

Prevalence of Mental Health Problems and High Risk-Behaviors in Male University Students

Ayesha Arshad^{1*}, Ghazia Sakhawat² and, Hidna Iqbal³

ABSTRACT

The aim of this study was to find the prevalence of Mental Health Problems and High-Risk Behaviors in male university students. Cross-sectional research method was used in this research. The sample was selected through convenient sampling. 408 male students participated in the study. Items generated to measure High Risk behaviors were added to demographic sheet. Shorter version of Depression, Anxiety, Stress Scale was used to measure Depression, Anxiety and Stress. The prevalence of Depression, Anxiety and Stress in male university students was 74.6%, 45.3%, 49.7% respectively. Binge eating was reported by 76% participants. Over speeding was reported 63% participants. Insufficient healthy food intake was reported by 93% participants. Insufficient sleep was reported by 53% participants, 38% participants reported insufficient exercise, and 53% participants were drug abusers. This emphasizes the importance of implementing effective primary and secondary prevention initiatives supported by well-structured services designed to address the specific needs of this group.

Keywords: Mental Health Problems, High Risk Behaviors, Prevalence, Students

1. Introduction

Around 30% to 50% of the people all around the world are experiencing certain kind of mental health problems (Solmi et al., 2021). The prevalence of mental disorders exists in different proportions in different countries, for example: 18.5% in United States, 10.1% in Canada, and 38.2% in Europe (Fan et al., 2025). The high proportion of common mental health problems has been reported in Muslim communities. About one fifth of Mental disorders exist in primary-care attendees in Saudi Arab (Almutairi, 2015), more than half are present in general clients in the United Arab Emirates (Dardkeh, Eapen & Ghubash, 2005), and 17% in Egypt general population (Ghanem, Gadallah, Meky, Mourad & El-Kholy, 2009). It is estimated that around 10 million Indians experience serious mental disorders (Math, Chandrashekar & Bhugra, 2007).

Due to increased prevalence, difficulties in therapeutic management and disease progression mental health problems are becoming one of the major world issues (Liu et al., 2025). Young people (aged 10-24 years) contribute to 28% of the world population. Disease burden on this age group is found

¹Ayesha Arshad, BS Clinical Psychology Student, Centre for Clinical Psychology, University of the Punjab, Lahore, Punjab, Pakistan **Corresponding Author:** ayeshaarshadlive@gmail.com

²Ghazia Sakhawat, BS Clinical Psychology Student, Centre for Clinical Psychology, University of the Punjab, Lahore, Punjab, Pakistan

³Hidna Iqbal, Lecturer, Centre for Clinical Psychology, University of the Punjab, Lahore, Punjab, Pakistan

to be higher, and psychological disorders are the major contributor (45%) towards disability. Common mental health problems which are prevalent among population include depressive and anxiety disorders. Globally estimated population that suffers from depressive disorders is 4.4% and 3.6% of the population suffer from anxiety disorders (Padhani et al., 2025). Psychological disorders are growing continuously and are significantly affecting health and other major social and economic domains of life in all countries of the world. In low- and middle-income countries 75 to 86% of the people with mental disorders do not seek treatment (Castelpietra et al., 2022)

In developing countries like Pakistan low-income, insecurity, hopelessness, low education is highly linked with poor mental health (Pervaiz et al., 2025). Pakistan being one of the developing countries is facing the issues of un-employment, poverty and economic burden which affects the mental health of population (Mehboob, 2021; Rao et al., 2024). Research suggests that mental health problems pose a major challenge to well-being of university students of Pakistan. Previous investigations of mental health problems among university students suggests high prevalence. Specifically, depression and anxiety has shown higher rates with 36% and 41% prevalence respectively (Niazi et al., 2025)

Along with mental health problems risky behaviors are one of the major threats to wellbeing of youth. Risky behaviors are the leading cause of mortality and morbidity among adolescents and young adults in both developed and industrialized nations (Bozzini et al., 2020). Research on risk taking behaviors indicates negative consequences associated with health of youth. Potentially risky behaviors such as poor diet, lack of physical activities, smoking, alcohol consumption, drug abuse, unprotected sex, reckless driving, criminal activities such as stealing, gambling may have long term negative consequences (Pervaiz et al., 2024; Zhang & Wang, 2025). Risky behaviors increase the possibility of negative consequences in terms of social, physical, psychological, and social outcomes. These behaviors increase the chances of premature death, physical disability and increase in incidence of chronic diseases (Rahelić et al., 2024; Richards, 2011)

Depression among students is a major concern in most countries including US, Australia, England. Entering university life is a critical transitory period in which students are going from adolescence to adulthood period. Trying to secure good grades, living away from home, trying to fit into the new environment, and planning for future can put a lot of burden on students. As a reaction to this stress some students get depressed. They find it difficult to get themselves together. They may isolate themselves, cry all the time, skip meals, and skip classes without even realizing that they are depressed (Kundu et al., 2021)

Anxiety disorders influence almost 40 million American adults (18 years and older) every year. Various factors including gender, the source of funding, satisfaction with education, field of study, academic performance, study year, and place of living are associated with symptoms of anxiety disorders (Kavelaars et al., 2023). During the academic process students encounter with a lot of stressors including difficulty in courses, new roommates, identity crisis, cultural shock and relationship difficulties with peers and teachers. These stressors may escalate anxiety symptoms among them (Roy et al., 2025). Anxiety is a major predictor of academic performance and research shows that it has detrimental effect. Anxious students experience cognitive deficits including apprehension of information or blocking of memory and recall. Students with high level of anxiety symptoms tend to experience less motivation in class. Escalated levels of anxiety affect concentration and memory, which are critical for academic success (Kavelaars et al., 2023). Anxiety has negative consequences on learning process of students. The psychological symptoms of anxiety among students include feeling nervous before class, panicking, going blank in class or lack of interest in course (Rastogi et al., 2025)

