

Status of PTSD and Psychological Well-Being Among Survivors of Railway Accident in Amritsar

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Abstract

Recently in October month of 2018 railway accident occurred close to Joda Phatak region of Amritsar where countless individuals were attending annual festival of Dashhera and some of them standing along the railway tracks passing nearby were hit by train in dark evening. This research attempted to find out the status of post-traumatic stress disorder and the status of psychological well-being amongst the above tragic accident survivors. Furthermore, relationship between PTSD and psychological wellbeing was analyzed. Participant survivors consist of victims and their immediate family members. Two standardized scales, PTSD symptoms scale by Weathers, et al. and Psychological Wellbeing scale by Ryffs were administered on 30 participants in the sample using Purposive sampling technique. Obtained data were analyzed applying quantitative technique of descriptive statistics, mean and standard deviation to examine the status of PTSD and psychological wellbeing and scores were treated with Pearson correlation statistics to study the relationship among the variables. Survivors including direct or indirect victims reported PTSD. Psychological wellbeing was also discussed in connection with the PTSD among survivors.

Keywords: Posttraumatic Stress Disorder, PTSD, Psychological wellbeing

Posttraumatic Stress Disorder

By experiencing or witnessing any terrifying event developed mental health condition is described as post traumatic stress disorder. Shiel Jr. defined post traumatic stress disorder as typical tension issue that creates after exposure to a frightening occasion or experience in which severe physical damage happened or was compromised. Relatives of unfortunate casualties additionally can build up the confusion. PTSD can happen in individuals of all ages, including kids and teenagers. More than twice the same number of ladies as men experience PTSD following presentation to injury. Depression, liquor or other substance misuse, or other uneasiness issue as often as possible co-happens with PTSD.

According to Journal of clinical medicine PTSD Posttraumatic stress issue is among the most widely recognized psychological well-being issue. PTSD is related with a chronic course and crippling side effects. According to Teens health research (in teens) Posttraumatic stress issue (PTSD) is a lot of indications — feeling nervous, resting issues, inconvenience concentrating that somebody creates after they experience something hurtful, alarming, or annoying. Any sort of extreme stress can prompt PTSD. It frequently creates after an immediate involvement where somebody is genuinely harmed or undermined with damage or passing. It likewise can happen to individuals who witness upsetting occasions or find out about a sudden or rough passing or damage to a relative or dear friends. Individuals of all ages — children, teenagers, and grown-ups — can create PTSD. Be that as it may, not every person who lives through a genuine injury creates it. At times, seeing pictures of those occasions on TV or online can prompt indications much like PTSD.

World Health Organization indicated 5.2% risk of making PTSD in the wake of learning of sudden demise of a close to ones. Because of the high predominance of this kind of traumatic events, sudden passing of a friend or family member represents around 20% of PTSD cases around the world. Medical condition related with an expanded danger of PTSD incorporate cancer, heart attack, and stroke. 22% of disease survivors present with long lasting PTSD like side effects.

Psychological wellbeing

Nowadays, there is much evidence about the significance of mental prosperity in the work environment. Mental prosperity identified with positive development of individual life and make they make great associations with others. Wellbeing related personal satisfaction (HRQOL) states that Well-being is a constructive result that is significant for individuals and for some segments of society, since it discloses to us that individuals see that their lives are going great. There is something like two wide methodologies, which begin from positive psychology, to estimating the effect of prosperity. The first (otherwise called "gluttonous") is for the most part about being glad or "feeling better", for example clarifies prosperity as far as encountering positive sentiments (influence sand feelings). The second methodology underlines the significance of having a reason in prosperity. As such, it expects that individuals can't genuinely make an incredible most (and work), except if they can accomplish imperative life/work objectives.

Subjective wellbeing of happiness by Richard Layard states happiness as the greatest number that every person counts for one. Happiness provides motivating force and a binding together guideline to control approach – and social policy. The Value Fulfillment Theory of Well-Being As per the value fulfillment theory, our lives go well to the degree that we seek after, and satisfy or understand, our proper values. To esteem something in the fullest sense is to have a generally steady example of feelings and wants as for it and to take these frames of mind to give you purposes behind activity and (for the most significant qualities) models for assessing how your life is going. Fitting qualities, at that point, are the objects of moderately practical and coordinated feelings, wants, and decisions.

