

# Practices and Attitude of General Physicians in Pakistan Regarding Post-Traumatic Stress Disorder: A Cross-Sectional Study

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## ABSTRACT

**Background:** Mental health illnesses contribute to 7.4% of global disability-adjusted life years and make up 22.9% of years lived with disability. With the ongoing COVID-19 pandemic, the risk of post-traumatic stress disorder (PTSD) and suicide has notably increased, particularly in developing countries as individuals face tremendous economic loss and fear of poverty.

**Aims:** To assess post-traumatic stress disorder (PTSD) screening, diagnostic, referral, and management practices of general practitioners in Karachi, Pakistan along with one-time attitudes regarding the same.

**Methods:** 151 general physicians, from three tertiary care hospitals and several private clinics participated in this survey, in Karachi from 2017-2019. Data was collected via an adapted and pretested questionnaire. The number of general practitioners adhering to good screening, diagnostic, and referral practices has been reported along with one-time attitudes regarding PTSD management in GP care.

**Results:** The response rate for the survey was 64% and the mean age of the participants was 38 ( $\pm 10$ ) years. 70% of physicians showed interest in mental health however, only 30% reported having any previous formal training in the subject. Good practices regarding PTSD included screening trauma patients for PTSD (57%), using DSM-5 criteria for diagnosing PTSD (13%), screening PTSD patients for risk of suicide (64%), and prescribing SSRIs and referrals as part of management (34%). It was seen that these practices differed significantly among males, females, graduates, postgraduates, and those who had formal training in mental health. The majority of the physicians (95%) are of the attitude that patients should be screened for PTSD following a recent traumatic event.

**Conclusion:** Overall practices of general physicians in Karachi are lacking in skills concerning common mental health issues like PTSD. A positive attitude should be taken advantage of, and further skills enhancement should be considered as the next step for improvement of our general practice to decrease mental health-related morbidity.

**Keywords:** Attitude, family medicine, family physicians, GPs, general practice, general physicians, general practitioners, post-traumatic stress disorder, PTSD, practices.

## BACKGROUND

Mental health-related illnesses are largely understudied in low middle-income countries (LMIC). Mental health illnesses contribute to 7.4% of global disability-adjusted life years (DALYs) and make up 22.9% of years lived with disability (YLDs) [1]. This puts mental health illnesses 5th in line for constituting global DALYs and YLDs [2]. Common mental disorders are reportedly 80% higher in LMICs as compared to the developed countries, and they make up 8.8%-16.6% of the total disease burden. This is further exacerbated by a lack of recognition of mental health problems by individuals and their preferred choice of seeking help by complementary physicians and faith healers. 76%-86% of people in LMICs receive no treatment for their mental health illness as opposed to 35%-50% of people receiving treatment in developed countries [3, 4].

Post-traumatic stress disorder is one of the many mental health problems that arise after encountering a traumatic event, which could include a serious road accident, natural disasters, violent personal assaults, serious health problems, and childbirth experiences [5]. The pooled prevalence of PTSD in the South Asian region has been reported to be 17% in systematic review and meta-analysis conducted in 2020 [6]. In Pakistan, injuries are among the top ten contributors to disease burden and causes of disabilities [7, 8]. Pakistan being an ally in the war against terrorism has suffered from massive casualties, transmigration to megacities, high rates of target killings. Poor law and order situation, prevalent interpersonal violence including robbery, sexual abuse, acid attacks, honor killings, and sectarian violence, all of which are risk factors for PTSD have made a huge contribution to the trauma burden in our population [9, 10]. PTSD is largely understudied in Pakistan, however, studies from various occasions have shown that the prevalence of PTSD in different populations has been high.

