was 0.71, indicating a statistically significant level of reliability at the 0.01 significance level.

3.3.3 Validity

In addition to having face validity due to all scale items addressing the targeted variable, the scale exhibits high content validity. This is evident from expert assessment and ratings, confirming that the scale items directly align with the concept of well-being. To ascertain validity beyond face and content measures, the reliability index was computed between the scores of the current scale and the General Well-being Scale developed by Chouhan and Didwania, which demonstrated high validity with a coefficient of 0.85.

3.3.4 Use of the scale

The key domains of well-being can be traced out with the use of the well-being index. This test is helpful in assessing people's quality of life in the current stressful environment. The scale is capable of being used for adults, teenagers and senior citizens.

3.4 PROCEDURE

The present study was conducted on TB-HIV co-infected patients from ART centres of Belagavi district, Karnataka. After attaining ethical clearance from Jawaharlal Nehru Medical College, Institutional Ethics Committee for Humans

Subject's Research, KAHER, Belagavi and permission from the Medical Officers and the authorities from the respective hospitals. Participants had been selected by a Non-probability sampling method (convenience method). After getting approval from the ART centre, the researcher briefed about the study and gained informed consent from the patients. The researcher also translated the statements orally to the participants who were not literate and the informed consent also was briefed in their local language (Kannada and Hindi). Necessary precautions and essential safeguards were taken before interacting with the patients. The standardized questionnaire of General well-being, WBI-cvsv developed by Prof. (Dr.) Vijayalaxmi Chauhan (Udaipur) and Dr. Varsha Sharma (Udaipur). The filled questionnaires were collected back for processing of scoring and statistical analysis.

3.5 DATA PROCESS

The examination of the acquired data was carried out thoroughly along with scoring, coding and was entered in MS excel sheet after which relevant statistical measures were applied by using SPSS.

3.6 SCORING

The questionnaire consists of 50 statements of which are six dimensions; emotional (6), psychological (9), social (15), spiritual (5), self awareness (9) and physical well-being(6) from which 18 are negative and 32 statements are positive.

It is five point rating scale. The items can be responded to by selecting from the options; Always, Often, Sometimes, Rarely and Never.

Table 1: Scoring pattern of General Well-being

Type of item	Always	Often	Sometimes	Rarely	Never
Positive	5	4	3	2	1
Negative	1	2	3	4	5

3.7 ANALYSIS OF RESULTS: Descriptive statistics/ Non parametric tests

3.7.1 Statistical analysis

Percentage method was applied to calculate the level of general well being in TB and HIV coinfected patients and Chi square test was used to find out the association between demographic variables and general well-being and t-test was applied to know comparison between male and female.

3.8 ETHICAL ISSUES

The present study was conducted after obtaining ethical clearance from the Institutional Ethics Committee of J.N. Medical College, KAHER, Belagavi. A briefing of study was made to the participants, confidentiality was assured and only after obtaining informed consent from the patients, questionnaire was administered. Participation in the research was kept voluntary.

RESULTS AND DISCUSSION

"Well being can be understood by how people feel and how they function both on a personal and social level and how they evaluate their lives as a whole". **Aaron J. and Roache (2023)**

Several studies have shown that TB-HIV coinfection can significantly impact patient's physical and mental health, leading to poor treatment outcomes. **Julia Louw et al. (2012)**

The overlap of the TB and HIV can have severe reactions on physical and psychological health of the infected individuals as the burden of both the diseases can arise the feelings of being isolated, stressed and frustrated as they carry social stigma and misconceptions.

Furthermore, managing this chronic bacterial-infection goes beyond the medical treatment alone; it requires a holistic approach that attends the multifaceted factors of overall wellbeing to ensure optimal health outcomes.

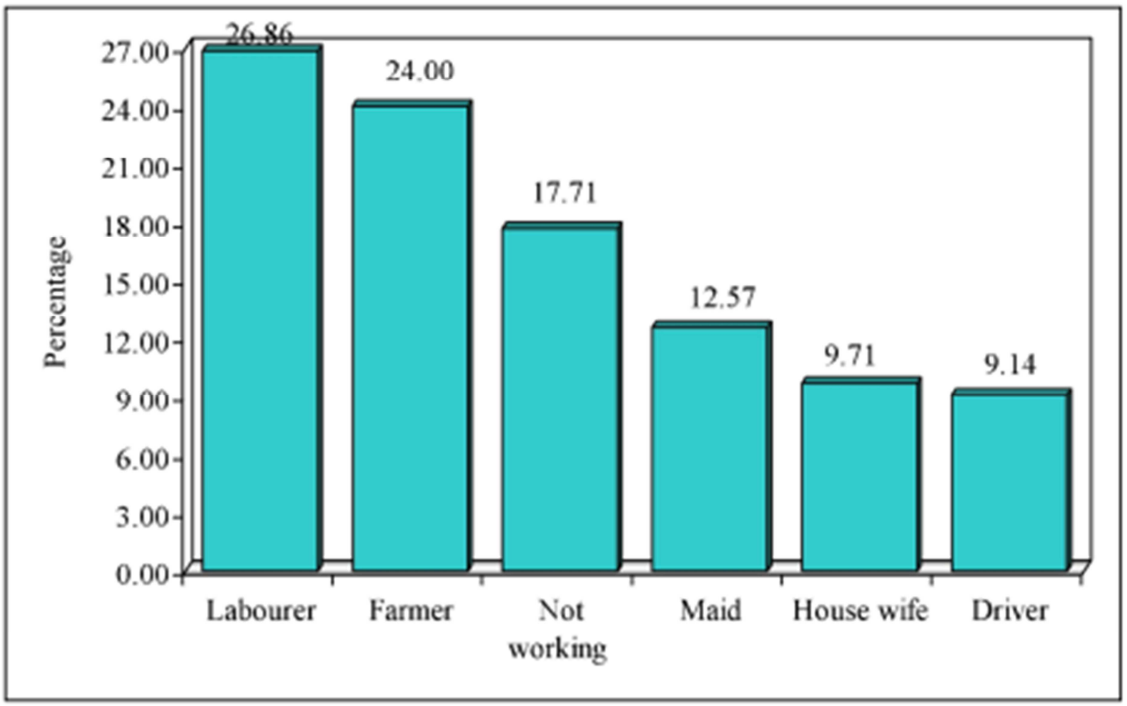
In addition, both health conditions need a broader view as it not only is linked with body but also the state of mind which can in turn have a greater impact on how the stressful problems are and can be dealt by the victims of this chronic condition.