The term “Hedonic” wellbeing is typically used to refer to the abstract sentiments of joy. It involves two segments, a full of feeling part (high positive effect and low negative effect) and

a psychological segment (fulfillment with life). It is suggested that an individual encounters joy when positive effect and fulfillment with life are both high (Carruthers and Hood, 2004). The less notable term, "Eudaimonic" prosperity is utilized to refer to the deliberate part of PWB. The clinician Carol Ryff has built up a reasonable model that separates Eudaimonic prosperity into six key kinds of mental prosperity.

Review of literature

New investigation indicates PTSD as physical as opposed to mental this study was conducted in 2018 by Crystal Bradshaw. Injury is an ordinarily known contributing component of PTSD and, up to 8,000,000 individuals experience the ill effects of it because of horrendous accidents at whatever year. Most Soldiers' injury is a consequence of battle pressure; however more youthful Soldiers, who were not in administration during Operations Iraqi Freedom and Enduring Freedom, experience the ill effects of PTSD because of adolescence or generational injuries. Bradshaw conclude that in the Armed Forces, PTSD can be expelled or misdiagnosed, hence leaving Soldiers incapable to look for legitimate consideration. A few Fighters may think that it's hard to acknowledge that they need assistance or that their social concerns are not brief. The failure to talk about occasions, or the absence of intrigue or comprehension from relatives may baffle others and lead them to remain close-lipped regarding their condition.

Railroad crossing mishaps like India has a broad rail coordinate with elevated levels of damage and violence. An aggregate of 300 postmortems, performed at the morgue of the Forensic Medicine department, DMC during the time of January to December 2016, were contemplated. Of them 164 cases were of mishaps. Veronese et al. (2015) revealed that discoveries substantiate the prescient power of SOC and posttraumatic stress issue (PTSD) in connection to mental wellbeing crosswise over various expert groups. They found that expert guide laborers working in war-like conditions utilized their capacity to property importance and lucidness (SOC) to their encounters, keeping up agreeable degrees of mental working and prosperity in spite of experiencing a moderate degree of stress furthermore, injury.

Prosperity and Post-Traumatic Stress Disorder due to characteristic and man-made disasters on adults study conducted by Riaz et al. (2015) demonstrated that man-made debacles impact individuals more seriously than cataclysmic events. Females are influenced all the more seriously when contrasted with guys in catastrophes. To look at the distinctions in prosperity and PTSD among grown-ups presented to characteristic and man-made disasters. Adults presented to catastrophic event like flood scored essentially higher on prosperity when contrasted with grown-ups presented to man-made fiasco like psychological oppression and suicide bombarding. Post-horrendous pressure issue was more in psychological warfare uncovered grown-ups when contrasted with flood uncovered grown-ups. Inside sexual orientation, females adjusted better to man-made disasters. This cross-sectional overview was led on 150 youthful grown-ups presented to flood in Punjab (50), psychological oppression in KPK (Khyber Pakhtunkhwa) (50) and suicide bombarding (fear based oppression) in Islamabad (50).

Shakespeare-Finch et al. (2010) studied injury type and post trauma outcomes, contrasts between survivors of motor vehicle accidents, sexual assault, and deprivation. Research looking at post trauma pathology shows negative results can contrast as an element of the kind of injury experienced. Results showed contrasts in development between the gatherings, with the deprived revealing more significant levels of development than different survivors.

Also, sexual maltreatment survivors showing more elevated levels of post traumatic stress issue side effects than different gatherings. In any case, this didn't block sexual maltreatment survivors from too revealing moderate degrees of development.

Matthews (2005) studied the work potential of road accident survivors with and without PTSD. All members were working before their mishap. Results demonstrated that survivors with PTSD had altogether less work potential post mishap than survivors without PTSD. Explicit boundaries to employability for survivors with PTSD distinguished by this examination included abnormal amounts of discouragement, diminished time-the executives capacity, and an over concern or nervousness with physical wounds.

Ho et al. (2000) evaluated the impacts of motor vehicle accidents (MVAs) on drivers' and travelers' duty attribution, and dimensions of mental trouble and prosperity. An aggregate of 321 MVA exploited people from the province of Queensland, Australia, took part in this investigation by reacting to a poll intended to gauge the examination's basic factors.