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PTSD was reported to be as high as 41% from three districts of Pakistan, 30 months following a disastrous earthquake in 2005 [9]. A study conducted in Peshawar among school children, after a terrorist attack, showed that among 205 children, 154 (75.2%) showed symptoms of PTSD [11]. A cross-sectional study from Karachi, Pakistan was conducted on the prevalence of PTSD due to community violence among university students. The results indicated a high occurrence of PTSD (25%) after exposure to violent events and elevated rates of lifetime PTSD among urban youth [12]. It's also seen that PTSD is related to a higher rate of reported medical problems in primary care patients [13]. With the ongoing COVID-19 pandemic, the risk of PTSD and suicide has notably increased, particularly in developing countries as individuals face tremendous economic loss and fear of poverty [14].

In Pakistan, general physicians are the most accessible health care providers present in the community dealing with an array of diseases [15]. Given the burden of trauma and PTSD, it is imperative to equip general physicians with the necessary skills to identify and diagnose mental health disorders. PTSD and suicidal risks to prevent long-term morbidity, early deaths, and undue burden on the already crippled healthcare system [16]. To integrate a surveillance and referral system for PTSD within primary care general practitioners, it's important to assess their current practices regarding the management of PTSD in daily outpatient practice [17]. With limited evidence from literature, it can be estimated that PTSD screening and management practices of general physicians in Pakistan would be questionable, given that they were inadequate in a developed country like New Zealand, as reported in a survey [18]. Therefore, this study was aimed at identifying the PTSD screening, diagnostic, referral, and management practices of general physicians in Karachi, Pakistan. This study also intended to identify the existing gap to aid in planning impactful interventions accordingly at the time of the ongoing COVID-19 pandemic when they are needed most.

## METHODS

This study was conducted among general practitioners working in private practices as well as in tertiary care hospitals of Karachi namely Aga Khan University Hospital (AKUH), Ziauddin University Hospital (ZUH), and Liaquat National Hospital (LNH) from July 2017 to April 2019.

WHO software was used for sample size determination [19]. Findings from the literature shows that 28.3% of the physicians correctly diagnosed PTSD, 67.5% included PTSD in their differential diagnosis, 86.8% referred the patients, and 42.9% correctly prescribed the drug of choice for PTSD [17]. WHO sample size calculator was used to calculate a minimum sample size of 125 GPs, with a 95% confidence interval and bound on the error of

8% Maximum sample size was achieved at 28%. 5% for non-responders' rate was assumed, and the final sample size was 151 GPs was decided. Any general practitioner who was doing practice with a minimum of 1-year experience after completion of their MBBS (graduate medical degree) and currently practicing with age in the range of 25 - 65 years were invited to participate in the study. Non-probability convenience sampling was used for physician selection.

### Data Collection Tool

A self-administered, close-ended, structured questionnaire was used to record responses of the physicians regarding various aspects of PTSD. The questionnaire was adapted and modified according to study requirements [20]. It had a total of 33 items and three sections. The first section dealt with demographic details and participant characteristics such as age, qualification, experience in general practice, interest in mental health and prior mental health training, the average number of patients seen weekly, and the number of patients with traumatic exposure seen in a week.

The second section dealt with practices for PTSD like screening, use of diagnostic criteria, assessment of the risk of suicide and other psychiatric co-morbidities, referral practices, prescribing practices, and use of psychotherapy.

The third section was aimed at identifying one-time attitudes of the physicians: perception of the importance of diagnosing PTSD, evaluation of patient exposed to trauma for PTSD, understanding of general physician's role in diagnosing and treating PTSD, challenges faced by them in identification and management of PTSD, and limitations affecting optimal care provision for PTSD sufferers. All questions were assessed by close-ended, structured questions with binary responses. Physicians were approached at the end of their clinics or academic sessions and the questionnaires were self-administered after taking their written consent.

For descriptive analysis, mean and standard deviations have been reported for quantitative variables like age, average follow-up minutes. Proportions and percentages are reported for qualitative variables. Pearson Chi-square and Fisher's exact test has been used to detect a significant difference of practices among various categories. All analysis in this study was two-tailed, and p values of 0.05 or less were considered statistically significant. Analysis was performed on IBM Corp SPSS version 21.

### Ethics Approval and Participant Consent

The study protocol was approved by the Ethical Review Committee (ERC) of AKUH (reference # 2019-1328-3771). Written informed consent was taken from physicians willing to participate in the study.