Table no.2: Demographic characteristics wise distribution of patients

Demographic characteristics	No. of patients	%of patients
Age groups		
21 – 30 years	9	5.14
31 – 40 years	49	28.00
41 – 50 years	65	37.14
51 – 60 years	44	25.14
>=61 years	8	4.57
Mean	45.09	
SD	9.70	
Gender		
Male	96	54.86
Female	79	45.14
Occupations		
Not working	31	17.71
Labourer	47	26.86
Farmer	42	24.00
Maid	22	12.57
House wife	17	9.71
Driver	16	9.14
Total	**175**	**100.00**

As presented in the above table, majority (37.14%) of patients belonged to 41-50 years, among which males were 54.86% exceeding females (45.14%). With respect to occupation, most patients were laborers (26.86%).

Figure 1: Occupations wise distribution of patients



Results concerned to objective 1 are discussed below

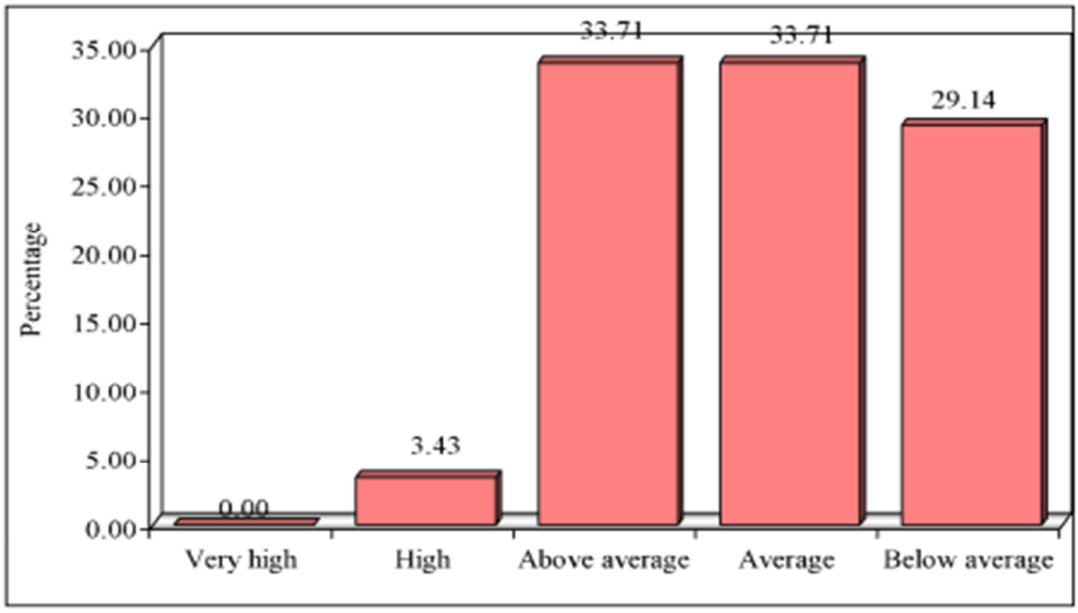
Table no.3 : Levels of general well being among TB-HIV coinfected patients

Levels of general well be	No of patients	%of patients
Very high	0	0.00
High	6	3.43
Above average	59	33.71
Average	59	33.71
Below average	51	29.14
Total	175	100.00

With reference to the above table, among 175 TB-HIV coinfected patients, 33.71% have average level of general well being followed by 29.14% with below average level, 3.43% with high level of general well being and none of the patients had very high level of general well being.

A study showed lower scores in the areas i.e, physical, psychological and social relations areas among TB-HIV coinfected patients. **Lis Aparecida de Souza Neves et al. (2012)**

Figure 2: Levels of general well being wise distribution of patients



Results related to second objective are presented and discussed as below

Table no.4: Association between levels of general well being with demographic characteristics

Characteristics	Levels of general well being										Chi-square	
	VH	%	H	%	AA	%	A	%	BA	%	Chi-square	P-value
Age groups												
21-30yrs	0	0.00	0	0.00	4	44.44	5	55.56	0	0.00	14.8160	0.2520
31-40yrs	0	0.00	2	4.08	21	42.86	12	24.49	14	28.57		
41-50yrs	0	0.00	4	6.15	17	26.15	25	38.46	19	29.23		
51-60yrs	0	0.00	0	0.00	13	29.55	14	31.82	17	38.64		
>=61yrs	0	0.00	0	0.00	4	50.00	3	37.50	1	12.50		
Gender												
Male	0	0.00	6	6.25	44	45.83	40	41.67	6	6.25	56.4330	0.0001*
Female	0	0.00	0	0.00	15	18.99	19	24.05	45	56.96		
Occupations												
Not working	0	0.00	2	6.45	14	45.16	14	45.16	1	3.23	44.5120	0.0001*
Labourer	0	0.00	2	4.26	19	40.43	15	31.91	11	23.40		
Farmer	0	0.00	1	2.38	10	23.81	15	35.71	16	38.10		
Maid	0	0.00	0	0.00	2	9.09	7	31.82	13	59.09		
House wife	0	0.00	0	0.00	3	17.65	4	23.53	10	58.82		
Driver	0	0.00	1	6.25	11	68.75	4	25.00	0	0.00		
Total	0	0.00	6	3.43	59	33.71	59	33.71	51	29.14		

***p<0.05, VH-Very high, H-High, AA-Above average, A-Average, BA-Below average**

As per the table no. 3, among all the age groups, none of the patients showed very high level of general well being, 6.15% patients from the age group 41 – 50 years followed by 4.08% of 31 – 40 years age group had high level; above average level was observed in 50% patients of 61 years and above, average level was seen in 55.56% from 21- 30 years; below average was majorly found in 38.64% of 51 – 60 years.

