

ORIGINAL ARTICLE

RELATIONSHIP OF SUICIDE ATTEMPT WITH DEPRESSION AND OTHER SOCIO-DEMOGRAPHIC FACTORS AMONG THE TRANS-GENDERS

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Background: This study was conducted to assess the frequency of suicide attempt among the transgender population and analyse the relationship of depression and other socio-demographic factors with the suicide attempt. **Methods:** The sample population comprised of one hundred and forty-eight transgender people of Rawalpindi and Islamabad. Suicidal attempt was assessed by the simple question that “Have you ever performed an action with the intent to take your own life in your life time?” Answer of yes or no was recorded. Hamilton rating scale for Depression (HAM-D) was used to look for the presence of depression among the target population. Relationship of the age, smoking, family income, illicit substance use and depression was studied with the presence of suicidal attempt among these transgender population of twin cities of Pakistan. **Results:** A total of 148 transgender people were included in the final analysis. Mean age of the study participants was 38.24±3.18. Out of these, 70.9% had no suicidal attempt in their whole life while 29.1% had one or more suicidal attempts during the course of their life. Twelve had more than one suicidal attempt while 19 had attempt in last one year. Fifty-five did not show depression while 93 had depression on HAM-D. With binary logistic regression we found that presence of depression and low income had significant association with the presence of suicidal attempt among the target population. **Conclusion:** This study showed a high prevalence of suicidal attempts among the transgender population of twin cities of Pakistan. Routine screening for mental health problems should be performed on this high-risk group and adequate employment resources should be generated in order to enable them to earn their livelihood and prevent them from making attempts to take their own life.

Keywords: Depression; Suicide attempt; Trans-genders

Citation: Zubair UB, Khan MA, Jalil A, Kamal A, Nizami A, Minhas F, *et al.* Relationship of suicide attempt with depression and other socio-demographic factors among the trans-genders. J Ayub Med Coll Abbottabad 2019;31(4):576–9.

INTRODUCTION

Depressive illness is a highly prevalent mental health disorder among all parts of the world and still its incidence is on a rise.¹ Pakistan is no exception to this rule and bears a lot of burden of this psychiatric illness, most of which remain undiagnosed and untreated.² Untreated depression may lead to serious life threatening consequences including severe depression with psychotic illness, physical problems and even suicide.^{3–5}

All types of gender identity disorder are usually covered by this broad term, transgender. Gender incongruence is a new term coined by ICD-11 to cover all the gender related problems. Population of United States have transgender prevalence of about 3.9%.⁶ Census conducted by government of Pakistan in 2017 has shown that more than 10000 trans-genders live in Pakistan. They suffer from various health issues including the HIV, drug dependence and various mental health problems.^{7,8}

Presence of depression and suicide attempts among the transgender population has been highlighted in the literature. Even developed countries like US show high prevalence of depression, suicide and other mental health problems among the transgender population as compared to controls.⁹ Another similar study done in our neighbouring country India revealed that suicide attempt rate was 32–50% among the transgender population. Depression was studied as a predictor to these attempts to take one's own life.¹⁰ Transgenders have been at a high risk of all the mental health illnesses including both neurotic and psychotic illnesses.¹¹ Depression and suicidal attempts if remain unaddressed for a long period can lead to compromised quality of life and even death. Timely intervention by a mental health physician is the key for prevention of devastating results.¹²

Biological pathway somehow or the other explains the co morbidity of depression and suicidal behaviour. Role of Genetics, alteration in the hypothalamic-pituitary-adrenal (HPA) axis, dysregulation of serotonin metabolism and receptors and neuro-immunological basis are some

of the factors which contribute in development of both depression and suicidality.¹³ In addition to the biological factors psychological and social pathways can also lead a patient of depression to take his or her own life.¹⁴ ICD-11 criteria for a depressive episode also includes ideas of self-harm.

Trans-genders in our society have been stigmatized and side-lined by the socio-cultural and religious issues.^{15,16} They have been facing difficulties in disclosing their identities at work place and mostly forced to work as sex-workers or beggars.¹⁵ This predispose them to various physical and mental health disorders. A study has been done to look for prevalence of HIV among this group in recent past in our country¹⁷ but no study has yet been published on their mental health status so the rationale of this study is to determine the prevalence and correlates of suicidal attempt among the transgender population of twin cities of Pakistan.