## RESULTS

235 general physicians were approached of which 151 physicians participated in this study (response rate 64%). The average age of physicians was 38 ±10 years, with 88 (58%) females in the sample. More than half of patients (n=86, 57%) had either 2-year or 4-year postgraduate qualifications. Most respondents (n=107, 80%) had an interest in mental health whereas only 46 (30%) had undergone mental health/psychiatry training. Descriptive characteristics of participants can be found in Table 1.

### PtSD Screening, Assessment of Suicidal Tendency, and Referral Practices of General Physicians

Out of 151 participants, 86 (57%) were practicing PTSD screening of patients with a known history of trauma, 98 (67%) assessed for suicidal tendencies in PTSD patients, 96 (63%) were providing an immediate referral to patients who showed suicidal tendencies, and 114 (75.5%) physicians responded that they assessed patients for psychiatric comorbidities. Results from our study showed that PTSD screening practices were significantly different in males and females ( $p=0.028$ ), and this practice was more frequent in females (66%). PTSD screening practices were also significantly dependent on qualification ( $p=0.042$ ), and the proportion of GPs practicing PTSD screening was higher (64%). Age, however, was not significantly associated with PTSD screening, but physicians aged less than 40 were more frequent in screening patients for PTSD (Table 2).

The practice of assessing patients for suicidal tendencies differed significantly among gender ( $p=0.017$ ), graduates and postgraduates ( $p=0.013$ ), and in those who had training in mental health ( $p=0.008$ ) (Table 2). 114(75.5%) physicians were screening for other psychiatric-comorbid in patients who showed signs of PTSD. This

**Table 1:** Descriptive characteristics of general physicians (n=151) who participated in the survey.

Variable	n (%)
<b>Age (in years) *</b>	38 ±10
<b>Gender</b>	
Male	63 (42)
Female	88 (58)
<b>Qualification</b>	
Graduate	65 (43)
Postgraduate	86 (56)
<b>Years of experience</b>	
11-15 years	10 (6)
6-10 years	47 (31)
<5 years	45 (29)
>15 years	49 (32)
<b>Have an interest in MH</b>	
Yes	107 (70)
No	44 (29)
<b>Have any mental health/psychiatry training</b>	
Yes	46 (30)
No	105 (70)
<b>No of the practice sites</b>	
One	92 (60)
two or more	59 (39)
<b>The average number of patients seen in a week</b>	
less than 50	73 (48)
between 50-100	33 (21)
more than 100	45 (29)
Initial visits mins*	17 ± 7
Follow up visit mins*	10 ± 5
<b>Number of trauma-exposed patients seen weekly</b>	
None	21 (14)
20 or less	123 (81)
more than 20	7 (5)

\*Mean (SD) are reported for quantitative variables

**Table 2:** Screening, assessment, referral, diagnostic and drug-prescription practices of (n=151) general physicians who responded to the questionnaire.

Variable n (%)	Screen Patients for PTSD n(%)	Assess PTSD Patients for Suicidal Tendencies n(%)	Immediate Referral of Patients with Suicidal Thoughts n(%)	Use DSM-IV or DSM-5 Criteria n(%)	Prescribed SSRIs or Any Other Class of Drug n(%)
<b>Age</b>					
≤40 years	53(55.7)	65(68.4)	63(66.3)	21(22.1)	32(33.6)
>40 years	33(58.9)	33(58.9)	33(58.9)	4(7.1)	26(46)
<b>p-value</b>	0.140	0.203	0.310	0.020 †*	0.120
<b>Gender</b>					
Male	29(46)	34(53.9)	36(57.1)	9(14.2)	22(34.9)
Female	57(64.7)	64(72.7)	60(68.1)	16(18.1)	36(40.9)
<b>p-value</b>	0.028*	0.017*	0.540†	0.650 †	0.451
<b>Highest qualification</b>					
Graduation	31(47.6)	35(53.8)	36(55.3)	12(18.4)	18(27.6)
Post-graduation	55(63.9)	63(73.2)	60(69.7)	13(15.1)	40(46.5)
<b>p-value</b>	0.042*	0.013*	0.891 †	0.652 †	0.019*
<b>Had training in MH</b>					
Yes	35(76.08)	37(80.4)	36(78.2)	15(32.6)	32(69.5)
No	51(48.5)	61(58)	60(57.1)	10(9.5)	26(24.7)
<b>p-value</b>	0.002**	0.008**	0.900 †	0.241 †	0.002**

