

ORIGINAL ARTICLE

Frequency of Depression and Suicidal Thoughts in Young Adults of Pakistan: A Cross-Sectional Study

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ABSTRACT**Objective:** To find the frequency and association of depression and suicidal ideation in young adults.**Study design:** A descriptive cross-sectional study.**Place and Duration of Study:** The study was conducted in different areas of Pakistan, including Lahore and Karachi with the main population participating from the Islamabad and Rawalpindi region from May 2016 to August 2016.**Materials and Methods:** Printed and online versions of the questionnaire were filled by conveniently available young adults in different cities of Pakistan between the ages of 15-25 years. Questionnaires were designed in three parts: Part 1 comprised demographics. Part 2 was the Goldberg Depression Questionnaire which is used for depression screening, while Part 3 was the SBQ-R® used to identify individuals having suicide ideation and those at risk of carrying out a suicide attempt.**Results:** A high proportion of individuals were in the range of mild-moderate depression, 87 (43.7%), while a high proportion of individuals, 139 (69.8%), possessed a suicide score range of 3-6, which corresponds to a very low suicide attempt risk. The highest suicide score was between 16-18 and was possessed by only 2 (1%) individuals, while the highest depression score, which was any value above 54, was possessed by 45 (22.6%) individuals. Also, with increasing suicide score, the frequency seemed to decrease; 32 (16.1%) for a score range of 7-9, 15 (7.5%) for 10-12 score range and 11 (5.5%) for a score range of 13-15. However, the correlation coefficient between the two had a value of +0.5, so there was a marked positive correlation.**Conclusion:** The frequency of depression in young adults was considerably high since many of the participants were exposed to mild, moderate as well as severe depression. Also, there was a positive correlation between depression and suicide scores which predicted that depression can be a cause of suicide ideation and attempts. As the depression levels increased, the frequency of suicide tendencies was also salient.**Keywords:** *Depression, Ideation, Pakistan, Suicide, Suicidal Behavior, Youth.***How to cite this:** Anwar P, Salman R, Zahra M, Tufail R, Sohail RS, Arshad L. Frequency of Depression and Suicidal Thoughts in Young Adults of Pakistan: A Cross-Sectional Study. *Life and Science*. 2022; 3(4): 168-173. doi: <http://doi.org/10.37185/LnS.1.1.233>This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license. (<https://creativecommons.org/licenses/by-nc/4.0/>). Non-commercial uses of the work are permitted, provided the original work is properly cited.**Introduction**

The 21st century is a century of technological wonders which have connected all the people on Earth together.¹ Yet, ironically, in this extremely

interconnected world, people have never been more isolated and alone.² Where everybody used to have ample physical activities in the past³, the generation of this modern age now stays at home on their smartphones, TVs, computers and various other gadgets.⁴ This kind of digital isolation slowly builds into depression in young adults.⁵

Depression, if not witnessed, turns out to be a chief cause of suicide among the youth all over the world,⁶ which is an eminent cause of death in the same age group. According to WHO, it was the second leading cause of death in 15–29-year-olds all over the world in 2012. In Pakistan, the knowledge of suicidal ideation and attempts, however, is quite limited.⁷

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Therefore, our research-based survey focuses on pointing out the factors that lead to this particular mentality in Pakistan. The “suicidal process” begins with the first thought of taking one's life and continues up to the final act of carrying it out.⁷ The necessity to study these suicidal behaviours is important in order to make room for preventive strategies at different steps of the “suicidal process”.⁷ Even though there are strong religious and social restrictions to suicide in Pakistan and it is considered as an unforgivable sin and degraded, despite all this, there is sufficient evidence of suicide ideation and attempts being on the rise in Pakistan. According to the Human Rights Commission of Pakistan, it was shown that in the months of January and August 2000, there were a total of around 2000 suicides reported in Pakistan, which makes an average of 250 per month, as compared to the statistics of 1999 which showed a rate of 175 suicides per month.⁸ To the extent of our knowledge, in the past, very few research have been carried out in Pakistan about suicide attempts and ideation^{7,8}, thus, providing us with the objective to carry out the research in order to understand the links of suicide ideation to depression. The responses can also be used to identify individuals at risk of suicide attempt and, to assess specific risk behaviors.

Materials and Methods

A cross-sectional, questionnaire-based research was carried out. A questionnaire was circulated asking the participants particular behavioural questions. These questions correlated to a specific level of an arbitrarily set scale with a minimum and maximum range for both the depression screening as well as the Suicide-based questionnaire (SBQ).