MATERIAL AND METHODS

After ethical approval from concerned ethical review committee and written consent from all potential participants this cross-sectional study was planned from 01-01-2016 to 30-06-2016 in the twin cities of Rawalpindi and Islamabad. Non-probability consecutive sampling technique was used. All the trans-genders available at Chandni chowk and F-9 Markaz in the given dates were included in the study. Exclusion criteria were the trans-genders less than 18 years of age or with a past or current history of any chronic physical illness (Diabetes mellitus, Hypertension, Ischemic heart disease, Rheumatoid arthritis or other diseases of chronic nature) or those who underwent medical or surgical treatment for gender dysphoria. Trans-genders who were already diagnosed cases of depression or any other psychiatric illness were also excluded. Participants who could not read or perform the questionnaires were also not included in the study.

It is a 17-item clinician rated, standardized and time-tested scale to look for the presence and severity of depression. Cut off score used in our study is 7. Validated Urdu translation was used to avoid the bias.¹⁸

Suicidal attempt was assessed by the simple question that "Have you ever performed an action with the intent to take your own life in your life time?" Answer of yes or no was recorded. Positive answer was classed as suicide attempt. Number of such attempts throughout the life of an individual were asked and recorded. Ethical approval was obtained from the ethical review

board committee of the institution. After written informed consent trans-genders available at Chandni chowk Rawalpindi and F-9 Markaz Islamabad fulfilling the above-mentioned inclusion and exclusion criteria presenting were included in the study. All patients underwent a detailed history taking and systemic examination to rule out the confounding variables like chronic illnesses. HAM-D and question to record the suicide attempt were administered to the trans-genders by the clinicians. They were asked to answer the questions according to their condition in last two weeks regarding depressive symptoms and entire life regarding the suicide attempt. Socio demographic variables were collected on a proforma specially designed for this study. Descriptive statistics were used to describe the risk factors and the distribution of trans-genders with the suicide ideation. Samples were identified under the categories of presence of or absence of a suicide attempt. Variables in the study included age, smoking, family income, illicit substance use and depression. Binary logistic regression analysis was done to evaluate factors related to the presence of suicidal attempt. All statistical analysis was performed using SPSS version 23.0. Differences between groups were considered significant if *p*-values were less than or equal to 0.05.

RESULTS

A total of 175 trans-genders were initially approached to participate in the study. Two refused participation, 16 were ineligible due to exclusion criteria (8 gave history of medical or surgical treatment for gender dysphoria, 4 had DM, 2 had HTN, 1 had previous episodes of mood disorder, 1 was mentally retarded). After being consented, an additional 9 did not provide complete data at baseline, leaving 148 participants who underwent the questionnaire administration. Mean age of the study participants was 38.24±3.18.

Out of these, 70.9% had no suicidal attempt in their whole life while 29.1% had one or more suicidal attempts during the course of their life. Twelve (8.1%) had more than one suicidal attempt while 19 (12.8%) had attempt in last one year. Fifty-five (37.2%) did not showed depression while 93 (62.8%) had depression on HAM-D. Depression and low income were related to suicidal attempt when chi-square was applied (Table-I). With binary logistic regression we found that depression and low income had significant association with the presence of suicidal attempt among the target population (Table-2).

Table-1: General characteristics of the trans-genders participating in the study

Socio demographic factors	No suicide attempt n (%)	Suicide attempt n (%)	p-value
Total	105 (57.1)	43 (42.9)	
Age			
<50	46 (43.8)	16 (37.2)	0.458
50 or more	59 (56.2)	27 (62.8)	
Family income			
More than or equal to outgoing	95 (90.4)	32 (74.4)	0.015
Less than outgoing	10 (9.6)	11 (25.6)	
Smoking			
No	44 (41.9)	16 (37.2)	0.596
Yes	61 (58.1)	27 (62.8)	
Illicit substance use			
No	81 (77.1)	29 (67.4)	0.227
Yes	24 (22.9)	14 (32.6)	
Depression			
No	46 (43.8)	09 (20.9)	0.007
Yes	59 (56.2)	34 (79.1)	

Table-2: The correlated factors relating to presence of suicide attempt among the trans-genders of twin cities of Pakistan: the binary logistic regression analysis

	p-value	Odds ratio	Confidence interval	
			lower	upper
Age (ref. is <50 years)	0.653	1.200	0.541	2.660
Illicit substance use (reference is no use)	0.057	2.335	0.976	5.586
Smoking (ref. is no smoking)	0.916	1.044	0.470	2.322
Family income (ref. is more than or equal to outgoing)	0.005	4.380	1.548	12.394
Depression (ref. is no depression)	0.006	3.578	1.451	8.819