Calculated Chi square is 14.8160 with p value of 0.2520 revealing that though there is an association between age groups and levels of general well being but not statistically significant.

On the factor of gender, both male and female have not showed very high level of general well being; only 6.25% of males showed on high level; 45.83% of males were seen with above average level while 41.67% of males had average level. Majority of the females (56.96%) had below average level.

Therefore, it is evident from the calculated p-value that there was very highly significant association between gender and levels of general well being at 0.0001 level of significance.

Among all the occupations, no patients from any of occupation groups presented very high level of general well being.

High level of general well being was found in 6.45% not working participants; above average level was seen majorly in 68.75% drivers; average level was observed in 45.16% of not working population; below average level was majorly found in 59.09% maids and 58.82% housewives.

Hence, it is clear from the calculated p-value that there is very high significant association between occupations and levels of general well being at 0.0001 level.

The study identified unemployement and being unmarried as social inequalities faced by women with TB and HIV coinfection, which could impact their mental health and treatment. **Baluku et al. (2021)**

Results of the third objective are discussed as follow:

Table no. 5: Comparison between male and female with general well being scores

Gender	n	Mean	SD	SE	t-value	P-value
Male	96	142.73	18.45	1.88	7.6108	0.0001*
Female	79	119.56	21.83	2.46		

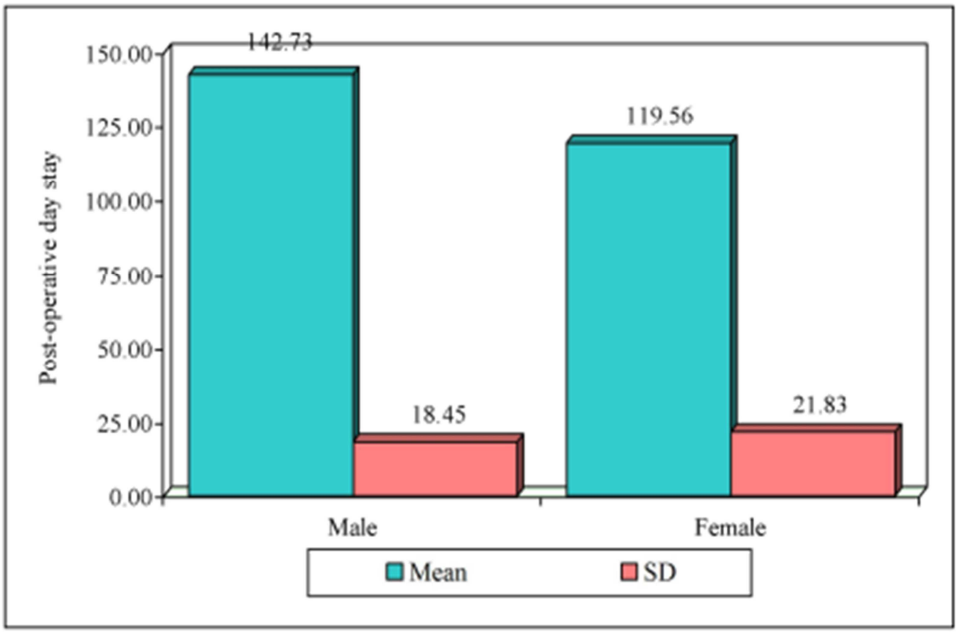
***p<0.05**

According to table No.5, mean score for males is 142.73 and females is 119.56, standard deviation scores of 18.45 and 21.83 respectively. The calculated t-value is 7.6108, which is significant at 0.0001 level.

Therefore, the results revealed that there was highly significant difference between male and female participants.

Previous research also identified variations in treatment outcomes among patients with drug-resistant TB and HIV co-infection, attributed to gender differences. **Joseph et al. (2021)**

Figure 3 : Comparison of male and female with general well being scores



SUMMARY

The level of stress among these patients gets aggravated by biopsychosocial challenges that comes with the diagnosis, understanding their well-being helps in developing better treatment plans and healthcare facilities that can accommodate their needs. The current research study was aimed to examine the general wellbeing of 175 TB-HIV patients within the Belagavi District. The objectives of the study were to assess the general wellbeing status of these patients along with its association with age, gender, occupation. It also evaluated the differences in wellbeing status between male and female patients to understand the gender differences.

CONCLUSION

1. Majority of TB-HIV co-infected patients exhibited average to below average levels of general well-being.
2. There was significant association between demographic variables except age and levels of general well-being
3. There was significant difference in well-being status between male and female TB-HIV co-infected patients

SUGGESTIONS

- Implement routine screening of clinical assessments during ART/ICTC routine visits to identify patients who may require additional support.
- Develop targeted psychosocial support programs tailored to the unique needs of TB-HIV co-infected patients, addressing factors such as depression, stigma and social support to enhance overall well-being.
- Foster collaboration between ART centers and mental health services to ensure comprehensive care for TB-HIV co-infected individuals, integrating mental health assessments and interventions into existing HIV care protocols.
- Provide education and training for healthcare providers at ART centers on recognizing signs of distress and addressing mental health concerns in TB-HIV co-infected patients, promoting a holistic approach to care.
- Advocate for policy changes and resource allocation to prioritize mental health services within HIV care settings, recognizing the interconnectedness of physical and psychological well-being in this population.
- Conduct further research to explore trends in general well-being among TB-HIV co-infected patients attending ART centers, investigating the impact of interventions and identifying additional factors influencing well-being over time.