In student life stress is inevitable. The most common sources of stress in university life include unhealthy competition, assignment workload, poor eating habits, irregular sleep patterns, lack of social activities and financial problems. Institutional level stressors include poor management system of institution, favoritism by teachers, lack of resources. Students use different coping mechanisms

including religious and social support to reduce the sources of stress (AlHamlan et al., 2025). A study conducted in Canada reported 30% prevalence of stress in undergraduate students. Another research on Australian students reported that 53% students suffered from psychological distress (Adlaf et al., 2001). A cross-sectional research conducted on university students in Karachi reported that 21.7% students felt difficulty in concentrating in class and 15% students had trouble sleeping (Jaffri et al., 2024). Bibi et al. (2019) and Saleem et al. (2019) investigated mental health problems among university students of Pakistan using "Student problem checklist". Various questions related to anxiety proneness, lack of self-regulation, loss of confidence, and a sense of being dysfunctional were asked. In both research high prevalence (17% and 24%) of problems was detected. From public health perspectives the early detection of these problems is necessary in order to prevent them and provide treatment.

Risky behaviors are the major cause of mortality during transition to adulthood transition period. These behaviors also tend to affect life of youth in future. Risky behaviors are the voluntary behaviors which lead to negative personal and social outcomes. Social consequences associated with Risky Behaviors involve low productivity, behavioral issues, and economic impact on family as well as community. Academic related There are a host of potentially risky and delinquent behaviors including drug abuse, unprotected sex, gambling, stealing, high speed driving, which pose significant threats to psychological as well as physical well-being of adolescents. These behaviors are a major concern of researcher concerned with adolescents. Most of the risky behaviors in youth have been explained by negative perceptions of school, lack of parental support and more time spent with peers (Issahaku et al., 2024)

Risky behaviors are interrelated and have a clustering effect with mental health. A research conducted by in US demonstrated that substance use was associated with attempt to be included and accepted by friends. Addiction has been linked with poor mental health, including feeling of loneliness and irregular sleep pattern. Both men and women are affected by mental illness however it is most of the time overlooked in males. The overall prevalence of mental health problems in males is lower than females because these problems often go untreated as men are less likely to seek help. Suicide and depression are the leading cause of men in US. Every year six million men are affected by depression. The suicide rate is four times higher in men than in women. Men are three-times more likely to use drugs than women (Jao et al., 2018)

Men are less likely to seek help and more likely to be involved in unhealthy behaviors as compared to women. One of the major causes interfering men from seeking help is masculine norms. Negative attitude and disapproval are shown when men tend to seek mental help. Traditional masculinity tends to maintain the dominance and privilege of men over women. This notion is opposed when men seek mental help. Adherence to these masculine norms is resulting in interpersonal violence, worsening of depression and anxiety, substance abuse, threat to health, issues in interpersonal intimacy in men. This is not only detrimental at personal level but also on community level (Chatmon, 2020).

The current study aimed at finding out the prevalence of Mental Health Problems and High Risk Behaviors in the male university students. In Pakistan, the studies conducted in specifically students are very few. This study targeted university students of both private and public sector universities of Pakistan so that students of all socio-economic backgrounds can be included, and the results can be generalized. Young adults were chosen in this study. Large number of youth population exists in Pakistan. Approximately 103 million or 63% of the community comes under the age range of 25 years. Literacy rate in Male youth is approximately 53 per cent while in women; it is lower at 42 per cent, on the other hand 15% percent of the youth is jobless. Our youth plays a major role to in country's progress but due to inadequate support they are experiencing a lot of new challenges in society such as they are distressed due to identity pressure, loss of self-confidence, a sense of despair and failure, and confusion regarding moral dilemmas and the future. They have indulged in a culture distinct by violence and drugs (Duggan & Smith. 2014).

This study targeted university students due to several reasons. University students fall under the category of special group of people who enter from adolescent to adulthood and face a lot of stressors in life such as maintaining good grades, trying to adjust to changes, and plan future goals often lead to anxiety for a lot of students (Mofatteh, 2020) Moreover, the years spent in university are emotionally and intellectually challenging for an individual than any other stage of learning. At this stage, a student encounters several demands and situations that present range of emotional, physical and social crisis University students are vulnerable to experience psychological disorders by changing social and emotional competence (Park et al., 2020)

2. Methodology

2.1 Research Design

The cross-sectional research design was used to find out prevalence of mental health problems and high-risk behaviors in different public and private university students. In present study convenient sampling was used. Participants who fulfilled the selection criteria and were easily accessible and willing to participate in the research were selected.