The study was conducted in different areas of Pakistan, including Lahore, and Karachi, with the main population participating from Islamabad/Rawalpindi region.

A total of 260 individuals were approached, out of which 204 people filled out the questionnaire while 56 did not respond. 4 of the questionnaires were rejected based on incomplete data, in accordance with the rejection theory.⁹ The final sample size (n=199) was 199.

The duration of the study was 2.5 months collectively for the questionnaire designing, collection of data and writing of the research article, beginning from

22nd May 2016 to 1st August 2016.

The convenience sampling technique (non-probability sampling) was used to collect data from individuals who were conveniently available to participate in the study.

The participants were approached through social media platforms, including Facebook, Twitter, and WhatsApp. Since the questionnaire was mainly circulated online through a Google Forms link, there had to be two or three reminders given to the participants before they filled out the questionnaire. The participants who did not respond the second time were not contacted again.

Participation in the study was voluntary, and the responses were treated with confidentiality. Consent was sought from the participants before the questions were answered. The participants were assured that their data would be kept anonymous and were advised to contact the researchers in case of any questions. Data was genuinely kept anonymous.

In order to avoid bias, the interviewer and the participant were not allowed to interact during the questionnaire filling. All the data was kept authentic to avoid any misinterpretation of analysis.

Pakistani young adults aged between 15-25 years were used for the survey-based research.

The young people with Pakistani nationality who had moved to foreign countries like the USA for further studies were excluded. The transgender community was excluded. The elderly, the adults aged more than 25 years and the married were also excluded from the survey.

The questionnaire was based on three sections: Section A containing questions for depression screening, Section B as SBQ and Section C for demographics.

For section A, the Goldberg Depression questionnaire¹⁰ was used. The questions were related to daily behaviours of the individual, including questions such as “I feel sad, blue and unhappy” and “I feel depressed even when good things happen to me.” The answers to the questions ranged from least to most in statements like “not at all”, “just a little”, “somewhat”, “moderately”, “quite a lot”, and “very much”.

For section B, the SBQ-R¹¹ was used. It is composed of four items, each tapping a different dimension of

suicidal ideation and attempt. Question 1 tapped into lifetime suicide ideation and/or attempts. Question 2 assessed the frequency of suicidal ideation over the past year. Question 3 assessed the threat of suicide attempts. Question 4 evaluated the self-reported likelihood of suicidal behaviour in the future. Due to the wording of the SBQ-R, a broad spectrum of information can be obtained in a concise questioning round.

Section C consisted of demographics, including questions such as age, gender, family's monthly income, education level, and marital status of parents to assess the isolation of the participant, the area they are resident in and questions relating to smoking and substance abuse and their frequency of use.

Depression score was calculated using the Goldberg Scale¹⁰ i.e., 0-9 cumulative score indicated that the person was not prone to depression,¹⁰⁻¹⁷ indicated that the person was possibly mildly depressed,¹⁸⁻²¹ indicated that the person was at the borderline of depression, 22-35 indicated mild to moderate depression, 36-53 indicated moderate to severe depression and 54+ score was indicative of severe depression. SBQ-R¹¹ was used to distinguish people at suicide attempt risk and were given points according to the response chosen. The total score ranged from 3 to 18, and the scores were broken down into smaller ranges, and a category was allocated in accordance with the intensity; very low, low, moderate, high, and very high.

The questionnaire was either given to the participants by hand, or they were linked through Google Docs and filled them. Results through both questioning methodologies were compiled and data was entered.

Statistical Package for Social Sciences (SPSS) version 23.0 was used to collect, organize, and analyze the data. Frequencies were derived by using the same software, and graphs were constructed using Microsoft Excel 2013. Data analysis began during the data collection stage and continued till the writing of the final article. Pearson's correlation coefficient test was applied to deduce the final correlation between depression and suicide scores. The correlation coefficient value can range between -1, indicating a perfect negative correlation, and +1, indicating a perfect positive correlation. Any value between ±0.5

and ±1 indicates a strong correlation. The test was also applied using SPSS version 23.0.

Results

The results were obtained for 199 participants after analyzing the data from their filled questionnaires. The response rate was 76.5%.

There were 61% females and 38% males; most of the participants (55%) were aged between 20-22 years; most were undergraduates (73%). Moreover, 26.6% (n=53) of the participants were smokers and 18.1% (n=36) of the participants were involved in the consumption of drugs and alcohol, 6.5% (n=13) said they “rarely” consumed such substances, and 3.5% (n=7) chose the “quite often” option. The majority of the participants were females aged between 20-22 years with a family income of Rs 100,000-300,000 and pursuing undergraduate education. The demographics of the study are shown in the following table 1.