SOCIAL IMPLICATIONS

Investigating and understanding the general wellbeing among HIV infected TB patients can provide an insight in healthcare practices. It can also help to identify the areas to improve the patient care to enhance their overall quality of life. Additionally, the study can contribute to the creating awareness, development of support programs and providing counseling services.

LIMITATIONS

The study was conducted only in Belagavi District and it can be carried out across the country considering a larger sample size.

The study included only male and female patients whereas, transgender with TB-HIV patients could have been included.

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ANNEXURE – I - ETHICAL CLEARANCE LETTER

K.L.E. ACADEMY OF HIGHER EDUCATION AND RESEARCH
(Deemed – to- be- University)
Accredited 'A+' Grade by NAAC in (3rd Cycle) Placed in Category 'A' by MHRD (GoI)
JNMC INSTITUTIONAL ETHICS COMMITTEE
JAWAHARLAL NEHRU MEDICAL COLLEGE,
NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)
Website: http//www.jnmc.edu
E-Mail : dome@jnmc.edu
Phone: (+ 91-(0)831 Office : 2472550
Principal: 2471701
Fax No. +91 (0)831 – 2470759

Ref No.MDC/JNMCIEC/ 233 **Date: 01/06/2023**

To

REG NO: FM0122004

PG Student in M.Sc Psychology
J. N. Medical College,
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"GENERAL WELLBEING OF TB-HIV CO-INFECTED PATIENTS ATTENDING ART CENTER OF BELAGAVI- A CROSS SECTIONAL STUDY",** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee.

(Dr. Smita Sonoli)
Member Secretary
JNMC Institutional Ethics Committee
J.N.Medical College, Belagavi.

(Dr. Harsha Hegde)
Chairman,
JNMC Institutional Ethics Committee
J.N.Medical College, Belagavi

ANNEXURE-II

INFORMED CONSENT FORM AND STATEMENT

K.L.E. ACADEMY OF HIGHER EDUCATION AND RESEARCH,

J.N. MEDICAL COLLEGE, BELAGAVI.

DEPARTMENT OF PSYCHOLOGY

INFORMED CONSENT FORM

"General well-being of TB-HIV co-infected patients attending ART center of Belagavi – A cross sectional study"

Investigator: Ms.

Guide/Co Investigators:

Dr.

Dr.

Objectives:

1. To assess the general well-being status of TB-HIV co-infected patients.
2. To find out the association between demographic variables and general well-being.
3. To find out the difference in well-being status between male and female TB-HIV co-infected patients.

Introduction: TB and HIV are deadly union that advances one another more quickly. TB is a bacterial infection that affects the lungs and HIV is weakens the immune system making individuals more vulnerable to infections like TB. If there is no appropriate treatment, then 60% of TB patients and all HIV-positive TB are predicted to suffer death. About 1,67,000 people died due to this chronic condition in 2022.

Compared to those without HIV, the ones living with this chronic disease had a 16 times higher risk of developing TB illness.

The well-being of TB-HIV co-infected patients is a crucial issue that has gained increasing attention in recent years. Individuals infected with tuberculosis and human immunodeficiency virus encompasses multidimensional well-being that includes emotional, psychological, social, spiritual, self- awareness and physical. Managing tuberculosis and HIV infections is critical for maintaining physical health, while dealing with mental and emotional issues which is critical for fostering psychological well-being. Social support networks are necessary for encouraging and assisting people, minimizing isolation and developing a sense of belonging.

Explanation of procedure: In this study, a standardized questionnaire on Well-being Index by Vijayalaxmi Chauhan and Varsha Sharma (English) consisting of 50 items will be administered on each patient who is TB-HIV co-infected patients. It will take approximately 10-15 minutes for the test to be administered.

Withdrawal from participation in the study: "Your participation in this study will be voluntary. You are free to decide whether to participate or not in the study. In case you decide not to participate in this study, you will be able to withdraw your participation".

Possible benefits from participating in the study: "You will not get any, benefits but will come to know your general wellbeing level (if willing to)".

Possible risks from participating in the study: Possible risks from participating in the study: There will not be any risk involved in the study. The scale will be

administered for the sake of information regarding the levels of general wellbeing in Tuberculosis-HIV co-infected patients.

Privacy and confidentiality: Your identity will not be revealed. All the information collected will be coded so that no one will know your identity. The data collected from you will be kept confidential and only aggregated data will be published.

Financial incentives: "You will not receive any payment for participating in the study"

Authorization for publication of aggregated data: Results of this study may be published for scientific purposes and presented to scientific groups; however, you will not be identified.

Questions: If you have any question or complaints with regard to your right as study participant you may contact Dr Harsha Hegde, Chairperson, Ethical committee of JNMC, 0831-2473777 Extension 4052.

Legal rights: By signing this consent form, we are not waving any of your legal rights.

CONSENT STATEMENT

"I am making a voluntary decision to participate in the study. My signature below indicates that I have decided to participate and I have read the information provided above or the information provided above has been read to me in the language that I understand best. I was given the opportunity to ask questions and that they have been answered to my satisfaction."