1. Participant Characteristics

Table 1

Frequency (f) and percentage (%) of demographics of the participants (n=408)

	<i>F</i>	%
Gender		
Male	408	100
Institute		
Private sector	113	27.7
Public sector	295	72.3
Education		
Graduate	226	65.2
Post Graduate	142	34.8
CGPA		
3.6-4	68	16.7
3.1-3.5	185	45.3
2.6-3.0	138	33.8
2.1-2.4	4	1.0
Below 2	13	3.2
Family status		
Joint	166	40.7
Nuclear	242	59.3
Family income		
>50000	56	13.7
50000-200000	225	55.1
<200000	127	31.1

Sample consisted of public and private university students (n=816). Young adults were taken with the age range 18-26 years (M=19.95, SD=2.887). From public universities a total sample of 374 students was taken. From private universities a total sample of 442 students was taken. The sample in this study is of male participants (n=408)

Sample size was 816. 50% of the sample included males and 50% were females. 45.8 participants belonged to Private sector institutes whereas 54.2 participants were from public sector institutes. Students from graduate programs were 74% whereas 26% participants were enrolled in postgraduate programs. CGPA of most students was falling in range Of 3.1-3.5. 28.2% students have CGPA in range 2.8-3.0. Students below 2 CGPA were 2.2%. Most of students belonged to middle class family.

Table 2

Mean and Standard deviation of Demographic of the Female participants (N=408)

Demographics of the Participants	Mean	SD
Age	20.1	2.04

Statistical analysis of demographics of the participants showed mean and standard deviation of age (M=20.1, SD=2.04).

Inclusion Criteria

Following participants were included

- Male students who are enrolled in university (private or public)
- Students who are enrolled in graduate or postgraduate programs.

Exclusion Criteria

Following participants were excluded

- Students having any psychological or physical illness

Assessment Measures

Following measures were employed in the present study to assess the prevalence of mental health problems and high-risk behaviors.

Socio-demographic Sheet

To obtain the socio-demographic profile of the participant, a questionnaire was constructed by the researcher. It consisted of questions related to participant's demographics such as age, education, marital status, faculty, degree, GPA, socioeconomic status, family system, occupation.

Assessment of High-Risk Behaviors

High-risk behaviors were assessed using a set of self-report items formulated on the basis of existing empirical literature and incorporated into the demographic questionnaire. The behaviors examined included low levels of physical activity, inadequate sleep, tobacco and substance use, poor

dietary practices (fruit and vegetable consumption), binge eating, binge drinking, and risky driving behaviour (over-speeding).

Binge Eating. Binge eating was evaluated by asking participants to report the frequency with which, during the previous two weeks, they consumed an unusually large quantity of food in the absence of physical hunger on at least two occasions. In line with criteria adopted in earlier research, participants who reported one or more binge eating episodes during this period were categorized as binge eaters, whereas those reporting no such episodes were classified as non-binge eaters.

Binge Drinking. Binge drinking was assessed by asking participants how often, over the past two weeks, they had consumed five or more alcoholic beverages in a single occasion. Consistent with prior studies, individuals who reported at least one episode of binge drinking during the specified period were identified as binge drinkers, while those reporting no such episodes were categorized as non-binge drinkers.

Smoking and Substance Use. Use of cigarettes, marijuana, and other illicit substances was measured by asking participants to indicate their frequency of use during the previous 30 days. Response options ranged from no lifetime use to regular use across all 30 days. For analytical purposes, responses were recoded into two categories: current users (those reporting any use in the past 30 days) and non-users (those reporting no use during this time frame), following the approach adopted in earlier research (Ruiter et al., 2015).

Physical Activity. Levels of physical activity were assessed through two items measuring engagement in moderate and moderate-to-vigorous physical activities. Participants reported the number of days they engaged in these activities over the past week, with responses ranging from 0 to 7 days. Scores from both items were combined and dichotomized. Participants reporting physical activity on fewer than three days per week were classified as insufficiently active, whereas those engaging in physical activity on four or more days per week were classified as sufficiently active.

Fruit and Vegetable Consumption. Dietary habits were assessed by asking participants to report their average daily intake of fruits and vegetables. Response options included no daily intake, 1–2 servings, 3–4 servings, and five or more servings per day. In accordance with established guidelines in previous studies, responses were dichotomized to represent adequate intake (five or more servings per day) and inadequate intake (fewer than five servings per day).

Sleep Adequacy. Sleep sufficiency was measured by asking participants to indicate the number of days during the previous week on which they obtained enough sleep to feel well-rested upon waking. Consistent with earlier research practices, responses were categorized as sufficient sleep (four or more restful nights per week) or insufficient sleep (fewer than four restful nights per week).

Depression Anxiety Stress Scale–21 (DASS-21). Psychological distress was assessed using the Depression Anxiety Stress Scale–21 (DASS-21; Lovibond & Lovibond, 1995), a brief self-report measure derived from the original 42-item scale. The instrument assesses three interrelated dimensions of emotional distress: depression, anxiety, and stress. Participants responded to items reflecting emotional and behavioral experiences, such as difficulty relaxing, lack of motivation, and heightened emotional reactivity. Responses were recorded on a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time), based on experiences

during the previous seven days. Higher scores indicate greater severity of symptoms across the respective subscales.

Procedure. Topic was approved by Department Doctoral Program Committee. After approval of topic data was collected from students in Public and Private Universities of Lahore. Disproportionate Random Sampling was done. Firstly, the permission was taken from the original authors of assessment tools used in the study. The permission letter to collect the data was taken from the Center for Clinical Psychology, University of the Punjab. Permission was taken from participants to collect the data through consent form. Participants were made sure that the information provided by them is kept confidential and will be used only for the research purpose. For this purpose, an information sheet & consent form was provided to the participants. The current study consists of pilot study and main study as explained below:

Pilot study. The pilot study was conducted on 10 participants prior to the main study in order to check the comprehension, viability, and time taken to fill the questionnaires. First of all, the participant information sheet was provided and important information about current study was given to the participants. Instructions were given to the participants in the form and their consent was taken to ensure their willingness to participate in the study. To enhance the quality of questionnaire, changes were induced in the questionnaires on the basis of pilot study.