Vatshelle et al. (1997) examined genuine on-the-track accidents experienced by train drivers: mental reactions and long-term wellbeing effects. Train drivers run a danger of on-the-track mishaps, the result of which they would seldom be able to impact. In a postal poll concentrate routed to all Norwegian train drivers, present wellbeing status was surveyed by GHQ-12 and three wellbeing records determined from a psychosomatic side effect list. Train drivers who had encountered upsetting on-the-track episodes were solicited to report crest force from mental responses to their most upsetting knowledge, by the Impact of Event Scale (IES). Of 830 respondents, 395 detailed troubling on-the-track occurrences. Present wellbeing status was fundamentally lower in drivers detailing a previous troubling background contrasted with others. The higher the reviewed IES scores, the more articulated medical issues were accounted for. In light of above literature reviews following objectives are framed to study in the present research work:

Objectives

1. To study the status of: a) PTSD level among accident survivors, b) Psychological wellbeing and its six dimensions among accident survivors.
2. To study the relationship between PTSD and a). wellbeing among accident survivors b) Autonomy c) Environmental mastery d) Personal growth level e) Positive relations with others f) Purpose in life g) Self-acceptance of accident survivors

Hypotheses

1. PTSD risk is not present among the survivors. b) Railway accident survivors are not having good psychological wellbeing.
2. There exists no significant relationship between PTSD and a) psychological wellbeing b) autonomy c) environment mastery d) personal growth e) positive relations with others f) purpose in life g) self-acceptance, of survivors.

Methodology

Following research methodology was followed to achieve the above framed objectives:

Design: A sample of 30 survivors including male and female (Mean age= 32.5 years) were contacted using purposive sampling from accident related nearby places. Purposive sampling is an examining method wherein analysts depend on their own judgment when picking individuals from populace to take an interest in the investigation. Purposive testing is a non-probability sampling technique. **Tools:** Keeping in view the aim and nature of the study and variables to be examined appropriate tools are selected.

PTSD Assessment by Weathers, et al. (1993) having 17 items that correspond to the key symptoms of PTSD, was administered. The items are based on the complaints and problems faced by people in stressful life experiences. The PCL is a standardized self-report rating scale for PTSD. Respondents need to indicate how much they have been bothered by a symptom during past month using a 5-point (1–5) scale, circling the appropriate choice. Responses range from 1 Not at All – 5 Extremely. It takes 15-20 minutes to do this scale.

Ryff's Psychological Well-Being Scales (PWB) by Ryff and Keyes, (1995) with 42 items was administered. In this scale there are 6 dimensions: Autonomy, Environmental mastery, Personal Growth, Positive Relations, Purpose in life, Self-acceptance. The scale measures the psychological wellbeing in a good manner. The test – retest reliability quality of Ryff's mental prosperity scale has been taken as 0.82.

Results and discussion

Statistical analyses were executed using SPSS software and the results are as discussed below:

Objectives 1: To study the Level of PTSD among accident survivors.

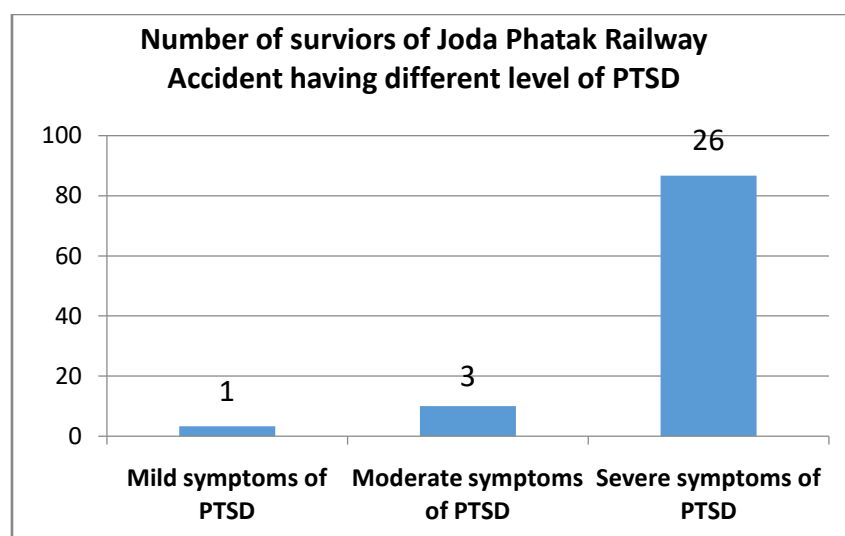
Table 1

Number of survivors of Joda Phatak Railway Accident having different level of PTSD

Symptoms of PTSD	Frequency	Percent (%)
Mild	1	3.3
Moderate	3	10
Severe	26	86.7
Total	30	100

Figure 1

Number of survivors of Joda Phatak Railway Accident having different level of PTSD



From the above Table 1 and Figure 1 it is evident that direct or indirect victims of railway accident have shown PTSD and thus the risk of PTSD development cannot be denied among

such accidents survivors or the victims. Majority (n=26) of the participants are falling in severe category of PTSD norms.

