

People's Vulnerability to Posttraumatic Stress Disorder: A Case Study of Ziarat Earthquake

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Abstract

Earthquakes are believed to be a stronger candidate for a stressful experience, as they literally shatter people's safety and world, include witnessing of horrifying casualties, destruction of properties and life threats. Researchers have confirmed that disclosure to tremor-related activities enhance PTSD risks and other psychological disorders. The psychological impairment is characterized by severe deficits in numerous human development areas. These serious deficiencies include social reciprocal interaction deficits; communication deficits and the impairment possibly cause development of stereotype attitudes in an individual toward people surrounding him, interests and activities. However, no study, to date, either clinical or non-clinical has been held on psychological status of 2008 earthquake victims. The current study aimed at screening people's mental status with a non-clinical approach administering self-report checklists of PTSD after 12 years of the event. The randomly selected participants (n = 193) with no gender discrimination were given self-report checklists so as to screen them. The results revealed that the rate of PTSD prevalence reported 64.73 per cent Positive and 35.26 per cent negative employing the recommended cutoff scores and screening criteria. No significant variation was noticed according to the profession, marital status and age or any

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previous experience of disasters or any tragic events. In order to understand either there is a statistically significant association between the respondents' socio-economic status such as age, education and gender and their PTSD, the study developed hypothesis tested association using nonprobability tests Pearson's Chi-Square along with Cramer's V and Phi Coefficients at the level of significance of 0.01%, 0.5% and 0.10%. Additionally, the non-employed and women were more vulnerable to posttraumatic stress disorders; Individuals with posttraumatic stress disorders showed denial, behavioral disengagements and many self-blaming as their coping strategies.

Keywords: Earthquake, Posttraumatic Stress Disorder (PTSD), Vulnerability, Ziarat.

Introduction

The contemporary climate of geopolitical, political, social, economic instabilities and man-made or natural calamities are on raise. Atrocities, forced migrations, internal displacement, violence and mass fatalities are all the consequences of civil and military wars and susceptible to similar incidents often lead to pathology and psychological stress and strain. The psychological strain and pathology encompass acute traumatic stress reaction, disorders of adjustment and posttraumatic stress disorders (PTSD), of the mentioned posttraumatic stress disorders are mostly associated with the level of morbidity and are usually underdiagnosed (Ahmed, 2007).

Disasters, whether natural or man-made are destructive events which disrupt the fabric of entire society, confront every community, and overwhelm worldwide millions in the given time (International Federation of Red Cross and Red Crescent Societies [IFRC], 1998). There has been evidences that the incidences of all sort of disasters are on an increase (IFRC, 2004), and by the time they strike, a huge number of youths are seen to be in close proximity and are considered vulnerable to eye witnessing the far-reaching destruction of disasters, witnessing deceased or maimed people, losing the loved ones, seeing physical damages and later being forced or asked to relocated their residency. Such heterogeneous phenomena as earthquake, hurricanes, tsunamis, floods, brushfires, mass transportation events, nuclear accidents and terrorist attacks disasters are all directly associated with increase rates of psychopathology as well as impairment in youths e.g. (Furr et al., 2010;

Hoven et al., 2005). Adolescents residing in an area that has once experienced a massive disaster are subsequently exposed to re-experiencing high rates of hyper emotional arousal i.e., posttraumatic stress disorders (PTSD) symptoms.

Literature Review

The posttraumatic stress disorders are mainly related with impairment, depressions, substances abuse, anxiety, and impaired life quality when they are left untreated e.g., (Copeland et al., 2007). In the wake of varied disasters the extents to which youths evidence PTSD symptoms vary extremely (Newman, 2004). Knowing the various stages of a child's ecological developments during growth see (Bronfenbrenner, 1986; Cicchetti & Cohen, 1995), escorting several frameworks presented by (La Greca et al., 1996) and the domains of post-disasters functioning of a child have been conceptualized by (Weems & Overstreet, 2008) . In these some are pre-existing domains of influence particularly, demographic characteristics i.e., gender, age, and socioeconomic conditions are closely related with different rates of posttraumatic stress disorders, with young children, women, and individuals having low socioeconomic statuses are more possibly to develop the posttraumatic stress disorders (Bromet & Dew, 1995; Rubonis & Bickman, 1991) and the disasters' aspects their exposure (e.g., youths closeness to disaster, self-threat perceived). The psychological and Interpersonal characteristics of individuals, such as, self-esteem and social aid, have also been connected in the course of posttraumatic stress disorders (Adams & Boscarino, 2005; Boscarino, 1995).