Main study. Main study was conducted after pilot study. The students who fulfill the inclusion and exclusion criteria of the study were identified and recruited as participants. All the ethical considerations were explained to participants. The assessment procedure was done in both public and private sector institutes. The participants were provided with necessary information about current study through the participant information sheet. They were informed that their identifying information like original name, address, phone number was not required in the study. The written consent was taken from the participants after assuring their confidentiality. Participants were informed that they had the right to hold the answer for which they feel uncomfortable. Questionnaires were self-administered by the participants

Ethical Considerations. The study was conducted in strict accordance with the ethical principles and guidelines outlined by the American Psychological Association (APA). Prior to initiating the research, formal approval was obtained from the Departmental Doctoral Program Committee, allowing the researcher to proceed with the study. Institutional approval was also secured from the Centre for Clinical Psychology, and written permission was granted by the research supervisor to conduct the study.

Authorization to use the assessment tools was obtained from the respective authors of the original versions of the instruments. Additionally, official permission letters were acquired from the Heads of Departments of both private and government educational institutions after providing comprehensive information regarding the objectives, procedures, and significance of the research.

Informed consent was obtained from all participants prior to their inclusion in the study. Participants were provided with a detailed information sheet explaining the nature, purpose, and procedures of the research in clear and understandable language. Participation was entirely voluntary, and participants were informed of their right to withdraw from the study at any stage without any penalty or adverse consequences.

Confidentiality of participants' data was strictly maintained throughout the research process. Anonymity was ensured by not collecting or disclosing any identifying personal information. All data were handled responsibly and used solely for research purposes. Finally, the findings of the study were

reported with honesty, transparency, and accuracy, ensuring adherence to ethical standards of research integrity.

3. Results

Firstly, preliminary analysis was done for the purpose of screening data and to identify and remove outliers in the study. Analysis was done on 408 male participants.

Table 3

Psychometric properties of the measure of DASS-21 and its subscales for Depression, Anxiety and Stress (n=408).

Measures	N	M	SD	A
DASS-21	21	23.35	15.74	.95
Depression	7	6.66	5.53	.88
Anxiety	7	8.56	6.25	.90
Stress	7	8.13	5.58	.98

Note: DASS-21 = Depression Anxiety Stress

The Table 3.1 shows the reliability of measures used in study. The Cronbach's alpha reliability values for DASS and its subscales of Depression Anxiety Stress were high ranging from .98 to .88 which suggests strong internal consistency of the measures.

Table 4

Frequency (f) and Percentage (%) of severity of Depression, Anxiety and stress in male sample (n=408)

	f	%
Depression	303	74.6
Anxiety	185	45.3
Stress	203	49.7
Depression		
Normal	104	25.5
Mild	44	10.8
Moderate	105	26
Severe	59	14.5
Extremely Severe	95	23.3
Anxiety		
Normal	223	54.7
Mild	21	5.1
Moderate	48	11.8
Severe	34	8.3
Extremely Severe	82	20.1
Stress		
Normal	205	50.2
Mild	54	13.2
Moderate	62	15.2
Severe	52	12.7
Extremely Severe	35	8.6

Results revealed that prevalence of Depression, Anxiety and Stress was 74.6%, 45.3%, 49.7% respectively. The severity levels of Depression, Anxiety and Stress revealed that 25.5% participants had no symptoms of depression. Mild level reported by 10.6% participants, 26 % participants reported moderate level of Depression, 14.5 % participants displayed severe depression level and 23.3 % participants reported extremely severe depression level. Data from male sample displayed that 54 % participants did not show anxiety symptoms, 5.1 % participants reported mild anxiety symptoms, 11.8 % participants displayed moderate anxiety level, 8.3 % participants were in severe category of anxiety level, and 20.1 % participants reported extremely severe symptoms of anxiety. On subscale of stress there were no symptoms in half of the participants. Mild level of stress was reported by 13.3% participants, 15.2 participants were in moderate category, 12.7 % participants displayed severe stress symptoms and 8.6 % participants had extremely severe stress symptoms.

Table 5

Frequency (f) and percentage (%) of risky behaviors of the male participants (n=408)

	<i>f</i>	<i>%</i>
Binge eating		
Yes	313	76.7
No	95	23.3
Over Speeding		
Yes	257	63
No	151	37
Drug use		
Non user	219	53.7
User	189	46.3
Vegetables intake		
Insufficient	383	93.9
Sufficient	25	6.1
Binge drinking		
Non drinker	225	55.1
Drinker	183	44.9
Sleep		
Sufficient	218	53.8
Insufficient	190	46.6
Exercise		
Insufficient	155	38
Sufficient	253	62

Binge eating was reported by 76% participants. Over speeding was reported 63% participants. Insufficient healthy food intake was reported by 93% participants. Insufficient sleep was reported by 53% participants, 38% participants reported insufficient exercise and 53% participants were drug abusers.

4. Discussion

This study reveals prevalence of Mental Health Problems and High-Risk Behaviors in male university students. The present section discusses the prevalence rates of Mental health Problems and High-Risk Behaviors in context of previous literature as well as cultural explanation of the findings.