Table 2
Mean scores of post traumatic stress disorder among Joda Phatak railway accident survivors

Participants	MEAN	SD
30	61.6	13.22

By observing the above Table 2 it is evident that majority of the victims of railway accident reported severe symptoms of post traumatic stress disorder (86.7%) that they were experiencing high level of post traumatic stress disorder (Fig. 1). Mean post traumatic stress disorder level was in the severe category (M= 61.5, SD=13.22) (Table 2). Findings are in line with a study, done by Keppel- Benson (2002) "Post Traumatic stress in children following motor vehicle accidents, predicted that PTSD indications are available in a dominant part of adolescents encountering MVAs and that a critical minority of them showed full disorders of PTSD. It was estimated that a blend of pre trauma factors (e.g., age, sex, financial status, history of past mishaps), injury explicit factors (e.g., degree of damage, method of mishap), furthermore, post-injury factors (e.g., social help, child rearing style following the mishap) are prescient of these mental outcomes.

Table 3
Mean scores of level of post traumatic stress disorder among Joda Phatak railway accident survivors

PTSD		
LEVEL	Mean	N
Mild symptoms of PTSD	146.0	1
Moderate symptoms of PTSD	173.33	3
Severe symptoms of PTSD	156.96	26
Total	158.23	30

As per the above Table 3, most of the survivors have severe symptoms of PTSD. Moderate symptoms of PTSD also noted with high mean (M=173.33). Over the all, 29 participants have responded for post traumatic symptoms.

Objective 2: To study the Psychological wellbeing of accident survivors.

Table 4
Psychological wellbeing and its dimensions status among survivors of Joda Phatak, Amritsar railway accident

Descriptive Statistics			
Dimensions	N	Mean	SD
Psychological Wellbeing	30	158.23	17.27
Autonomy	30	26.2	3.57
Environmental mastery	30	27.4	3.23
Personal Growth	30	26.2	2.67
Positive reaction with others	30	26.83	6.30
Purpose in life	30	24.76	2.79
Self-Acceptance	30	26.83	4.33

Figure 2
Psychological wellbeing and its dimensions level among Joda Phatak, Amritsar railway accident survivors

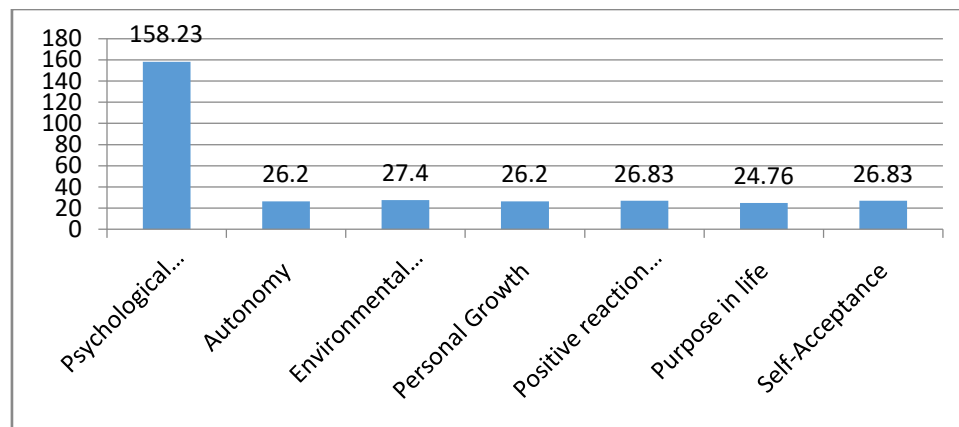


Table 5
Psychological wellbeing among Joda Phatak railway accident survivors

Psychological Wellbeing			
LEVEL	N	Mean	SD
Low	7	136.71	9.32
Average	0	0	0
High	23	164.78	13.34
Total	30	158.23	17.27

Observation of Table 4 and Figure 2 reflect overall status of psychological wellbeing and its six dimensions among the survivors of the accident. As per the above Table 5, some of the survivors (n=07) have low level (M=136.71, SD=9.32) of psychological wellbeing whereas many others (n=23) are falling in high (M=164.78, SD=13.34) psychological wellbeing which may be due to time gap already occurred after the actual accident. Also the participants include those individuals who are not directly hit by train in the accident rather they are related to the persons who lost the lives or hit by train. Many others are back on their routine of livelihood and restoring the normalcy of their lives routine which is a better indication towards living the life in a positive way.