Table 1: The demographics of the participants

Gender	Frequency (n)	Percentage (%)
Male	76	38
Female	122	61
Age		
15 years or under	10	5
16-19 years	60	30
20-22 years	109	55
22+ years	20	10
Education level		
Below matric	7	3%
Matric	6	3%
Intermediate	27	14%
Undergraduate	145	73%
Graduate	14	7%
Monthly income of the family (PKR)		
≤10,000	2	1%
≥ 10,000-50,000	15	8%
≥50,000-100,000	46	23%
≥ 100,000-300,000	86	43%
More than 300,000	46	23%

The following table 2 displays the frequency and percentages of participants in relation to depression and suicide scores. The lowest range (not prone to depression) was not occupied by any participant, the second (mild depression) range was occupied by 2% (n=4) of the participants, the third range (borderline depression) was occupied by 6% (n=12), the fourth

range (mild-moderate depression) was occupied by the highest proportion of the participants, 43.7% (n=87), the fifth range (moderate-severe depression) was occupied by the second highest proportion of participants, 25.6% (n=51) while the highest scores were occupied by 22.6% (n=45) of the participants. In case of suicide scores, a major portion of participants, 69.8% (n=139), had the lowest levels, which was in the range of 3-6 and with increasing levels of suicide scores the frequency of participants was seen to drop down thus comparatively very few of them had the highest possible suicide score range.

Table 2: Frequency distributions of depression and suicide scores

Depression score Level	Frequency (%)	Suicide score Level	Frequency (%)
0-9	0 (0)	3-6	139 (69.8)
10-17	4 (2)	7-9	32 (16.1)
18-21	12 (6)	10-12	15 (7.5)
22-35	87 (43.7)	13-15	11 (5.5)
36-53	51 (25.6)	16-18	2 (1)
54 and above	45 (22.6)	-	-

The correlation coefficient test was applied to the frequencies of the above scores, and the correlation was shown in the form of the following figure 1 and figure 2.

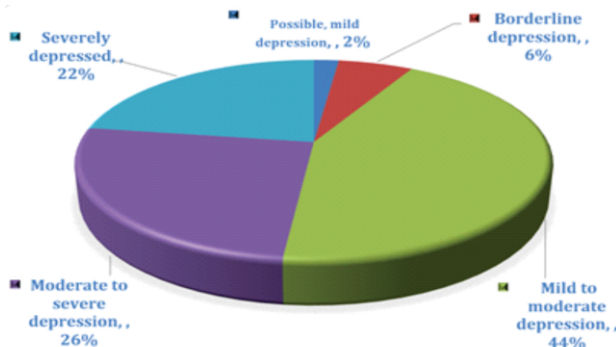


Fig 1: Percentage of Depression Levels

Figure 3 is the graph having Pearson's correlation coefficient test application. The coefficient value was $0.498 \approx +0.5$, indicating a strong correlation between the depression scores and the tendency to consider or attempt suicide. Increase in the depression level

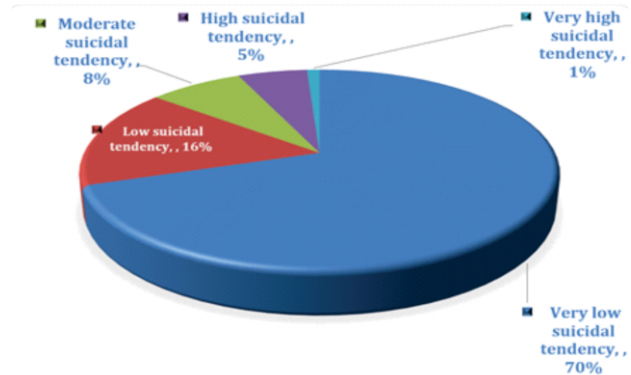


Fig 2: Percentage of Suicide Levels

increases the suicide tendencies as shown in Fig 3. Also, high numbers of participants with a very low suicide tendency were present in the category of borderline depression, which shows a strong association relating the onset of suicidal ideation beginning at the level of borderline depression.