The first objective of this study was to find the prevalence of Mental health problems in male university students. Findings revealed that prevalence of depression anxiety and stress in male university students was 74.6%, 45.3% and 49.7%.

Prevalence of depression in this research is higher than in previous research. Indigenous research show that prevalence in male students is consistent with previous studies conducted in Pakistan. The previous global studies shows that prevalence of depression in current study was higher as compared to Hong Kong, Kenya, Australia, Egypt, India, Malaysia, UAE, Saudi Arab, Turkey, and the USA (Shek et al., 2022; Tele et al., 2022; Kasturi et al., 2023; Ahmed et al., 2024; El-Ghitany et al., 2024) (Xiang et al., 2024) (Aslan & Çınar, 2023)

Results of anxiety were also higher previous researches in Pakistan. Anxiety was higher as compared to US, Turkey, Hong Kong and Australia but lower than Egypt and Iran (Kasturi et al., 2023; (El-Ghitany et al., 2024 (Mulupi et al., 2025) (Xiang et al., 2024) (Aslan & Çınar, 2023). Results of stress were consistent as compared to previous indigenous research. Stress was higher than Malaysia, US, Australia and Turkey but lower as compared to India and Egypt (Aslan & Çınar, 2023) (Zheng et al., 2022) (Hu et al., 2022) (Singh et al., 2026)

The higher prevalence of mental health problems in male university students can be because of male mental health stigma in our culture and restrictive emotionality. Gender roles are the fixed and inflexible rules and ideals that guide and formulate masculine and feminine behavior, thus both genders are believed to be associated with these social norms Traditional masculinity is a set one of rules that men living in a society are required to follow, utmost compliance of these rules is considered imperative in the society. In our culture the concept of traditional masculinity has been penetrated in men through their interaction and socialization within society to make them learn their expected role and behaviors. Men learn what is expected of them in their social interactions, hence, they absorb various customs, traditions, standards, rules, believes, values, fashions that define them in the precinct of the society (Gitay et al., 2018)

Incidence of binge eating in male population was 76.7% and prevalence of binge drinking was 44.9%. Prevalence of over speeding in males was 63%. Drug use behavior in 56% prevalent in male population. Prevalence of healthy food consumption in male population was 6.1%. 93% males were not consuming healthy diet. Males with having insufficient sleep and exercise were 46% and 62% respectively. Gender-based analyses of high-risk behaviors consistently demonstrate that men engage in a significantly broader range of health-compromising behaviors than women, with evidence suggesting involvement in more than thirty distinct risk behaviors associated with heightened vulnerability to disease, injury, and mortality. These behavioral patterns reflect not only individual lifestyle choices but also deeply embedded sociocultural norms related to masculinity, risk-taking, and health neglect. The consequences of such behaviors are particularly evident in countries like Russia, which exhibits one of the largest gender gaps in life expectancy worldwide, with men living on average 56.1 years compared to 66.4 years for women. This pronounced disparity has been critically linked to men's disproportionately higher rates of alcohol abuse, which contribute to an increased prevalence of accidental deaths, interpersonal violence, and cardiovascular disease. These findings underscore the role of gendered behavioral patterns as a key public health concern, highlighting the need for gender-sensitive prevention strategies that address not only substance use but also the broader social and structural determinants reinforcing high-risk behaviors among men (Alkazemi, 2018).

Strengths. Data was collected from different private and public sector universities participants from various socioeconomic class were included. In this study high risk behaviors have been studied. Previously research on High Risk Behaviors have not been conducted in Pakistan.

Limitations. Due to online mode data could not been collected as decided. Sample was not representative of the population because participants were selected on the basis of convenience of researcher. High risk behaviors were measured on the basis of questions derived from previous researches because no tool for measurement of high risk behaviors was available. There is a chance of over reporting of symptom because self-report questionnaires were used.

Recommendations and Implications. The present research assists as baseline for the prevalence rate of mental health problems and high-risk behaviors in male university students of Pakistan. Future research can be conducted on the severity of stressors involved in the progression of mental health problems. Prevalence study should be conducted every year. It can provide guideline to mental health professional, policy makers and university administrations to provide compatible environment. It also helps students to understand to whom they may concern for their mental health and university administrations to make intervention plans for student counselling. In future studies, Student's attitude towards seeking treatment for mental issues may also recommend improving present services and to establish new one. Indigenous tools may also be used for accessing mental health problems.

In Pakistan mental health problems are tremendously stigmatized because of inadequate awareness. Seminars and workshops regarding mental health awareness should be conducted in direct public attention towards needs of psychological well-being. Government should also provide funds and opportunities for this purpose. Mental health awareness should also be spread through mass media. Moreover, psychological therapies and counselling should also be provided to students at low cost. Stress management classes can be conducted in each department so that students can learn to manage their stress. Stress related to academics can also be reduced by university management by assessing the factors adding to stress of the students.

The severity and number of high risk behaviors in youth are increasing day by day. They are the major cause of morbidity in youth. Prevention strategies available for young people are limited. There is a dire need of awareness about this issue and there is need of more prevention programs in educational institutions. Furthermore, in future high-risk behaviors which are more related to our culture can be studied. A tool with proper cut off which is also related to our culture can be used in future researches.