Objective 3A: Relationship between PTSD and psychological wellbeing of accident survivors

Table 6
Correlation between post traumatic stress disorder and psychological wellbeing among Joda Phatak railway accident survivors

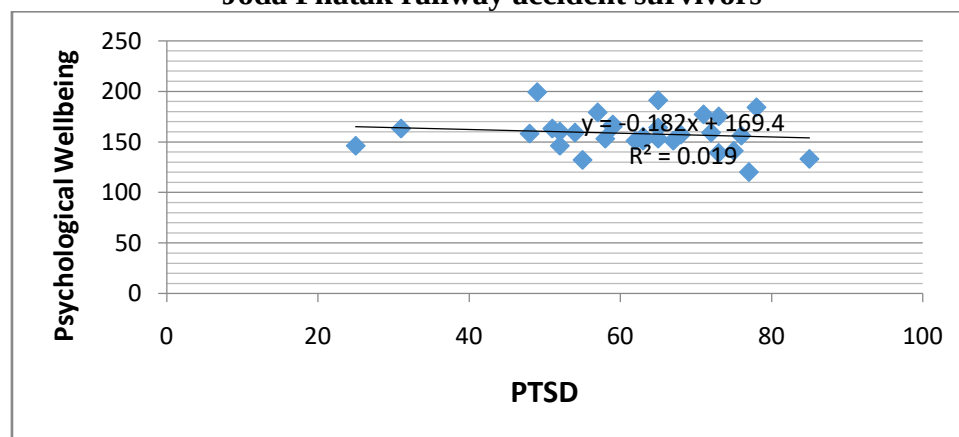
Correlations			
		PTSD	Psychological Wellbeing

PTSD	Pearson Correlation	1	-.139
	Sig. (2-tailed)		0.463
	N	30	

Above Table 6 depicts Pearson correlation coefficient for the variable of the PTSD and psychological wellbeing. There appears to be negative correlation between PTSD and Psychological Wellbeing ($r = -0.139$, $p = 0.463$), but could not reach to a significant level. It shows that PTSD has negative relationship with psychological wellbeing, means if PTSD increases then psychological wellbeing is decreasing. Thus, the null hypothesis stating that there exists no significant relationship between PTSD and Psychological wellbeing is accepted. However, trends of data reflected PTSD having deteriorating relationship with individual's psychological wellbeing.

Figure 3

Correlation between post traumatic stress disorder and psychological wellbeing among Joda Phatak railway accident survivors



Objective 3B: Relationship of autonomy with PTSD among accident survivors.

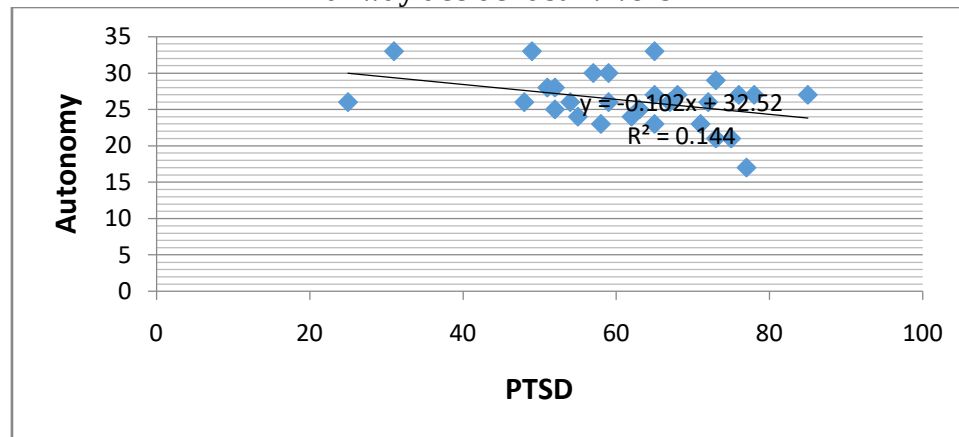
Table 7

Relationship between post traumatic stress disorder and autonomy among Joda Phatak railway accident survivors