Earthquakes and PTSD

Earthquakes are said to be a stronger candidate for a stressful experience, as they literally shatter people's safety and world, include witnessing of horrifying casualties, destruction of properties and life threats. Researchers have confirmed that discloser to tremor-related activities enhance PTSD risks and psychiatric disorders (Şalcioğlu et al., 2003). The PTSD prevalence differs among quake survivor to survivor, ranging as high as 60 percent in the Eurasian greater risks regions in Turkey, Armenia, Iran (Armenian et al., 2000; Şalcioğlu et al., 2003). As contrast to 16 percent to 28 percent sample disclose to a sole destructive tremor (Chen & Czerwinski, 2000). The

difference in the PTSD percentage might lie in the comprehensiveness of aftermath issues and cultural expressions of any community.

Post-traumatic Stress Disorder in Pakistan

On October 8th, 2005, an earthquake of 7.6 magnitudes, which was measured via Richter scale, occurred in the far-flung and mountainous areas of Kashmir and north of Pakistan. The tremor's epicenter was in the north of Muzaffarabad, which is the capital city of Azad Kashmir. The quake ruined 4 lac seventy thousand houses, more than seventy-three thousand individuals lost their lives, seventy-nine thousands were severely injured, thirteen lac people were displaced and the tremor altogether affected around four thousands villages and more than 65 percent hospitals were demolished and estimated number of schools whose infrastructures affected was about ten thousands. This major tremor caused post-traumatic stress disorder in general public of Muzaffarabad and Rawalakot(Naeem et al., 2011).

Development of PTSD Course

The posttraumatic stress disorders (PTSD) are anxieties disorders which follow individuals' vulnerability to stressors and are characterized by mainly three symptoms: (1) re-confronting of traumatic event of the same nature (e.g., nightmares, annoying personal thoughts) (2) avoiding of stimuli linked with trauma (3) hyper arousal e.g., hyper vigilance or overstated surprise responding (Spitzer & Williams, 1980). Though a very less number of individuals are exposed to trauma, have developed PTSD (Kessler, 2000), it has been one of the common psychological disorders with an expected lifetime universality of approximately 8per cent (Dutton et al., 2006; Kessler et al., 1995). The prevalence rates for current U.S. military soldiers have remained even greater, with percent of up to 20 for fighting soldiers, who returned from Afghanistan and Iraq (Hoge et al., 2004). Additionally, comorbidity is commonly found in PTSD patients (Engdahl et al., 1998), with 88 per cent in males and 79 per cent in females with posttraumatic stress disorders meeting the criteria for diagnosing another mental/psychological disorder (Kessler et al., 1995).

Table 1: Symptoms Linked to PTSD

Symptoms Linked to PTSD	
Re-experiences	Spontaneous memories of the specific events, recurrent related dreams, flashbacks or some other kind of prolonged psychological interns or mental distresses
Avoidances	Painful or distressing memories, thoughts/dreams, feelings or some external recalls of past traumatic incidents
Negative Moods or Cognitions	Ranging from continuous and distorted feelings of self-blames or towards other people to estrangement from them OR significantly lost zest in outdoor activities to inability to get the key aspects of the specific events to the mind.
Arousal	Appearances of aggressiveness, heedlessness/recklessness, or self-destructive behaviors, sleep disturbance, hyper-vigilance or similar behaviour

Psychosocial Vulnerability factors

Psychosocial vulnerability is underpinned by many internal and external factors presented in table 2.2, including trauma's nature, witnessing a murder, seeing an acute accident following major wounds, feeling of oneself at risk, great emotional reaction to fear, demographics of society survivors, taking in the divorced, unemployed, widowed, oppressed and individuals with very low income or adverse social status. Besides, the increase of susceptibilities to lifetime PTSD also results due to elderliness, being a child, pre-existing psychological health problems and having less education (Stuber et al, 2006).

Table 2: Psychological Vulnerability Factors

Psychological Vulnerability factors	
Internal characteristics	External factors
Being elder/female/child	Having lower education level
Having low sense of being safe	Facing Immigrant status
Having low sense of being social	Confronted traumatic events in the

supported	past
Having high characteristics of neuroticism	Severity/ acuteness of exposure (prolonged trauma)
Psychopathology pre-existence	
Negative appraisal of the traumatic event	

Source: American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders (5th ed).