Name of the participant:

Signature or left thumb impression of the participant:

Name of the witness:

Signature or left thumb impression of the witness:

Name of the investigator:

Signature of the investigator:

Date: _____

Place: _____

ಒಪ್ಪಿಗೆ ಹೇಳಿಕೆ

"ನಾನು ಅಧ್ಯಯನದಲ್ಲಿ ಪಾಲ್ಗೊಳ್ಳುವ ಸ್ವಯಂಪ್ರೇರಿತ ನಿರ್ಧಾರವನ್ನು ಮಾಡುತ್ತಿದ್ದೇನೆ. ಕೆಳಗಿನ ನನ್ನ ಸಹಿ /ಎಡ ಹೆಬ್ಬೆರಳ ಗುರುತು ನಾನು ಭಾಗವಹಿಸಲು ನಿರ್ಧರಿಸಿದ್ದೇನೆ ಎಂದು ಸೂಚಿಸುತ್ತವೆ. ನಾನು ಮೇಲೆ ಒದಗಿಸಿದ ಮಾಹಿತಿಯನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ಓದಿದ್ದೇನೆ (ಅಥವಾ ಮೇಲೆ ಒದಗಿಸಿದ ಮಾಹಿತಿಯನ್ನು ನನಗಾಗಿ ಓದಲಾಗಿದೆ) ನನಗೆ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಲು ಅವಕಾಶ ನೀಡಲಾಗಿದೆ ಮತ್ತು ನನ್ನ ಪ್ರಶ್ನೆಗಳಿಗೆ / ಸಂದೇಹಗಳಿಗೆ ತೃಪ್ತಿಕರವಾಗಿ ಉತ್ತರಿಸಲಾಗಿದೆ".

ಪಾಲ್ಗೊಳ್ಳುವವರ ಹೆಸರು:

ಪಾಲ್ಗೊಳ್ಳುವವರ ಸಹಿ:

ಅಥವಾ ಎಡ ಹೆಬ್ಬೆರಳ ಗುರುತು:

ಸಾಕ್ಷಿಯ ಹೆಸರು:

ಸಾಕ್ಷಿಯ ಸಹಿ:

ಸಂಶೋಧಕರ ಹೆಸರು:

ಸಂಶೋಧಕರ ಸಹಿ:

ದಿನಾಂಕ:

ಸ್ಥಳ: ಬೆಳಗಾವಿ

संमती विधान

"मी अभ्यासात सहभागी होण्यास स्वयंसेवी निर्णय घेत आहे. खाली माझे स्वाक्षरी / डाव्या अंगठ्याचा ठसा मला सहभागी करण्याचा निर्णय घेतला आहे आणि मी वर दिलेली माहिती वाचली आहे (किंवा वरील माहिती मला वाचली आहे) आणि मला प्रश्न विचारण्याची संधी देण्यात आली आणि त्यास उत्तर देण्यात आले माझे समाधान "

सहभागी यचे नाव:

सहभागीचे सही:

किंवा डाव्या अंगठ्याचा ठसा:

साक्षीदाराचे नाव:

साक्षीदारांची सही:

संशोधनाचे नाव:

संशोधकाचे स्वाक्षरी:

तारीख:

स्थान: बेलगावी

सहमति कथन

"मैं अध्ययन में भाग लेने के लिए एक स्वैच्छिक निर्णय ले रहा हूं। नीचे मेरे हस्ताक्षर / अंगूठे का निशान इंगित करता है कि मैंने भाग लेने का फैसला किया है और मैंने ऊपर प्रदान की गई जानकारी को पढ़ा है (या ऊपर दी गई जानकारी मुझे पढ़ी गई है) और मुझे प्रश्न पूछने का अवसर दिया गया था और उन्हें मेरी संतुष्टि के लिए जवाब दिया गया है ।"

प्रतिभागी का नाम:

प्रतिभागी का हस्ताक्षर या बाएँ अंगूठे का निशान

गवाह का नाम:

गवाह का हस्ताक्षर:

शोधकर्ता का नाम :

शोधकर्ता का हस्ताक्षर

दिनांक:

स्थान: बेलगावी

Prof. (Dr.) Vijayalaxmi Chauhan *(Udaipur)*
Dr. Varsha Sharma *(Udaipur)*

Consumable Booklet of

Wbl-cvsv

(English Version)

Please fill in the following entries : ***Date*** ☐☐-☐☐-☐☐

Name_____ **Father's Name**_____

Date of Birth ☐☐-☐☐-☐☐ **Gender : Male** ☐ **Female** ☐

Education Qualification_____ **Type of Family : Single** ☐ **Joint** ☐

Occupation_____

Teaching Experience_____ **Place : City** ☐ **Village** ☐

Belong to Area : Urban ☐ **Rural** ☐

INSTRUCTIONS

On the following pages 50 statements regarding Well-being have been given. Read each statement carefully and decide your responce on any one of the Five alternatives, viz., ***Always, Often, Sometimes, Rarely*** and ***Never*** and put a tick mark ☑ in the box of alternative which is close to your thinking.

Kindly answer to all the 50 statements.

Your answers will be kept confidential.

Scoring Table

	Raw Score			z-Score	Grade	Level of Well-being
Page	2	3	4			
Score						
Total						

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NATIONAL PSYCHOLOGICAL CORPORATION

UG-1; Nirmal Heights, Near Mental Hospital, Agra-282 007

Sr. No.	STATEMENTS	Always	Often	Some-times	Rarely	Never	SCORE
1.	I lead purposeful life.	☐	☐	☐	☐	☐	⬭
2.	My social relationships are satisfactory.	☐	☐	☐	☐	☐	⬭
3.	I eat healthy food.	☐	☐	☐	☐	☐	⬭
4.	I easily get irritated.	☐	☐	☐	☐	☐	⬭
5.	I feel myself competent.	☐	☐	☐	☐	☐	⬭
6.	I feel happy to be engaged in my routine activities.	☐	☐	☐	☐	☐	⬭
7.	I have a deep and sound sleep.	☐	☐	☐	☐	☐	⬭
8.	I feel people respect me.	☐	☐	☐	☐	☐	⬭
9.	I am optimistic about my future.	☐	☐	☐	☐	☐	⬭
10.	I feel myself energetic.	☐	☐	☐	☐	☐	⬭
11.	I easily lose control over my temper.	☐	☐	☐	☐	☐	⬭
12.	I try to give space to others.	☐	☐	☐	☐	☐	⬭
13.	I feel I have a good personality.	☐	☐	☐	☐	☐	⬭
14.	I am useful for others.	☐	☐	☐	☐	☐	⬭
15.	I believe in God.	☐	☐	☐	☐	☐	⬭
16.	I feel myself as rejected member of my family.	☐	☐	☐	☐	☐	⬭
17.	I actively participate in social activities.	☐	☐	☐	☐	☐	⬭
18.	I regularly do exercise.	☐	☐	☐	☐	☐	⬭