5. References

- Adlaf, E. M., Gliksman, L., Demers, A., & Newton-Taylor, B. (2001). The Prevalence of Elevated Psychological Distress Among Canadian Undergraduates: Findings from the 1998 Canadian Campus Survey. *Journal of American College Health*, 50(2), 67–72. <https://doi.org/10.1080/07448480109596009>
- Ahmed, H., Khaled, H., Allam, A. A., Alodini, B., Azzam, A., Hjazeen, A. A., Hassan, H. S., Hussein, S. M., & Hassan, F. E. (2024). Depression in geriatrics: a systematic review and meta-analysis of prevalence and risk factors in Egypt. *BMC Geriatrics*, 24(1), 930. <https://doi.org/10.1186/s12877-024-05484-2>
- AlHamlan, A. W., AlDhafiri, D. A., AlHajri, N. A., AlHouli, A. H., AlHubaidah, S. M., AlJassar, A. M., AlMutairi, N. N., AlRabiah, A. S., Al-Sultan, A. T., & Qasem, W. (2025). The impact of

- academic stress on the lifestyle of university students in Kuwait. *BMC Public Health*, 25(1), 2338. <https://doi.org/10.1186/s12889-025-23569-4>
- Alkazemi, D. (2018). Gender differences in weight status, dietary habits, and health attitudes among college students in Kuwait: A cross-sectional study. *Nutrition and Health*, 25(2), 75–84. <https://doi.org/10.1177/0260106018817410>
- Alsheweir, A., Goyder, E., Alnooh, G., & Caton, S. J. (2023). Prevalence of Eating Disorders and Disordered Eating Behaviours amongst Adolescents and Young Adults in Saudi Arabia: A Systematic Review. *Nutrients*, 15(21), 4643. <https://doi.org/10.3390/nu15214643>
- Aslan, I., & Çınar, O. (2023). Predictors and prevalence of stress, anxiety, depression, and PTSD among university students during the second wave of the COVID-19 pandemic in Turkey. *Frontiers in Psychology*, 13, 1087528. <https://doi.org/10.3389/fpsyg.2022.1087528>
- Atzendorf, J., Rauschert, C., Seitz, N., Lochbühler, K., & Kraus, L. (2019). The use of alcohol, tobacco, illegal drugs and medicines. *Deutsches Ärzteblatt International*, 116(35–36), 577–584. <https://doi.org/10.3238/arztebl.2019.0577>
- Bibi, A., Blackwell, S. E., & Margraf, J. (2019). Mental health, suicidal ideation, and experience of bullying among university students in Pakistan. *Journal of Health Psychology*, 26(8), 1185–1196. <https://doi.org/10.1177/1359105319869819>
- Bozzini, A. B., Bauer, A., Maruyama, J., Simões, R., & Matijasevich, A. (2020). Factors associated with risk behaviors in adolescence: a systematic review. *Brazilian Journal of Psychiatry*, 43(2), 210–221. <https://doi.org/10.1590/1516-4446-2019-0835>
- Castelpietra, G., Knudsen, A. K. S., Agardh, E. E., Armocida, B., Beghi, M., Iburg, K. M., Logroscino, G., Ma, R., Starace, F., Steel, N., Addolorato, G., Andrei, C. L., Andrei, T., Ayuso-Mateos, J. L., Banach, M., Bärnighausen, T. W., Barone-Adesi, F., Bhagavathula, A. S., Carvalho, F., . . . Monasta, L. (2022). The burden of mental disorders, substance use disorders and self-harm among young people in Europe, 1990–2019: Findings from the Global Burden of Disease Study 2019. *The Lancet Regional Health - Europe*, 16, 100341. <https://doi.org/10.1016/j.lanepe.2022.100341>
- Chatmon, B. N. (2020). Males and mental health stigma. *American Journal of Men S Health*, 14(4), 1557988320949322. <https://doi.org/10.1177/1557988320949322>
- El-Ghitany, E. M., Ashour, A., Elrewany, E., Farghaly, A. G., & Shata, Z. (2024). Prevalence and predictors of depression, anxiety, and stress among refugees in Egypt. *Journal of the Egyptian Public Health Association*, 99(1), 14. <https://doi.org/10.1186/s42506-024-00158-8>
- Fan, Y., Fan, A., Yang, Z., & Fan, D. (2025). Global burden of mental disorders in 204 countries and territories, 1990–2021: results from the global burden of disease study 2021. *BMC Psychiatry*, 25(1), 486. <https://doi.org/10.1186/s12888-025-06932-y>