Methodology and Profile of the Study Area

Procedure of the study

The Institutional Board of University of Balochistan approved the current study. Before administering the self-report questionnaires, consent was obtained from all the participants in the considered area. The agreement form was comprehensively translated into local language particularly to subjects with no education so as to completely aware them of what the study is all about. Likewise consent forms, all the questions in the questionnaires were also explained in Urdu as well as in local language (Pashtu) so that no participants misaddress them.

Data and sample size

For accumulating primary demographic data from the study area, multistage purposive random sampling method was utilized following structured household questionnaire.

Stage 1: In the first stage Union Councils were chosen

Stage 2: In the second stage villages were selected

Stage 3: In the last stage households (through proportional allocation method) were taken for the acquisition of data.

Since Population of the district was known, Arkin and Colton's Formula (1963) was employed with 95% Confidence level and 5% error rate. Secondary data was extracted from various sources like, American Psychological Association (APA), and etc. A random sample for posttraumatic stress disorders was a self-reporting checklist (questionnaire) encompassing the posttraumatic stress disorders Self-rating Scale.

Research Analysis Tools

The responses were analyzed in the SPSS 14.0 taking into account the descriptive statistics frequencies and percentages. Moreover, non-parametric statistics were used in order to see association between PTSD scores and respondents' age, gender and education. One factor was gender (with 2 levels, i.e., male, and female), and the other factor was age (with 4 or 5 levels). Cross tabulation Analysis was used for PTSD as dependent variables and the some other independent variables such as: gender, age, education, marital status, lost a family member, lost a mate/friend, physically injured, trapped in rubbles, lost home, felt horror, lost business, being witness of any death, loss of job. In the study a separate analyses was conducted PTSD and MDD as dependent variables, since the version of SPSS is used for this analysis did not allow the 21 input of two dependent variables at the same time. The data was analyzed with SPSS using Chi-square analysis, to evaluate PTSD and socio-demographics of respondents.

Profile of Study Area

Ziarat, which is the smallest among all other districts of province Balochistan, covers an area of consisting 1487 Sk. The longitudinal locality of Ziarat is "67°11'18"- 68°36' in the East and latitudinal locality is "30°09'46"- 30°35'56" in the north. The district comprises of 2 Tehsils and 13 UCs. The district is situated at 45.5 miles in the east from the downtown Quetta of Balochistan.



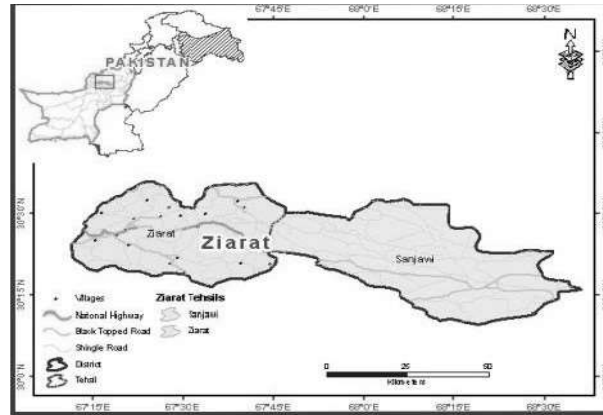


Figure 1 Study Area Map

Study Area Demographics

Based on the census 2017, the district Ziarat's population is 160422, with 28,999 houses containing 51.3% of male ratio, 03% transgender. The mean annual growth rate stands at 3.67% from the year 1998 to the census of 2017. Socially and economically dependent individuals are below age of fifteen years (< 15 age), above 60 to 70 years of age (> 60-70), mentally retarded or individuals with physical impairments and widowed females or divorced are included in the dependent list. However, the dependency ratio according to the census, the overall dependency ratio was 49%, 47% was of teenage population, 2% was of elder population, 3% was of widowed and divorced women (Pakistan Bureau of Statistics, 2018). Consequently, the social and economic dependency in the district is higher that witnesses an economic burden for active members of the district.