Total Score Page 2 ☐

Sr. No.	STATEMENTS	Always	Often	Some-times	Rarely	Never	SCORE
19.	I feel my life is full of happiness.	☐	☐	☐	☐	☐	⬭
20.	I have never been rewarded for my labor.	☐	☐	☐	☐	☐	⬭
21.	I always try to learn from experience of others.	☐	☐	☐	☐	☐	⬭
22.	I believe in myself.	☐	☐	☐	☐	☐	⬭
23.	I feel nothing is impossible in life.	☐	☐	☐	☐	☐	⬭
24.	Spirituality makes me disturbed.	☐	☐	☐	☐	☐	⬭
25.	I feel I have a good neighborhood.	☐	☐	☐	☐	☐	⬭
26.	I like to share my feelings with others.	☐	☐	☐	☐	☐	⬭
27.	I respect my elders.	☐	☐	☐	☐	☐	⬭
28.	I believe in 'simple living and high thinking'.	☐	☐	☐	☐	☐	⬭
29.	I feel my life is hopeless.	☐	☐	☐	☐	☐	⬭
30.	I love to learn new skills.	☐	☐	☐	☐	☐	⬭
31.	I rarely participate in family functions.	☐	☐	☐	☐	☐	⬭
32.	I always try to help the needy.	☐	☐	☐	☐	☐	⬭
33.	I am satisfied with my life.	☐	☐	☐	☐	☐	⬭
34.	I think to be happy is the moral duty of everyone.	☐	☐	☐	☐	☐	⬭
35.	I feel spirituality makes me peaceful.	☐	☐	☐	☐	☐	⬭

Total Score Page 3 ☐

Sr. No.	STATEMENTS	Always	Often	Some-times	Rarely	Never	SCORE
36.	Financial disturbances make me fearful.	☐	☐	☐	☐	☐	◯
37.	I fell myself physically fit.	☐	☐	☐	☐	☐	◯
38.	I feel my family puts so many social responsibilities over me.	☐	☐	☐	☐	☐	◯
39.	I have to follow social norms.	☐	☐	☐	☐	☐	◯
40.	I am happy with the care and support I get.	☐	☐	☐	☐	☐	◯
41.	I feel physical exercise produce weakness in me.	☐	☐	☐	☐	☐	◯
42.	I feel myself safe.	☐	☐	☐	☐	☐	◯
43.	I feel that in the busy schedule I never find time for myself.	☐	☐	☐	☐	☐	◯
44.	My past memories disturb me a lot.	☐	☐	☐	☐	☐	◯
45.	I share my feelings with my close friends.	☐	☐	☐	☐	☐	◯
46.	I hardly maintain any social relation for a long time.	☐	☐	☐	☐	☐	◯
47.	I hate my family.	☐	☐	☐	☐	☐	◯
48.	I don't like to follow the suggestion of others.	☐	☐	☐	☐	☐	◯
49.	I feel my parents would never understand me.	☐	☐	☐	☐	☐	◯
50.	I wish I would have born in opposite sex.	☐	☐	☐	☐	☐	◯

Total Score Page 4 ☐

KANNADA TRANSLATION:

		ಯಾವಾಗಲೂ	ಆಗಾಗ್ಗೆ	ಕೆಲವೊಮ್ಮೆ	ವಿರಳವಾಗಿ	ಎಂದಿಗೂ	ಅಂಕ
1	ನಾನು ಉದ್ದೇಶಪೂರ್ವಕ ಜೀವನವನ್ನು ನಡೆಸುತ್ತೇನೆ						
2	ನನ್ನ ಸಾಮಾಜಿಕ ಸಂಬಂಧಗಳು ತೃಪ್ತಿಕರವಾಗಿವೆ						
3	ನಾನು ಆರೋಗ್ಯಕರ ಆಹಾರವನ್ನು ತಿನ್ನುತ್ತೇನೆ						
4	ನಾನು ಸುಲಭವಾಗಿ ಕಿರಿಕಿರಿಗೊಳ್ಳುತ್ತೇನೆ						
5	ನಾನು ನನ್ನನ್ನು ಸಮರ್ಥನೆಂದು ಭಾವಿಸುತ್ತೇನೆ						
6	ನನ್ನ ದಿನನಿತ್ಯದ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ತೊಡಗಿಸಿಕೊಂಡಿರುವುದಕ್ಕೆ ನನಗೆ ಸಂತೋಷವಾಗುತ್ತದೆ						
7	ನನಗೆ ಆಳವಾದ ಮತ್ತು ಉತ್ತಮ ನಿದ್ರೆ ಇದೆ						
8	ಜನರು ನನ್ನನ್ನು ಗೌರವಿಸುತ್ತಾರೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
9	ನನ್ನ ಭವಿಷ್ಯದ ಬಗ್ಗೆ ನಾನು ಆಶಾವಾದಿಯಾಗಿದ್ದೇನೆ						
10	ನಾನು ನನ್ನನ್ನು ಶಕ್ತಿಯುತವಾಗಿ ಭಾವಿಸುತ್ತೇನೆ						
11	ನಾನು ಸುಲಭವಾಗಿ ನನ್ನ ಕೋಪದ ಮೇಲೆ ನಿಯಂತ್ರಣವನ್ನು ಕಳೆದುಕೊಳ್ಳುತ್ತೇನೆ						
12	ನಾನು ಇತರರಿಗೆ ಜಾಗವನ್ನು ನೀಡಲು ಪ್ರಯತ್ನಿಸುತ್ತೇನೆ						
13	ನಾನು ಉತ್ತಮ ವ್ಯಕ್ತಿತ್ವವನ್ನು ಹೊಂದಿದ್ದೇನೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
14	ನಾನು ಇತರರಿಗೆ ಉಪಯುಕ್ತ						
15	ನಾನು ದೇವರನ್ನು ನಂಬುತ್ತೇನೆ						
16	ನಾನು ನನ್ನ ಕುಟುಂಬದ ತಿರಸ್ಕೃತ ಸದಸ್ಯನೆಂದು ಭಾವಿಸುತ್ತೇನೆ						
17	ನಾನು ಸಾಮಾಜಿಕ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಸಕ್ರಿಯವಾಗಿ ಭಾಗವಹಿಸುತ್ತೇನೆ						
18	ನಾನು ನಿಯಮಿತವಾಗಿ ವ್ಯಾಯಾಮ ಮಾಡುತ್ತೇನೆ						
19	ನನ್ನ ಜೀವನವು ಸಂತೋಷದಿಂದ ತುಂಬಿದೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
20	ನನ್ನ ಶ್ರಮಕ್ಕೆ ಯಾವತ್ತೂ ಪ್ರತಿಫಲ ಸಿಕ್ಕಿಲ್ಲ						
21	ನಾನು ಯಾವಾಗಲೂ ಇತರರ ಅನುಭವದಿಂದ ಕಲಿಯಲು						