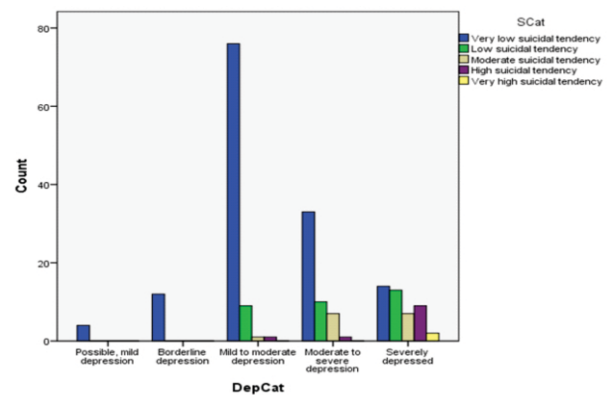


Fig 3: The correlation between depression score categories to suicide score categories

Discussion

We assessed if depression in a person has a positive correlation with suicide ideation by conducting a cross-sectional study in different areas of Pakistan. Depression promotes the likelihood of suicidal thoughts and attempts in our cohort. Depression has also been ranked first in the predictors of suicide, with alcoholism being the second on the list.¹² Depression can result from many factors, including problems in family and relationships like a death or a loss, substance abuse, loneliness and isolation, childhood trauma, environment and even genetics.^{13,14} Situations like these, as a precursor to depression, are shown to progress to the onset of suicide ideation and possible suicide attempts in young people.^{12,15}

Depression in young adults was found to be considerably high. We believe it can be due to many factors including academic pressure. Since most of our participants were undergraduates; therefore, university routine can add to the stress.^{16,17} Moreover, depression can also be attributed to a lack of social interaction and physical activities.^{18,19} Most of young people stay at home on their gadgets watching movies, preferring to text people instead of talking in person.⁴ They have become so engrossed in the technological wonders that they rarely realise the need to go for a walk or play sports like youth did in the past.³ Depression can also be as a result of any family or relationship issues, including a death or a loss which can have a huge impact on the person emotionally.²⁰⁻²² A considerably high number of young people are involved in smoking.²³ Drugs and alcohol consumption is obviously lower in Pakistan than in other countries but is still present in our cohort, which means a considerable number of Pakistani young adults are involved in such activities^{23,24} contributing to depression. Since, alcohol is a depressant; it can make the symptoms of depression worse even though it may be taken to achieve opposite effects.²⁵

In our study, as depression levels increased, suicidal tendencies became more salient. According to Suicide Awareness Voices of Education (SAVE), chronic depression can lead to feelings of despair and hopelessness and can eventually lead to thoughts of suicide. However, usually, most people who attempt or plan suicide do not actually want to die; they just want their pain and suffering to end. They also said that a suicide attempt is a cry for help which should never be ignored, and it is merely not to gain attention and sympathies.^{17,25}

Suffering from depression is involuntary, just like cancer or diabetes, but it is healable and can be managed.²⁵ There are many ways to treat this condition, depending upon the type of illness and severity. According to SAVE, research continues to show that a combination of psychotherapy and antidepressant medication is the most effective way to treat depression. However, it should be done under the supervision of a medical doctor.^{25,26} Also, creating public awareness of depression and suicide ideation, being curable and preventable, would be a good suicide prevention strategy. This can be done by

conducting various educational campaigns.^{26,27}

Limitations

- Sample size and sampling technique (convenience sampling) were not sufficient to represent the whole population of Pakistan since there is a possibility of under or over-representation of a certain group of people.
- Most of the participants were aged between 20-22 years, which does not represent the whole batch of young adults.
- The answers given were self-reported, which could have been biased, even though anonymity was told to be preserved.
- Inadequate research surveys have been carried out in the past. Therefore, there was no powerful data to reinforce our findings.
- A significant error in the printed questionnaire section C was identified later, in which the marital status question did not have a complete statement of "marital status of parents". It was confused to be the marital status of the bachelors themselves, and no option of 'unmarried' was added.
- Google Forms was used to collect samples, and a snowballing effect was given to our sampling technique, inadvertently.
- There is a possibility of gender bias since the number of females was exceptionally higher than males.

Conclusion

Depression was considerably evident in the young adults of our cohort, many were exposed to mild, moderate as well as severe depression. It is also seen to be a precursor of suicide ideation and attempt. It is a serious illness and requires immediate attention.

Recommendations

- A larger sample size should be used to achieve more accurate results.
- The questionnaire should have been piloted before circulation, or feedback on the questionnaire could have been obtained by some participants.
- A broad spectrum of age groups in our sample could be used to achieve better results as well as to assess the depression levels of various age groups.
- An equal or almost equal number of males and

females should be included in the study to assess the gender differences in the likelihood of depression.

- This issue should be promoted for further findings and analysis.