Respondents' socio-economic profile

In the table below represented the socio-demographic profile of the respondents that comprised of 70.5 per cent of male and 29.5 per cent of females. The participants' age was grouped into three cohorts, out of whom 47.9% were aged 16 to 30 years of old, 43.2% fell in cohort group of 31 to 50 and 8.9% respondents belonged to 51 to 68 cohort group with comprising of (*Mean = 33.81 and Std. Deviation = 11.204*). In all three age cohorts 60.5% were reported married and 39.5% were still unmarried, among them 22.6% were housewives, 17.9% respondents owing employment in various government departments including education, 12.6% had carried agriculture activities after completion of their middle education, 2.1% reported running

their own business, 44.7% respondents reported currently students. Due to joint family system in the area the respondents' family size was grouped into two categories; 3 to 30 and 31 to 53. 99.5% family size fell in category one 3 to 30 and only .5% (1 house) fell in category two 31 to 53 members in the family with mean monthly income (*Mean = 47272.80 and Std. Deviation = 28741.217*) and monthly expenditure (*Mean = 44170.17 and Std. Deviation = 26772.536*).

Table 3: Socio-demographics of the Respondents

Gender of the Respondents		Frequencies	%	Valid %	Cumulative %
	Males	134	70.5	70.5	70.5
Females	56	29.5	29.5	100.0	
Age groups of the Respondents	16-30	91	47.9	47.9	47.9
	31-50	82	43.2	43.2	91.1
	51-68	17	8.9	8.9	100.0
	Mean	33.81	SD	11.204	
Marital Status	Married	115	60.5	60.5	60.5
	Unmarried	75	39.5	39.5	100.0
Occupation of the Respondents	Student	85	44.7	44.7	44.7
	Business	4	2.1	2.1	46.8
	Agriculture	24	12.6	12.6	59.5
	Gov. Employed	34	17.9	17.9	77.4
	House Wife	43	22.6	22.6	100.0
Education Level	Middle	65	34.2	34.2	34.2
	Intermediate	33	17.4	17.4	51.6
	Higher	27	14.2	14.2	65.8
	Illiterate	65	34.2	34.2	100.0
Family Size	3-30	189	99.5	99.5	99.5
	31-53	1	.5	.5	100.0
	Total	190	100.0	100.0	
Income & Expenditure		Mean		Std. Deviation	
	Monthly income	47272.80		28741.217	
	Monthly expenditure	44170.17		26772.536	

Analysis

The participants who completed half questionnaire or only one portion of the self-report questionnaire, were excepted from the analysis of the study ($n=3$). However, in the table below 5.1, the highest and lowest percentages or frequencies for the statements asked in the self-report checklist of PTSD are reported here. As 24.7% of the respondents checked “Extremely” and 13.7% checked “Quite a bit” for the statement repeated, unwanted and disturbing memories of the stressful experiences, disturbing and Repeated dreams of the stressful experiences statement was responded 46.8% “Extremely” and 1.1% “Not at all”. The highest response to third statement was 31.6% and the lowest was .5%. For the statement “Feeling very upset when something reminded you of the stressful experience” highest response was 23.2% (A little bit) and lowest response was 15.3% (not at all). 47 respondents (24.7%) were moderately “having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)” and 19 respondents (10.0%) checked “Not at all”. 0.5% of the participants were not at all Avoiding thoughts, memories, or feelings associated to the stressful experiences and 41.1% of the respondents (78) were a little more avoiding memories and thoughts associated to stressful events. Similarly, 34.2% of the participants checked “Extremely” to the statement “Repeated, disturbing dreams of the stressful experience” and a very less percentage of the respondents 3.7% checked “Not at all”. Eight individuals 4.2% checked “Not at all” for the statement “Trouble remembering important parts of the stressful experience” and 70 individuals 36.7% checked “Extremely” for the same statement. 16.8% respondents checked “Quite a bit and Moderately” for the statement “Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)” and 34.2% checked “Extremely” for the same statement. 5.2% participants chose “Not at all” and 35.8% chose the option “Extremely” for the statement “Blaming yourself or someone else for the stressful experience or what happened after it”. 61.1% of the respondents checked the option “A little bit” and .5% opted “Quite a bit” for the statement “Having strong negative feelings such as fear, horror, anger, guilt, or shame”.