- Farhane-Medina, N. Z., Luque, B., Tabernero, C., & Castillo-Mayén, R. (2022). Factors associated with gender and sex differences in anxiety prevalence and comorbidity: A systematic review. *Science Progress*, 105(4), 368504221135469. <https://doi.org/10.1177/00368504221135469>
- Fondzenyuy, S. K., Turner, B. M., Burlacu, A. F., & Jurewicz, C. (2024). The contribution of excessive or inappropriate speeds to road traffic crashes and fatalities: A review of literature. *Transportation Engineering*, 17, 100259. <https://doi.org/10.1016/j.treng.2024.100259>
- Gitay, M. N., Fatima, S., Arshad, S., Arshad, B., Ehtesham, A., Baig, M. A., Ilyas, M. F., Rizvi, S. F., Farooqui, Q., Masroor, M., & Haque, Z. (2018). Gender differences and prevalence of mental health problems in students of healthcare units. *Community Mental Health Journal*, 55(5), 849–853. <https://doi.org/10.1007/s10597-018-0304-2>
- Hay, P., Aouad, P., Le, A., Marks, P., Maloney, D., Barakat, S., Boakes, R., Brennan, L., Bryant, E., Byrne, S., Caldwell, B., Calvert, S., Carroll, B., Castle, D., Caterson, I., Chelius, B., Chiem, L., Clarke, S., Conti, J., . . . Maguire, S. (2023). Epidemiology of eating disorders: population, prevalence, disease burden and quality of life informing public policy in Australia—a rapid review. *Journal of Eating Disorders*, 11(1). <https://doi.org/10.1186/s40337-023-00738-7>
- Hu, K., Godfrey, K., Ren, Q., Wang, S., Yang, X., & Li, Q. (2022). The impact of the COVID-19 pandemic on college students in USA: Two years later. *Psychiatry Research*, 315, 114685. <https://doi.org/10.1016/j.psychres.2022.114685>
- Issahaku, P. A., Adam, A., & Sulemana, A. (2024). Youth Risky and Antisocial Behaviors in Newfoundland and Labrador: The Perspectives of Young People. *SAGE Open*, 14(2). <https://doi.org/10.1177/21582440241258222>
- Jaffri, N., Jabeen, D., & Butt, S. F. (2024). The Relationship of Sleep quality and Cognitive Failure among University Students: A Quantitative Study. *Journal of Education and Educational Development*, 11(2), 310–322. <https://doi.org/10.22555/joeed.v11i2.1072>
- Jao, N. C., Robinson, L. D., Kelly, P. J., Ciecierski, C. C., & Hitsman, B. (2018). Unhealthy behavior clustering and mental health status in United States college students. *Journal of American College Health*, 67(8), 790–800. <https://doi.org/10.1080/07448481.2018.1515744>
- Kasturi, S., Oguoma, V. M., Grant, J. B., Niyonsenga, T., & Mohanty, I. (2023). Prevalence Rates of Depression and Anxiety among Young Rural and Urban Australians: A Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*, 20(1), 800. <https://doi.org/10.3390/ijerph20010800>
- Kavelaars, R., Ward, H., Mackie, D. S., Modi, K. M., & Mohandas, A. (2023). The burden of anxiety among a nationally representative US adult population. *Journal of Affective Disorders*, 336, 81–91. <https://doi.org/10.1016/j.jad.2023.04.069>
- Kjeldbjerg, M. L., & Clausen, L. (2021). Prevalence of binge-eating disorder among children and adolescents: a systematic review and meta-analysis. *European Child & Adolescent Psychiatry*, 32(4), 549–574. <https://doi.org/10.1007/s00787-021-01850-2>

- Kundu, S., Bakchi, J., Banna, M. H. A., Sayeed, A., Hasan, M. T., Abid, M. T., Ghosh, S., Sarker, N., & Khan, M. S. I. (2021). Depressive symptoms associated with loneliness and physical activities among graduate university students in Bangladesh: findings from a cross-sectional pilot study. *Heliyon*, 7(3), e06401. <https://doi.org/10.1016/j.heliyon.2021.e06401>
- Liu, W., Zhang, Y., Chen, J., Li, X., Huang, Y., Zhao, F., Chen, F., Qu, P., & Li, Y. (2025). Global burden and trends of major mental disorders in individuals under 24 years of age from 1990 to 2021, with projections to 2050: insights from the Global Burden of Disease Study 2021. *Frontiers in Public Health*, 13, 1635801. <https://doi.org/10.3389/fpubh.2025.1635801>
- Mehboob, R. (2021). Mental Health Disorders and Challenges faced by developing countries. *Pakistan BioMedical Journal*, 3(2). <https://doi.org/10.52229/pbmj.v3i2.9>
- Mofatteh, M. (2020). Risk factors associated with stress, anxiety, and depression among university undergraduate students. *AIMS Public Health*, 8(1), 36–65. <https://doi.org/10.3934/publichealth.2021004>
- Mulupi, S., Abubakar, A., Nyongesa, M. K., Angwenyi, V., Kabue, M., Mwangi, P. M., Odhiambo, R., Marangu, J., Njoroge, E., Mokaya, M. M., Obulemire, E. K., Ombech, E., Ssewanyana, D., Moran, G., Martin, M., Proulx, K., Marfo, K., & Lye, S. (2025). Prevalence and correlates of depressive and anxiety symptoms among pregnant women from an urban informal settlement in Nairobi, Kenya: a community-based cross-sectional study. *BMC Pregnancy and Childbirth*, 25(1), 213. <https://doi.org/10.1186/s12884-025-07339-z>
- Niazi, Y., Moazzam, M., Asif, M. F., & Farooq, S. M. Y. (2025). Prevalence and epidemiology of depression symptoms among Pakistani students: a systematic review and meta-analysis (2000–2025). *Cambridge Prisms Global Mental Health*, 13, 1–41. <https://doi.org/10.1017/gmh.2025.10125>
- Padhani, Z. A., Avery, J. C., Meherali, S., Tessema, G. A., & Lassi, Z. S. (2025). Burdens and risk factors for mortality in adolescents and young adults aged 10–24 years in Australia and comparison with OECD countries between 2000 and 2021: Global Burden of Disease Study 2021. *BMJ Public Health*, 3(2), e002986. <https://doi.org/10.1136/bmjph-2025-002986>
- Park, S. Y., Andalibi, N., Zou, Y., Ambulkar, S., & Huh-Yoo, J. (2020). Understanding Students' Mental Well-Being Challenges on a University Campus: Interview study. *JMIR Formative Research*, 4(3), e15962. <https://doi.org/10.2196/15962>
- Pervaiz, B., Manzoor, M. Q., Majeed, M. F., & Mehmood, F. (2025). *Household vulnerability to food insecurity in Gilgit-Baltistan, Pakistan: A VEP approach*. The Critical Review of Social Sciences Studies, 3(3), 2646–2657. <https://doi.org/10.59075/g6brv408>
- Pervaiz, B., Sultana, M., Manzoor, M. Q., & Yaseen, M. (2024). *Household-level food insecurity in Hunza Valley, Pakistan: An experience-based and psychosocial assessment*. Academic Journal of Social Sciences, 8(2), 1–11. <https://doi.org/10.54692/ajss.2024.812173>