	ಪ್ರಯತ್ನಿಸುತ್ತೇನೆ						
22	ನಾನು ನನ್ನನ್ನು ನಂಬುತ್ತೇನೆ						
23	ಜೀವನದಲ್ಲಿ ಯಾವುದೂ ಅಸಾಧ್ಯವಲ್ಲ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
24	ಅಧ್ಯಾತ್ಮವು ನನ್ನನ್ನು ವಿಚಲಿತಗೊಳಿಸುತ್ತದೆ						
25	ನಾನು ಉತ್ತಮ ನೆರೆಹೊರೆಯನ್ನು ಹೊಂದಿದ್ದೇನೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
26	ನನ್ನ ಭಾವನೆಗಳನ್ನು ಇತರರೊಂದಿಗೆ ಹಂಚಿಕೊಳ್ಳಲು ಇಷ್ಟಪಡುತ್ತೇನೆ						
27	ನಾನು ನನ್ನ ಹಿರಿಯರನ್ನು ಗೌರವಿಸುತ್ತೇನೆ						
28	ನಾನು ಸರಳ ಜೀವನ ಮತ್ತು ಉನ್ನತ ಚಿಂತನೆಯನ್ನು ನಂಬುತ್ತೇನೆ						
29	ನನ್ನ ಜೀವನವು ಹತಾಶವಾಗಿದೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
30	ನಾನು ಹೊಸ ಕೌಶಲ್ಯಗಳನ್ನು ಕಲಿಯಲು ಇಷ್ಟಪಡುತ್ತೇನೆ						
31	ನಾನು ಕುಟುಂಬದ ಕಾರ್ಯಕ್ರಮಗಳಲ್ಲಿ ವಿರಳವಾಗಿ ಭಾಗವಹಿಸುತ್ತೇನೆ						
32	ನಾನು ಯಾವಾಗಲೂ ಅಗತ್ಯವಿರುವವರಿಗೆ ಸಹಾಯ ಮಾಡಲು ಪ್ರಯತ್ನಿಸುತ್ತೇನೆ						
33	ನನ್ನ ಜೀವನದಲ್ಲಿ ನಾನು ತೃಪ್ತನಾಗಿದ್ದೇನೆ						
34	ಸಂತೋಷವಾಗಿರುವುದು ಪ್ರತಿಯೊಬ್ಬರ ನೈತಿಕ ಕರ್ತವ್ಯ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
35	ಆಧ್ಯಾತ್ಮಿಕತೆಯು ನನ್ನನ್ನು ಶಾಂತಗೊಳಿಸುತ್ತದೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
36	ಹಣಕಾಸಿನ ಅಡಚಣೆಗಳು ನನ್ನನ್ನು ಭಯಪಡಿಸುತ್ತವೆ						
37	ನಾನು ದೈಹಿಕವಾಗಿ ಸದೃಢತೆ ಹೊಂದಿದ್ದೇನೆ						
38	ನನ್ನ ಕುಟುಂಬವು ನನ್ನ ಮೇಲೆ ಅನೇಕ ಸಾಮಾಜಿಕ ಪ್ರತಿಕ್ರಿಯೆಗಳನ್ನು ಹಾಕುತ್ತದೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
39	ನಾನು ಸಾಮಾಜಿಕ ನಿಯಮಗಳನ್ನು ಅನುಸರಿಸಬೇಕು						
40	ನಾನು ಪಡೆಯುವ ಕಾಳಜಿ ಮತ್ತು ಬೆಂಬಲದಿಂದ ನಾನು ಸಂತೋಷವಾಗಿದ್ದೇನೆ						
41	ದೈಹಿಕ ವ್ಯಾಯಾಮವು ನನ್ನಲ್ಲಿ ದೌರ್ಬಲ್ಯವನ್ನು						