Correlations			
		PTSD	Autonomy
PTSD	Pearson Correlation	1	-0.381*
	Sig. (2-tailed)		0.038
	N	30	

The above Table 7 depicts that there is a negative significant correlation between PTSD and autonomy ($r = -0.381$, $p = 0.038$), which convey that autonomy decreases when PTSD increases. Hence, null hypothesis that there exists no significant relationship between PTSD and autonomy of survivors is not accepted. Thus, if autonomy is to improve on positive side for a good psychological wellbeing, PTSD is to be taken care of so as to minimize it not affecting the mental health of the individual.

Figure 4
Relationship between post traumatic stress disorder and autonomy among Joda Phatak railway accident survivors



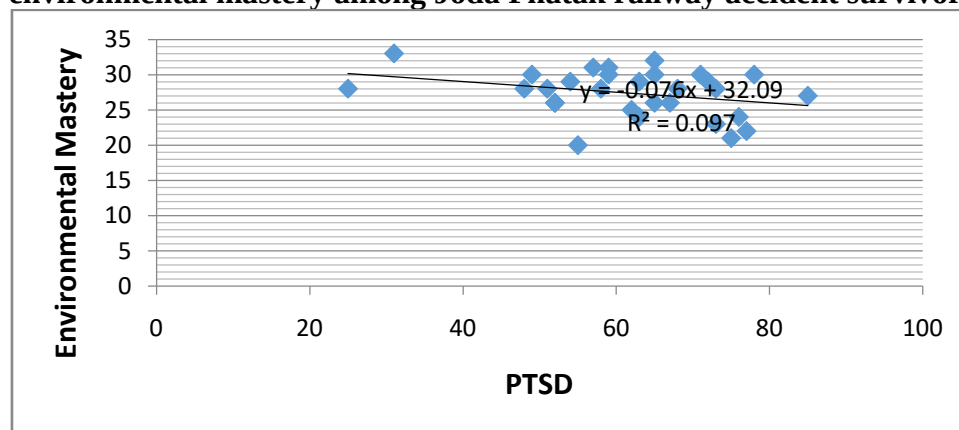
Objective 3C: Relationship between PTSD and Environmental mastery among accident survivors.

Table 8
Relationship between relationship between post traumatic stress disorder and environmental mastery among Joda Phatak railway accident survivors

Correlations			
		PTSD	Environmental mastery
PTSD	Pearson Correlation	1	-0.311
	Sig. (2-tailed)		0.094
	N	30	

The above Table 8 depicts that there is a negative correlation between PTSD and Environmental mastery ($r = -0.311$, $p = 0.094$), which convey that Environmental mastery decreases when PTSD increases. But the results could not achieve the statistical significant level. Hence, null hypothesis that there exists no significant relationship between PTSD and Environmental mastery of survivors is accepted. Therefore it is concluded that if Environmental mastery is to improve on positive side for a good psychological wellbeing, PTSD is to be minimized.

Figure 5
Relationship between relationship between post traumatic stress disorder and environmental mastery among Joda Phatak railway accident survivors



Objective 3D: Relationship between PTSD and Personal growth among accident survivors.

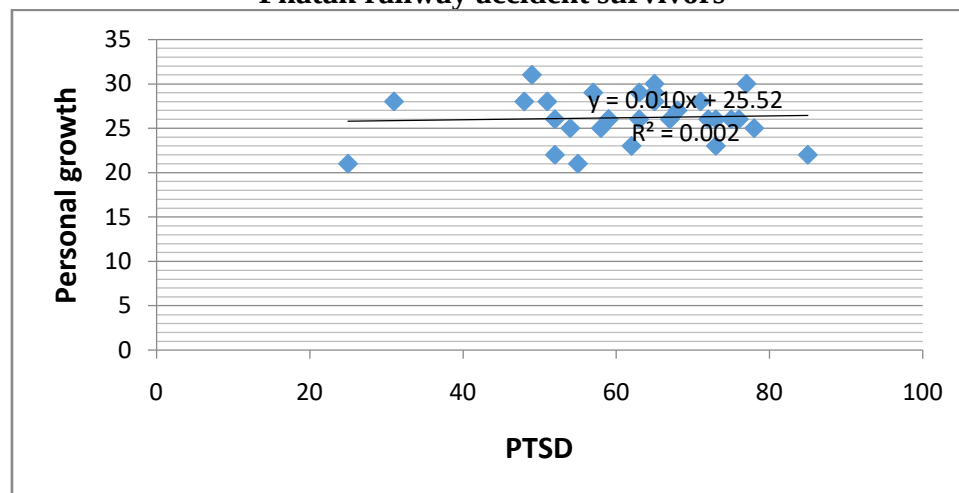
Table 9
Relationship between post traumatic stress disorder and personal growth among Joda Phatak railway accident survivors