† Fisher's exact test, level of significance  $p<0.05$ , \*Significant, \*\*Highly significant

**Table 3:** Attitudes of (n=151) general physicians regarding PTSD who responded to the questionnaire.

Survey Items	Frequency (%)
Do you think patients should be evaluated after recent exposure to trauma?	
No	7 (5)
Yes	144 (95)
Do you think PTSD is worthy of serious concern and attention?	
No	5 (3)
Yes	146 (97)
Do you think patients should be evaluated after recent exposure to trauma?	
No	7 (5)
Yes	144 (95)
Do you think family physicians/ general practitioners have any role in care provision for these patients along with specialists?	
No	4 (3)
Yes	147 (97)
Do you think identifying patients with PTSD is challenging?	
No	22 (15)
Yes	129 (85)
Do you think managing patients with PTSD is challenging?	
No	17 (11)
Yes	134 (89)
Do you think limitations are affecting optimal care, needed for PTSD sufferers?	
No	10 (6)
Yes	141 (94)
Do you feel that you need to improve the way you evaluate and manage patients with PTSD?	
No	7 (5)
Yes	144 (95)

practice was more frequently done by females (58%), and by those who had mental health training (64%). Immediate referral of patients with suicidal tendencies was more often practiced by females, postgraduates, and those who had interests and training in mental health. However, the practices were not significantly different in any of the groups (**Table 2**).

### Diagnostic and Drug Prescription Practices Regarding PTSD

Results from our study show that only 25 (16%) practitioners used DSM-IV or DSM-5 criteria for diagnosing PTSD in their patients, whereas 44 (10%) physicians screened using other criteria. The practice of using DSM-IV or DSM-5 criteria was only significantly associated with age groups ( $p=0.020$ ).

58(38.4%) were prescribing medications for PTSD when required. Of these, SSRIs were the choice of drugs of 52(89.7%) physicians, while 6(10.3%) were prescribing benzodiazepines or tricyclic inhibitors. Prescription practices were significantly different for qualification

groups ( $p=0.019$ ) and having mental health training ( $p=0.002$ ).

### Referral Practices

When asked about the reason for referral, the three most reported reasons were referral due to severity of disease ( $n=70$ , 52.6%), perceived lack of clinical expertise ( $n=47$ , 35.3%) and 46 (34.6%) physicians considered it out of their practice domain. Other reasons included patient preference ( $n=22$ , 16.5%), treatment tried without effect ( $n=16$ , 12%) and physician's lack of interest ( $n=3$ , 2.3%).

### The Attitude of General Practitioners Regarding PTSD

Results from our study show that majority of the physicians (95%) are of the attitude that patients should be screened for PTSD following a recent traumatic event. When asked if managing PTSD patients is a challenge, 89% agreed. 94% of physicians were of the view that there are limitations to the provision of optimal care for PTSD patients. Physicians' positive attitude was evident, as 95% responded that they need to improve their PTSD evaluation and care-provision protocols (**Table 3**).

## DISCUSSION

Pakistan is the 5<sup>th</sup> most populous country in the world, and it is estimated that at least 1/3<sup>rd</sup> of our population needs psychiatric assistance [13]. However, a study published in 2016 quoted Pakistan as having one psychiatrist for every 10,000 patients and one child psychiatrist for every four million children suffering from mental health disorders [21]. This has led to an increase in the number of patients presenting in general practice clinics with psychiatric morbidity and their somatic manifestations. In a developing country where general practice is the main point of care access for much of the population and where approaching a psychiatrist comes at a cost of taboo and stigma, assessment of the robustness of GPs for physical as well as mental health practices is imperative [21-23].