REFERENCES

- Collin P, Rahilly K, Richardson I, Third A. The benefits of social networking services. 2011; 1-29.
- O'Keeffe GS, Clarke-Pearson K. The impact of social media on children, adolescents, and families. *Pediatrics*. 2011; 127: 800-4.
- Marques A, de Matos MG. Adolescents' physical activity trends over the years: a three-cohort study based on the Health Behaviour in School-aged Children (HBSC) Portuguese survey. *BMJ open*. 2014; 4: e006012.
- Wallis C. The multitasking generation. *Time Magazine*. 2006; 167: 48-55.
- Witvliet M, Brendgen M, Van Lier PA, Koot HM, Vitaro F. Early adolescent depressive symptoms: prediction from clique isolation, loneliness, and perceived social acceptance. *Journal of abnormal child psychology*. 2010; 38: 1045-56.
- Murray B, Fortinberry A, Statistics D. Depression facts and stats. Online] <http://www.upliftprogram.com/depressionstats.html>. 2005.
- Khokher S, Khan MM. Suicidal ideation in Pakistani college students. *Crisis*. 2005; 26: 125-7.
- Khan MM, Prince M. Beyond rates: the tragedy of suicide in Pakistan. *Tropical doctor*. 2003; 33: 67-9.
- Sarr S. Survey research: we can do better. *Journal of the Medical Library Association: JMLA*. 2012; 100: 1.
- Aminpoor H, Afshinfar J, Mostafaei A, Ostovar S. Validation of Goldberg's Depression Scale in academic and non-academic peoples. *Ann Biol Res*. 2012; 3: 4564-73.
- Osman A, Bagge CL, Gutierrez PM, Konick LC, Kopper BA, Barrios FX. The Suicidal Behaviors Questionnaire-Revised (SBQ-R): validation with clinical and nonclinical samples. *Assessment*. 2001; 8: 443-54.
- Zhang J, Jin S. Determinants of suicide ideation: A comparison of Chinese and American college students. *Adolescence*. 1996; 31: 451.
- Rich AR, Scovel M. Causes of depression in college students: A cross-lagged panel correlational analysis. *Psychological Reports*. 1987; 60: 27-30.
- Klerman GL. The current age of youthful melancholia. Evidence for increase in depression among adolescents and young adults. *The British Journal of Psychiatry*. 1988; 152: 4-14.
- Diekstra RF. The epidemiology of suicide and parasuicide. *Acta Psychiatrica Scandinavica*. 1993; 87: 9-20.
- Furr SR, Westefeld JS, McConnell GN, Jenkins JM. Suicide and depression among college students: A decade later. *Professional Psychology: Research and Practice*. 2001; 32: 97.
- Depression and College Students [Internet]. 2015. Available from: http://www.balcells.com/blog/images/articles/entry558_2465_multitasking.pdf.
- Camacho TC, Roberts RE, Lazarus NB, Kaplan GA, Cohen RD. Physical activity and depression: evidence from the Alameda County Study. *American journal of epidemiology*. 1991; 134: 220-31.
- Kawachi I, Berkman LF. Social ties and mental health. *Journal of Urban health*. 2001; 78: 458-67.
- Aseltine Jr RH, Kessler RC. Marital disruption and depression in a community sample. *Journal of health and social behavior*. 1993: 237-51.
- Keitner GI, Miller IW. Family functioning and major depression: an overview. *American Journal of Psychiatry*. 1990; 147: 1128-37.
- Zisook S, Shuchter SR. Depression through the first year after the death of a spouse. *Am J Psychiatry*. 1991; 148: 1346-52.
- Sami N, Noorani SS, Lakhani LS, Ghouse A, Valliani S. Smoking practices and nicotine dependence among adolescents in Pakistan. *JPMA The Journal of the Pakistan Medical Association*. 2013; 63: 1260-5.
- Ahmed R, Rizwan-ur-Rashid MP, Ahmed SW. Frequency of cigarette smoking among young adults in Pakistan. *J Pak Med Assoc*. 2008; 58: 597-601.
- Suicide and depression Q&A [Internet]. SAVE. Available from: http://www.save.org/index.cfm?fuseaction=home.viewpage&page_id=705c8cb8-9321-f1bd-867e811b1b404c94.
- Buchanan JL. Prevention of depression in the college student population: a review of the literature. *Archives of Psychiatric Nursing*. 2012; 26: 21-42.
- Dumesnil H, Verger P. Public awareness campaigns about depression and suicide: a review. *Psychiatric Services*. 2009.