Correlations			
		PTSD	Personal growth
PTSD	Pearson Correlation	1	.054
	Sig. (2-tailed)		0.776
	N	30	

The above Table 9 depicts that there is a positive correlation between PTSD and Personal growth ($r = -0.054$, $p = 0.776$), which convey that Personal growth increases and PTSD also increasing according to Table. But the results could not achieve the statistical significant level. Hence, null hypothesis that there exists no significant relationship between PTSD and Personal growth of survivors is accepted. Therefore it is concluded that PTSD need to be

minimized for a good psychological wellbeing, more samples are required to analyze the Personal growth of the survivors.

Figure 6
Relationship between post traumatic stress disorder and personal growth among Joda Phatak railway accident survivors



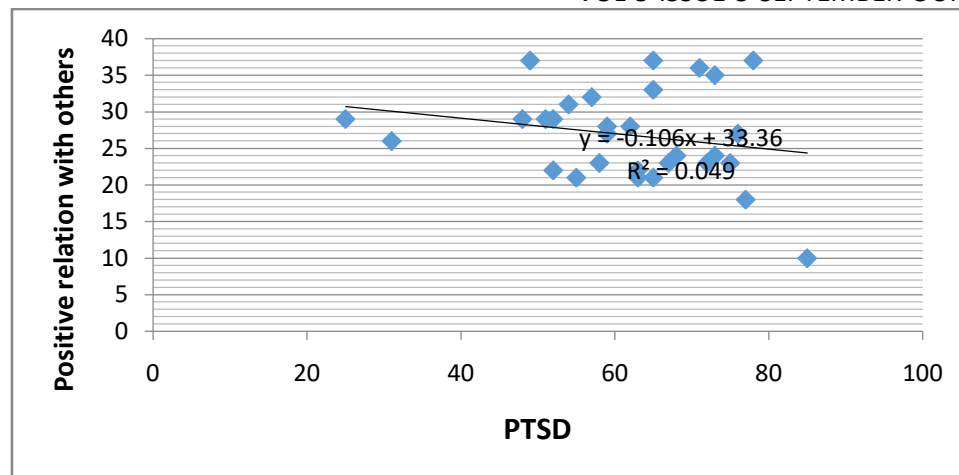
Objective 3E: Relationship between PTSD and Positive relation with others among accident survivors.

Table 10
Relationship between post traumatic stress disorder and positive relation with others among Joda Phatak railway accident survivors

Correlations			
		PTSD	Positive relation with others
PTSD	Pearson Correlation	1	-0.223
	Sig. (2-tailed)		0.237
	N	30	

The above Table 10 states that there is a negative correlation between PTSD and Positive relation with others ($r = -0.223$, $p = 0.237$), which convey that Positive relation with others decreasing and PTSD a increasing according to Table. But the results could not achieve the statistical significant level. Hence, null hypothesis that there exists no significant relationship between PTSD and Positive relation with others of survivors is accepted. Therefore it is concluded that PTSD need to be minimized for a good psychological wellbeing. Need to develop social interest, communicate with people so that they can come out of their fear and anxiety.

Figure 7
Relationship between post traumatic stress disorder and positive relation with others among Joda Phatak railway accident survivors



Objective 3F: Relationship between PTSD and Purpose in life among accident survivors.