	ಉಂಟುಮಾಡುತ್ತದೆ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
42	ನಾನು ನನ್ನನ್ನು ಸುರಕ್ಷಿತವಾಗಿ ಭಾವಿಸುತ್ತೇನೆ						
43	ಬಿಡುವಿಲ್ಲದ ವೇಳಾಪಟ್ಟಿಯಲ್ಲಿ ನಾನು ನನಗಾಗಿ ಸಮಯವನ್ನು ಕಂಡುಕೊಳ್ಳುವುದಿಲ್ಲ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
44	ನನ್ನ ಹಿಂದಿನ ನೆನಪುಗಳು ನನ್ನನ್ನು ತುಂಬಾ ಕಾಡುತ್ತವೆ						
45	ನಾನು ನನ್ನ ಭಾವನೆಗಳನ್ನು ನನ್ನ ಆತ್ಮೀಯ ಸ್ನೇಹಿತರೊಂದಿಗೆ ಹಂಚಿಕೊಳ್ಳುತ್ತೇನೆ						
46	ನಾನು ದೀರ್ಘಕಾಲದವರೆಗೆ ಯಾವುದೇ ಸಾಮಾಜಿಕ ಸಂಬಂಧವನ್ನು ಉಳಿಸಿಕೊಳ್ಳುವುದಿಲ್ಲ						
47	ನಾನು ನನ್ನ ಕುಟುಂಬವನ್ನು ದ್ವೇಷಿಸುತ್ತೇನೆ						
48	ನಾನು ಇತರರ ಸಲಹೆಯನ್ನು ಅನುಸರಿಸಲು ಇಷ್ಟಪಡುವುದಿಲ್ಲ						
49	ನನ್ನ ಪೋಷಕರು ಎಂದಿಗೂ ನನ್ನನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವುದಿಲ್ಲ ಎಂದು ನಾನು ಭಾವಿಸುತ್ತೇನೆ						
50	ನಾನು ವಿರುದ್ಧ ಲಿಂಗದಲ್ಲಿ ಜನಿಸಬೇಕೆಂದು ನಾನು ಬಯಸುತ್ತೇನೆ						

HINDI TRANSLATION:

		हमेशा	अक्सर	कभी-कभी	कभी-कभार	कभी नहीं	अंक
1	मैं एक उद्देश्यपूर्ण जीवन व्यतीत करता हूँ						
2	मेरे सामाजिक संबंध संतोषजनक है						
3	मैं स्वस्थ खाना खाता हूं						
4	मैं आसानी से चिढ़ जाता हूँ						
5	मैं स्वयं को सक्षम अनुभव करता हूँ						
6	मुझे अपनी नियमित गतिविधियों में शामिल होने में खुशी महसूस होती है						
7	मुझे गहरी और अच्छी नींद आती है						
8	मुझे लगता है कि लोग मेरा सम्मान करते हैं						
9	मैं अपने भविष्य को लेकर आशान्वित हूं						
10	मैं खुद को ऊर्जावान महसूस करता हूं						
11	मैं आसानी से अपने गुस्से पर नियंत्रण खो देता हूँ						
12	मैं दूसरों को जगह देने की कोशिश करता हूँ।						
13	मुझे लगता है कि मेरा व्यक्तित्व अच्छा है						
14	मैं दूसरों के लिए उपयोगी हूँ						
15	मुझे भगवान में विश्वास है						
16	मैं खुद को अपने परिवार के अस्वीकृत सदस्य के रूप में महसूस करता हूं						
17	मैं सामाजिक गतिविधियों में सक्रिय रूप से भाग लेता हूं						
18	मैं नियमित व्यायाम करता हूँ						
19	मुझे लगता है कि मेरा जीवन खुशियों से भरा है						
20	मुझे कभी भी मेरे श्रम के लिए पुरस्कृत नहीं किया गया है						
21	मैं हमेशा दूसरों के अनुभव से सीखने की कोशिश करता हूं						
22	मैं खुद में विश्वास करता हूँ						
23	मुझे लगता है कि जीवन में कुछ भी असंभव नहीं है						
24	अध्यात्म मुझे परेशान करता है						

25	मुझे लगता है कि मेरा पड़ोस अच्छा है						
26	मैं अपनी भावनाओं को दूसरों के साथ साझा करना पसंद करता हूं						
27	मैं अपने बड़ों का सम्मान करता हूं						
28	मैं सादा जीवन और उच्च विचार में विश्वास रखता हूं						
29	मुझे लगता है कि मेरा जीवन निराशाजनक है						
30	मुझे नए कौशल सीखना अच्छा लगता है						
31	मैं शायद ही कभी पारिवारिक समारोहों में भाग लेता हूँ						
32	मैं हमेशा जरूरतमंदों की मदद करने की कोशिश करता हूं						
33	मैं अपने जीवन से संतुष्ट हूं						
34	मुझे लगता है कि खुश रहना हर किसी का नैतिक कर्तव्य है						
35	मुझे लगता है कि आध्यात्मिकता मुझे शांत बनाती है						
36	वित्तीय गड़बड़ी मुझे भयभीत करती है						
37	मैं अपने आप को शारीरिक रूप से फिट महसूस करता हूँ।						
38	मुझे लगता है कि मेरा परिवार मुझ पर बहुत सारी सामाजिक प्रतिक्रियाएँ डालता है						
39	मुझे सामाजिक मानदंडों का पालन करना है						
40	मुझे जो देखभाल और समर्थन मिल रहा है, उससे मैं खुश हूं						
41	मुझे लगता है कि शारीरिक व्यायाम मुझमें कमजोरी पैदा करता है						
42	मैं खुद को सुरक्षित महसूस करता हूं						

43	मुझे लगता है कि बिजी शेड्यूल में मुझे अपने लिए समय ही नहीं मिल पाता है						
44	मेरी पिछली यादें मुझे बहुत परेशान करती हैं						
45	मैं अपनी भावनाओं को अपने करीबी दोस्तों के साथ साझा करता हूं						
46	मैं मुश्किल से ही कोई सामाजिक संबंध लंबे समय तक बनाए रखता हूं						
47	मुझे अपने परिवार से नफरत है						

48	मैं दूसरों के सुझाव का पालन करना पसंद नहीं करता						
49	मुझे लगता है कि मेरे माता-पिता मुझे कभी नहीं समझ पाएंगे						
50	काश मैं विपरीत लिंग में पैदा होता						