DISCUSSION

Gender dysphoria and problems related to it have been faced by the mankind since long. The study is an attempt to record the presence of suicidal attempt among the people which have been stigmatized by the society from religious and cultural aspects. Mental health problems have been common in Pakistan and depression has been the most common of all according to a large recent study.¹⁹ Using the standard psychometric tools and direct questioning we observed that presence of depression and suicidal attempts is far greater among the trans-genders as compared to population without problems of gender identity and congruence. Though this is in accordance with the studies done on trans-genders among other parts of the world.^{8,9} Important reasons for suicidal attempts among these people may be social injustice, stigma in society, lack of jobs and educational opportunities.¹⁶ Stress, anxiety, depression or other psychological problems are positively linked with suicide in various studies done in the past.^{6,9} All these issues have been faced by trans-genders in excess to the population without gender related dilemmas therefore prone them towards the thoughts of harming themselves to an extent that their life ends. Slightly more prevalence of mental health indices in our study as compared to other similar studies in west or developing countries may be either due to overall compromised

socioeconomic environment or extreme religo-cultural stigmatization which is less prevalent in other parts of the world regarding people with gender incongruence.¹⁶ More judgmental approach and lack of empathy and compassion in our society prone the trans-genders of our society to more stigmatization and psychiatric diseases.

Age has been found related to suicide among trans-genders in various studies done in the past in other populations.^{20,21} The results in our study were different and age was not related to presence of suicide attempt in our target population. Reason might be that transgender community usually lives separately from the routine population and as the member gets older, he is appointed as head of group of transgender people who work and earn under him. Therefore, he is exempted from routine duties but also remains productive in administrative chores. This may serve as a protective factor against mental health problems including suicide.

Monthly income was found to be significantly correlated with the presence of suicidal ideation in our target population which was in accordance to the existing literature worldwide.²⁰ Though there is some legislation and quota regarding their education and employment but implementation is poor in this regard. Social stigma does not enable them to work freely among the people without gender incongruence so either they are compelled to work as sex-workers or beggars in order to earn their livelihood.

Depression was strongly related to suicide attempt in our study. Various studies done on people with and without gender identity problems have confirmed this association.^{20,21} This association can be due to common biological factors or social stigma linked with trans-genders in our setup. All over the world people with gender identity disorders have been more at risk of physical and mental ailments including the depression and suicide as compared to rest of the population, more severity in our target population may be due to the complex religo-cultural scenario which lay emphasis on the punishment of the deviant behaviours associated with gender incongruence.¹⁶ Further studies especially qualitative studies specially designed to explore this phenomenon may be helpful in determining the exact causes of this association.

Illicit substance use included cannabis, opiates, benzodiazepines and organic solvents. Their use was not related with the presence of suicidal attempt in our study. Past literature also supports our findings.²¹ Illicit substance use may be a maladaptive coping strategy for the existing stressors which may temporarily relieve the tension. Larger studies with more sample size are required to look for the association.

Our study has many limitations regarding sample size, study design and using self-administered tools and direct questions. The findings cannot be generalized as our study population was not selected

from a randomized sample of all the transgender population of our country. Instead a small portion was targeted from two cities of Pakistan. Another limitation is that we assessed depressive symptoms for last two weeks but suicidal attempts for entire life. This raises questions on the association established. Large studies with a better study design and using more valid or locally developed psychometric tools should be done in order to establish the determinants of mental health of this high-risk group with more precision and accuracy.

CONCLUSION

This study showed a high prevalence of suicidal attempts among the transgender population of twin cities of Pakistan. Routine screening for mental health problems should be performed on this high-risk group and adequate employment resources should be generated in order to enable them to earn their livelihood and prevent them from making attempts to take their own life.

Disclosure statement: No financial support availed or any conflict of interest.

AUTHORS' CONTRIBUTION

UBZ: Conceived the idea and analyzed data and wrote manuscript. MAK: Planned the study and collected data. AJ helped in data collection and analysis. AK: Helped in data collection and manuscript writing. AN: Participated in data analysis and manuscript writing. FM: Supervised all the activities from conception of study till manuscript writing. ST: Helped in data collection and analysis.

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Submitted: 14 August, 2018

Revised: --

Accepted: 9 September, 2019

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