Table 4 Respondents PTSD Responses

Disturbing, Repeated and Undesired Stressful Experiences Memories				
	Frequency	%	Valid %	Cumulative %
Not at All	33	17.4	17.4	17.4
A little bit	45	23.7	23.7	41.1
Moderately	26	13.7	13.7	54.7
Quite a bit	39	20.5	20.5	75.3
Extremely	47	24.7	24.7	100.0
Disturbing, Repeated, Stressful Experience Dreams				
Not at All	2	1.1	1.1	1.1
A little bit	51	26.8	26.8	27.9
Moderately	24	12.6	12.6	40.5
Quite a bit	24	12.6	12.6	53.2
Extremely	89	46.8	46.8	100.0
Acting or having Sudden feelings as though the stressful incidents were happening again (as though you were actually back there reliving them)				
Not at All	1	.5	.5	.5
A little bit	60	31.6	31.6	32.1
Moderately	32	16.8	16.8	48.9
Quite a bit	41	21.6	21.6	70.5
Extremely	56	29.5	29.5	100.0
Becoming depressed when an event reminded you of the stressful experience				
Not at All	29	15.3	15.3	15.3
A little bit	44	23.2	23.2	38.4
Moderately	38	20.0	20.0	58.4
Quite a bit	42	22.1	22.1	80.5
Extremely	37	19.5	19.5	100.0
Reacting strong physically whenever an event reminded you of that stressful experience (for instance, sweating, heart pounding, trouble breathing)				
Not at All	19	10.0	10.0	10.0
A little bit	34	17.9	17.9	27.9
Moderately	47	24.7	24.7	52.6
Quite a bit	46	24.2	24.2	76.8
Extremely	44	23.2	23.2	100.0
Keeping away stressful experience thoughts, feelings or memories				
Not at All	1	.5	.5	.5
A little bit	78	41.1	41.1	41.6

Moderately	46	24.2	24.2	65.8
Quite a bit	39	20.5	20.5	86.3
Extremely	26	13.7	13.7	100.0
Having disturbing and repeated stressful experience dreams				
Not at All	7	3.7	3.7	3.7
A little bit	55	28.9	28.9	32.6
Moderately	41	21.6	21.6	54.2
Quite a bit	22	11.6	11.6	65.8
Extremely	65	34.2	34.2	100.0
Having difficulties in recalling the stressful experience important parts				
Not at All	8	4.2	4.2	4.2
A little bit	39	20.5	20.5	24.7
Moderately	41	21.6	21.6	46.3
Quite a bit	32	16.8	16.8	63.2
Extremely	70	36.8	36.8	100.0
Possessing strong unpleasant or negative self-beliefs, about others or world (for instance, carrying thoughts like, there is something very wrong with me, I am bad, this world is seriously dangerous or no one can be trusted)				
A little bit	61	32.1	32.1	32.1
Moderately	32	16.8	16.8	48.9
Quite a bit	32	16.8	16.8	65.8
Extremely	65	34.2	34.2	100.0
Self-blames or blaming someone else for the stressful experience or the happenings after the event				
Not at All	10	5.3	5.3	5.3
A little bit	66	34.7	34.7	40.0
Moderately	41	21.6	21.6	61.6
Quite a bit	5	2.6	2.6	64.2
Extremely	68	35.8	35.8	100.0
Possessing strong adverse feelings like horror, fear, guilt, anger or shame				
A little bit	116	61.1	61.1	61.1
Moderately	71	37.4	37.4	98.4
Quite a bit	1	.5	.5	98.9
Extremely	2	1.1	1.1	100.0
Losing interest in such activities that once you would enjoy				
Not at All	17	8.9	8.9	8.9
A little bit	90	47.4	47.4	56.3
Moderately	61	32.1	32.1	88.4
Quite a bit	17	8.9	8.9	97.4

Extremely	5	2.6	2.6	100.0
Aloofness or distancing yourself from other people				
Not at All	23	12.1	12.1	12.1
A little bit	50	26.3	26.3	38.4
Moderately	94	49.5	49.5	87.9
Quite a bit	18	9.5	9.5	97.4
Extremely	5	2.6	2.6	100.0
Having difficulties in forming positive feelings (for instance, unable to find happiness or forming love for closed ones)				
Not at All	10	5.3	5.3	5.3
A little bit	47	24.7	24.7	30.0
Moderately	87	45.8	45.8	75.8
Quite a bit	24	12.6	12.6	88.4
Extremely	22	11.6	11.6	100.0
Annoying behaviors, like outbursts, angry all the time or aggressive actions				
Not at All	27	14.2	14.2	14.2
A little bit	77	40.5	40.5	54.7
Moderately	71	37.4	37.4	92.1
Quite a bit	9	4.7	4.7	96.8
Extremely	6	3.2	3.2	100.0
Frequently taking risks or doing such activities that may cause you harm				
Not at All	18	9.5	9.5	9.5
A little bit	105	55.3	55.3	64.7
Moderately	48	25.3	25.3	90.0
Quite a bit	12	6.3	6.3	96.3
Extremely	7	3.7	3.7	100.0
Watchful, being "superalert" or on guard				
Not at All	11	5.8	5.8	5.8
A little bit	135	71.1	71.1	76.8
Moderately	38	20.0	20.0	96.8
Quite a bit	4	2.1	2.1	98.9
Extremely	2	1.1	1.1	100.0
Easily startled or feeling jumpy				
Not at All	28	14.7	14.7	14.7
A little bit	81	42.6	42.6	57.4
Moderately	42	22.1	22.1	79.5
Quite a bit	27	14.2	14.2	93.7
Extremely	12	6.3	6.3	100.0
Having difficulty concentrating				