In a 2012 study, the frequency of patients with mental health disorders seen in daily general practice was reported to be up to 10% of their caseload by the majority [23]. In our study, 81% ( $n=123$ ) practitioners responded seeing less than 20 trauma suffering patients per week, which is believed to be underreported as the known prevalence of trauma and violence is believed to be more than 18% [18, 22]. A lot of trauma-related incidents go unreported, so the possibility of these patients going unrecognized is real, and therefore, this is only an estimate.

A study conducted in the UK on 946 GPs found that 67.5% included PTSD in their differential diagnosis and 28.3% of the GPs correctly diagnose PTSD, whereas in our study, only 25 (16%) practitioners admitted using DSM-IV or DSM-5 criteria for diagnosing PTSD in their patients, and 86.8% referred the patients to secondary care. It has been found in research that lack of knowledge



is among the reasons for less-than-ideal recognition and management of PTSD in primary care [24]. In our study, only 46 (30%) Physicians reported having received any form of training for mental health whereas in a study from India on GPs only 61 (34%) received psychiatric training during the practicing period [25].

In terms of appropriate practices, 32 (37%) participants admitted to screening patients for PTSD after 1 month of trauma which was significantly associated with previous training in mental health management. According to WHO, there are an estimated 130,000 to 270,000 acts of attempted suicide in Pakistan each year [26, 27]. This makes screening for suicide imperative, especially in trauma-exposed patients. 85% (n=98) of the GPs in our survey reportedly practice screening for suicide, and this practice was again found to be significantly associated with any prior training in mental health management. 95 (63%) general physicians in this study correctly dealt with suicidal tendency as an emergency and practiced immediate referral.

In our study, SSRIs were observed as treatment of choice for PTSD by those 34% (n=52) physicians who were prescribing some drugs as opposed to 62% (n=93) who did not prescribe anything at all. Whereas if we compare with UK study where 42.9% correctly prescribed the drug of choice for PTSD [28]. A study from Karachi also reported benzodiazepines as the most favored drugs, chosen by 50.7% of GPs, and SSRIs were chosen by only 15.4% of GPs for anxiety disorders which also includes PTSD [21].

Correct practice for appropriate referral suggests only those who continue to suffer despite 3 months of treatment or those who present with very severe disease warrant referral to a psychiatrist [5]. Lack of interest as a reason for referral is something which is reported by Naqvi *et al.* and it is also reported in our study, supplemented by the fact that many physicians think it's out of their clinical practice domain to cater to PTSD patients [21]. Physicians' lack of knowledge/lack of expertise was also reported among the recurring reasons for the lack of management of mental health disorders. Overall lack of awareness, lack of use of proper diagnostic criteria, and reluctance to prescribe relevant medications sheds light on the poor practice of physicians [26].

### CONCLUSION

In a developing country like Pakistan, equipping general practitioners with skills for diagnosis, management, and timely referral is crucial to keep on check on morbidity and early mortality, alongside preventing burden on the healthcare system. It is important to bring the attention of medical regulatory authorities to conduct workshops and raise awareness regarding the early diagnosis of a manageable disorder like PTSD.

### DISCLAIMER

The oral presentation was given at PGME Annual Conference 2019, held at Main AKUH, Karachi, from September 20-22, 2019. Theme: Tawazun (Striking the right balance).

The abstract was also selected for oral presentation at The WONCA South Asia region conference held from November 22-24, 2019, in Lahore, Pakistan. The theme was "Primary Care- complete health care". The conference was hosted by the Pakistan Society of Family Physicians.

### ETHICS APPROVAL

The study protocol was approved by the Ethical Review Committee (ERC) of AKUH (reference # 2019-1328-3771). All procedures performed in studies involving human participants were in accordance with the ethical standards of the Helsinki declaration.

### CONSENT FOR PUBLICATION

Written informed consent was taken from physicians willing to participate in the study.

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None.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

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