- Rahelić, V., Perković, T., Romić, L., Perković, P., Klobučar, S., Pavić, E., & Rahelić, D. (2024). The Role of Behavioral Factors on Chronic Diseases—Practice and Knowledge Gaps. *Healthcare*, 12(24), 2520. <https://doi.org/10.3390/healthcare12242520>
- Rastogi, S., Gupta, S., Deepak, D., Mishra, B. N., Gore, R., & Singh, V. (2025). A Systematic Literature Review on Anxiety among Undergraduate Students: Causes and Coping Strategies. *Annals of Neurosciences*, 09727531251366078. <https://doi.org/10.1177/09727531251366078>
- Rao, M. A., Pervaiz, B., Fatima, M., Manzoor, M. Q., & Javed, A. (2024). *Combating unemployment in Pakistan: Empirical study of key macroeconomic factors*. Academic Journal of Social Sciences, 8(2), 22–31. <https://doi.org/10.54692/ajss.2024.822255>
- Richards, D. (2011). Prevalence and clinical course of depression: A review. *Clinical Psychology Review*, 31(7), 1117–1125. <https://doi.org/10.1016/j.cpr.2011.07.004>
- Roy, S., Biswas, A. K., & Sharma, M. (2025). Stress, Anxiety, and Depression as Psychological distress among college and undergraduate students: A scoping review of reviews guided by the Socio-Ecological Model. *Healthcare*, 13(16), 1948. <https://doi.org/10.3390/healthcare13161948>
- Saleem, S., Asghar, A., Subhan, S., & Mahmood, Z. (2019). Parental rejection and mental health problems in college students: Mediating role of Interpersonal Difficulties. *Pakistan Journal of Psychological Research*, 34(3), 639–653. <https://doi.org/10.33824/pjpr.2019.34.3.35>
- Shek, D. T. L., Dou, D., & Zhu, X. (2022). Prevalence and correlates of mental health of university students in Hong Kong: What happened one year after the occurrence of COVID-19? *Frontiers in Public Health*, 10, 857147. <https://doi.org/10.3389/fpubh.2022.857147>
- Singh, A., Srivastava, A. K., Chauhan, N. S., Singh, A., Thakur, M. S., & Gupta, V. (2026). Investigating stress dynamics triggers and sleep disturbances among Indian medical students. *Discover Public Health*, 23(1). <https://doi.org/10.1186/s12982-026-01383-6>
- Solmi, M., Radua, J., Olivola, M., Croce, E., Soardo, L., De Pablo, G. S., Shin, J. I., Kirkbride, J. B., Jones, P., Kim, J. H., Kim, J. Y., Carvalho, A. F., Seeman, M. V., Correll, C. U., & Fusar-Poli, P. (2021). Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. *Molecular Psychiatry*, 27(1), 281–295. <https://doi.org/10.1038/s41380-021-01161-7>
- Tele, A., Kathono, J., Mwaniga, S., Nyongesa, V., Yator, O., Gachuno, O., Wamalwa, D., Amugune, B., Cuijpers, P., Saxena, S., McKay, M., Carvajal, L., Lai, J., Huang, K. Y., Merali, Z., & Kumar, M. (2022). Prevalence and risk factors associated with depression in pregnant adolescents in Nairobi, Kenya. *Journal of Affective Disorders Reports*, 10, 100424. <https://doi.org/10.1016/j.jadr.2022.100424>
- Vinish, V., Chakrabarty, J., Vijayan, S., Nayak, B. S., Shashidhara, Y. N., Kulkarni, M., & Noronha, J. A. (2023). Prevalence of road traffic injuries in South East and South Asian region – A systematic review. *Journal of Neurosciences in Rural Practice*, 14, 214–223. https://doi.org/10.25259/jnrp_25_2022

- Xiang, A. H., Martinez, M. P., Chow, T., Carter, S. A., Negriff, S., Velasquez, B., Spitzer, J., Zuberbuhler, J. C., Zucker, A., & Kumar, S. (2024). Depression and anxiety among US children and young adults. *JAMA Network Open*, 7(10), e2436906. <https://doi.org/10.1001/jamanetworkopen.2024.36906>
- Zhang, J., & Wang, E. (2025). Positive and negative risk-taking behaviors in adolescents: Distinct characteristics, interrelationships, and influencing factors. *World Journal of Psychiatry*, 15(6), 106944. <https://doi.org/10.5498/wjp.v15.i6.106944>
- Zheng, Y., Jiao, J., & Hao, W. (2022). Prevalence of stress among nursing students: A protocol for systematic review and meta-analysis. *Medicine*, 101(31), e29293. <https://doi.org/10.1097/md.00000000000029293>