Not at all	40	21.1	21.1	21.1
A little bit	50	26.3	26.3	47.4
Moderately	48	25.3	25.3	72.6
Quite a bit	25	13.2	13.2	85.8
Extremely	27	14.2	14.2	100.0
Self-Criticalness				
Not at all	28	14.7	14.7	14.7
A little bit	49	25.8	25.8	40.5
Moderately	32	16.8	16.8	57.4
Quite a bit	40	21.1	21.1	78.4
Extremely	41	21.6	21.6	100.0
Total	190	100.0	100.0	

47.4% of the participants checked the box “A little bit” and 2.6% opted “Extremely” for the statement “Loss of interest in activities that you used to enjoy” moreover, for the statement “Feeling distant or cut off from other people” 49.5% respondents opted “Moderately” and only little percentage 2,6% of the respondents chose “Extremely” for the statement. For another self-report statement “Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)” around half of the respondents 45.8% checked “Moderately” and a tiny percentage 5.3% chose “Not at all”. Out of the respondents 40.5% had a little bit “Irritable behavior, angry outbursts, or acting aggressively” and only 3.2% had “Extremely”. In this regard 55.3% of the participants checked box of “A little bit” and 3.7% chose “Extremely” for the statement “Taking too many risks or doing things that could cause you harm”. And more than half of the respondents 71.1% were a little bit “being "super alert" or on guard or watchful” and only 1.1% were “Extremely”. 42.6% of the respondents checked the box of “A little bit” and 6.3% checked “Extremely” for the statement “Feeling jumpy or easily startled”. For the second last statement of self-report checklist for PTSD 26.3% checked the box “A little bit” and 13.2% checked the box “Quite a bit” for the statement “Having difficulty concentrating”. And the last statement “Self-Criticalness” 25.8% checked the box “A little bit” and 14.7% checked the box “Not at all”.

Cutoff Scores for the PTSD

The total scores of the checklist ranged from 0 to 80. The initial studies have recommended a cut-off scores either 33 or 38 in some for the veterans who were being screened for the PTSD symptoms (Murphy et al., 2017). However, in this study the cut-off score taken is 38. And the frequency and percentage of total number of sample respondents screened either positive or negative are mentioned in the Figure 5.1.

Moreover, in the sampled respondents 64.73% (123) have been positively screened for the post-traumatic stress disorders and 35.26% (67) of the respondents have been screened negative for the posttraumatic stress disorder in the district Ziarat.

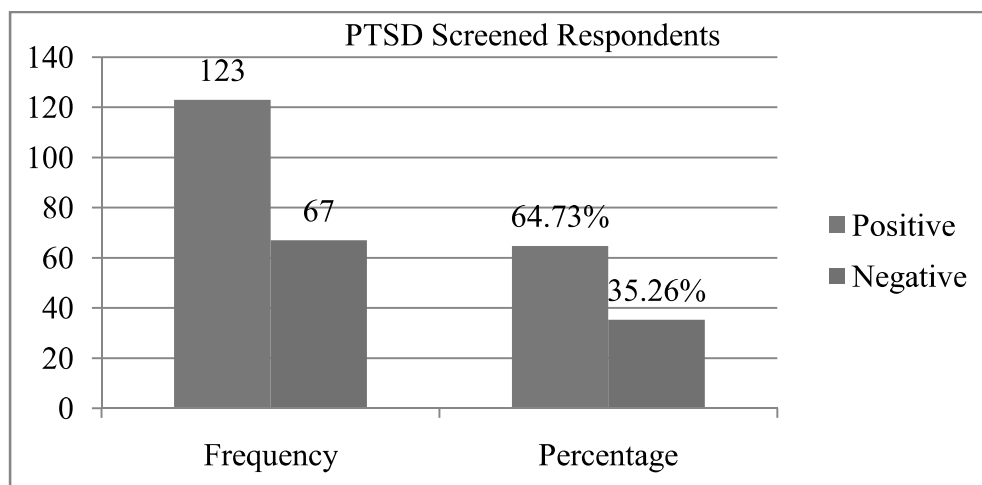


Figure 2: PTSD Screened Respondents

So as to understand either there is a statistical significant association between respondents' socio-economic status such as age, education, gender and profession and development of PTSD, the study employed Chi-Square nonprobability tests of Pearson along with Cramer's V and Phi Coefficients at the level of significance of 0.01%, 0.5% and 0.10%. Additionally, only one statement from each group has been quoted here. Based on the previous studies conducted, Individuals settled in temporary housing in the post-earthquake were noticed with high rates of post-traumatic stresses disorders.

Table 5 Pearson's Chi-Square Test, Gender and PTSD

		Self-blames or blaming someone else for the stressful experience or the happenings after the event					Total
		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely	
Gender Of the Respondent	Male	4	51	33	5	41	134
	Female	6	15	8	0	27	56
Total		10	66	41	5	68	190
Pearson Chi-Square				13.400(a)***			

*** Shows Significance at 1%

Symmetric Measures

		Values	Approx. Sig.
Nominal By Nominal	Phi	.266	.009
	Cramer's V	.266	.009
No of Valid Cases		190	

- a. Not assuming the null hypothesis
- b. Using the asymptotic standards error assuming the null hypothesis

Pearson's Chi Square Test Age and PTSD

Table 6 Age and PTSD Statements

		Aloofness or distancing yourself from other people					Total
		Not at All	A little bit	Moderately	Quite a Bit	Extremely	
Age of the Respondent	16-30	9	29	44	7	2	91
	31-50	10	21	41	9	1	82
	51-68	4	0	9	2	2	17
Total		23	50	94	18	5	190
Pearson Chi-Square				14.496(a)*			

* Shows Significance at 10%

Symmetric Measures

		Values	Approx. Sig.
Nominal By Nominal	Phi	.276	.070
	Cramer's V	.195	.070
No of Valid Cases		190	

- a. Not assuming the null hypothesis
- b. Using the asymptotic standards error assuming the null hypothesis

Pearson's Chi-Square Test, Education and PTSD

Table 7 Education and PTSD Statements

		Disturbing, Repeated and Undesired Stressful Experiences Memories					Total
		Not at All	A Little Bit	Moderately	Quite a Bit	Extremely	
Education Level of the Respondents	Middle	10	16	14	11	13	64
	Intermediate	13	5	2	7	6	33
	Higher	5	8	1	2	11	27
	Illiterate	5	16	9	19	17	66
Total		33	45	26	39	47	190
Pearson Chi-Square				29.688(a)***			

*** Shows Significance at 1%

Symmetric Measures

		Values	Approx. Sign.
Nominal By Nominal	Phi	.395	.003
	Cramer' V	.228	.003
No of Valid Cases		190	

- a. Not assuming the null hypothesis
- b. Using the asymptotic standards error assuming the null hypothesis

Pearson's Chi-Square Test, Occupation and PTSD

Table 8 Occupation and PTSD Statements

		Disturbing, Repeated and Undesired Stressful Experiences Memories					Total
		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely	
Occupation of the Respondents	Student	12	24	12	14	24	86
	Business	1	0	0	2	1	4
	Agriculture	4	9	2	1	8	24
	Govt. Employed	1	6	7	16	4	34

	House Wife	15	6	5	6	10	42
Total		33	45	26	39	47	190
Pearson Chi-Square				42.316(a)***			

*** Shows Significance at 1%

Symmetric Measures

		Values	Approx. Sign.
Nominal By Nominal	Phi	.472	.000
	Cramer's V	.236	.000
No of Valid Cases		190	

- a. Not assuming the null hypothesis
- b. Using the asymptotic standards error assuming the null hypothesis

Age of the respondents is also a key factor in the development of the PTSD. Age allows a person to make decisions for his family and himself. Nevertheless, the age and PTSD association is tested with both Chi-Square of Pearson and Cramer's V with Phi coefficients. The Chi-Square of Pearson Value 14.496, Cramer's V .195 and Phi Coefficient .276 with sig value of 0.07 which indicated their association with 10% of significance level.

Education is considered the major factor in awareness enhancement and equipping individuals with handful knowledge related to earthquake hazard. It contributes an effective role in family and community decision makings. Moreover, education is believed helping an individual in development of preparedness cultures and enables him to take the right decision (Yabe et al., 2014). Likewise the analysis for the gender and age the Pearson's Chi-Square value for the first statement "Repeated, disturbing, and unwanted memories of the stressful experience" is 29.688 with Cramer's V .228 and Phi coefficient .395 with sig value of 0.00 and for the last statement "Having difficulty concentrating" Pearson's Chi-Square value 20.811 with Cramer's V .191 and Phi coefficient .331 with sig value of 0.05 which show association at significance level of 1% and 5%.

Gender of the respondents imparts a vital role in post-traumatic stress disorders development. Women in particular are more vulnerable to PTSD particularly when the traumatic events encompass the assaultive cases (Breslau & Anthony, 2007). However, in the above given tables various statements of PTSD Checklist self-report were tested with Chi-Square

Pearson and Cramer's V Phi coefficient. Out of which the first statement and last statement are discussed here. For the statement "Repeated, disturbing dreams of the stressful experience" the Chi-Square value is 9.794 and Cramer' V .227 with Phi coefficient .227 with sig value of 0.04, and for the statement "Having difficulty concentrating" the Pearson's Chi-Square value is 22.846 and Cramer' V .347 with Phi coefficient .347 with sig value of 0.00 presented that respondents' gender and their PTSD are statistically significant at 1%, 5% and 10% which indicated that development of PTSD and gender are strongly associated with each other.

Apart from individual's education, age and gender, profession of an individual can also play an essential role in overwhelming depressions and postromantic stress disorders. The analysis either there is a significant association among occupation and PTSD variables tested with Chi-Square of Pearson's and Cramer's V and Phi coefficient. For the statement "Disturbing, Repeated and Undesired Stressful Experiences Memories" the Chi-Square value is 42.316, Cramer's V .236 and Phi coefficient .472 with sig value of 0.000show that there is a strong statistical association at 1% among the occupation and PTSD variables.

Discussion

*Earthquakes are said to be a stronger candidate for a stressful experience, as they literally shatter people's safety and world, include witnessing of horrifying casualties, destruction of properties and life threats. Researchers have confirmed that discloser to tremor-related activities enhance PSTD risks and other psychological disorders.*The psychological impairment is characterized by sever deficits in numerous human development areas. These serious deficiencies include social reciprocal interaction deficits; communication deficits and the impairment possibly cause development of stereotype attitudes in an individual toward people surrounding him, interests and activities (American Psychological Association, 2013). However, Individuals residing in temporary housing in the post-earthquake were noticed with high rates of posttraumatic stress disorders. As the prevalence of posttraumatic stress disorder was reported 43 percent. The non-employed and women were more vulnerable to posttraumatic stress disorders, while education and age were not having association with the PTSD. Individuals

with posttraumatic stress disorders showed denial, behavioral disengagements and many self-blaming as their coping strategies.

The Mount Sinai School of Medicine held the study on 2005 earthquake of Muzaffarabad in Pakistan after three years of the event and the results showed that 64.6 percent of the respondents met the probable posttraumatic disorder criteria. The female gender, loss of loved ones, individuals with lower education level and negative coping strategies were reported to be closely linked with higher PTSD symptoms. However, high purpose in individuals' life was notice to be related with lower level of symptoms and higher self-report positive emotions.

In the current study the rate of PTSD prevalence has been reported 64.73 per cent Positive and 35.26 per cent negative employing the recommended cutoff scores and screening criteria. No significant variation was noticed according to the profession, marital status and age or any previous experience of disasters or any tragic events. In order to understand either there is a statistically significant association between the respondents' socio-economic status such as age, education and gender and their PTSD; association tested using nonprobability tests Pearson's Chi-Square along with Cramer's V and Phi Coefficients at the level of significance of 0.01%, 0.5% and 0.10%. Additionally, statements that were statistically significant are quoted here. Based on the previous studies conducted, Individuals settled in temporary housing in the post-earthquake were noticed with high rates of posttraumatic stress disorders. As the prevalence of posttraumatic stress disorder was reported 43 percent. The non-employed and women were more vulnerable to posttraumatic stress disorders, while education and age were not having association with the PTSD. Individuals with posttraumatic stress disorders showed denial, behavioral disengagements and many self-blaming as their coping strategies.

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