Table 11

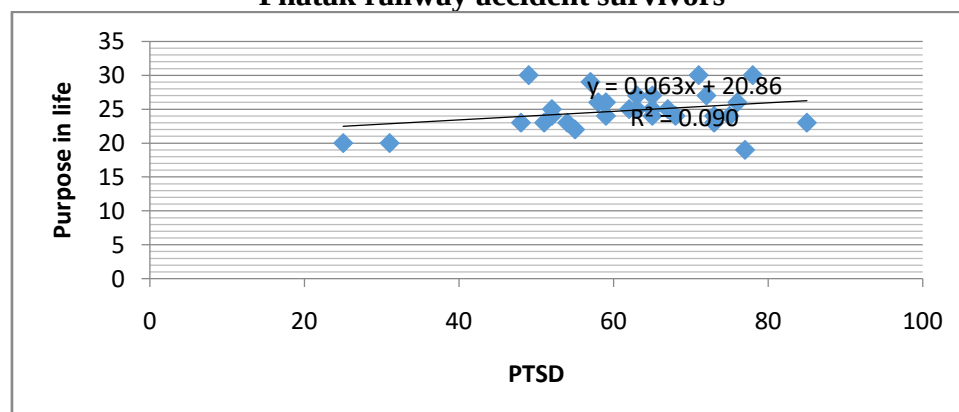
Relationship between post traumatic stress disorder and purpose in life among Joda Phatak railway accident survivors

Correlations			
		PTSD	Purpose in life
PTSD	Pearson Correlation	1	0.300
	Sig. (2-tailed)		0.107
	N	30	

The above Table 11 states that there is a positive correlation between PTSD and Purpose in life ($r = 0.300$, $p = 0.107$), which convey that Purpose in life increasing and PTSD also increasing according to Table. But the results could not achieve the statistical significant level. Hence, null hypothesis that there exists no significant relationship between PTSD and Purpose in life of survivors is accepted. Thus, it is concluded that PTSD need to be decreased for a good psychological wellbeing among accident survivors.

Figure 8

Relationship between post traumatic stress disorder and purpose in life among Joda Phatak railway accident survivors



Objective 3G: Relationship between PTSD and Self Acceptance among accident survivors.

Table 12

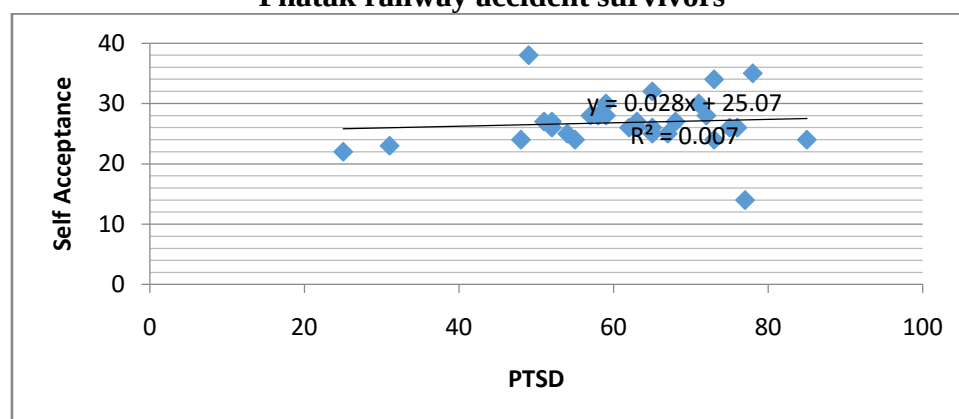
Relationship between post traumatic stress disorder and self acceptance among Joda Phatak railway accident survivors

Correlations			
		PTSD	Self Acceptance
PTSD	Pearson Correlation	1	.087
	Sig. (2-tailed)		0.646
	N	30	

The above Table 12 depicts that there is a positive correlation between PTSD and Self Acceptance ($r = 0.087$, $p = 0.646$), which convey that Self Acceptance increases and PTSD also increasing. Hence, null hypothesis that there exists no significant relationship between PTSD and Self Acceptance of survivors is accepted. But the results could not achieve the statistical significant level. Therefore it is concluded that PTSD need to be decreased for improving the psychological wellbeing, more samples need to analyze the Self Acceptance of the survivors.

Figure 9

Relationship between post traumatic stress disorder and self acceptance among Joda Phatak railway accident survivors



Conclusions and discussions

On the basis of the results obtained following conclusions were made on the current research. The first hypothesis that PTSD risk is not present among accident survivors is not accepted on the basis of findings. The results reveal that most of the survivors were suffering from PTSD, about 86% of the participants have severe symptoms of PTSD and whereas only 3% of the participants falls in mild symptoms of PTSD.

The second hypothesis that railway accident survivors are not having good psychological wellbeing is also not accepted because observation of findings showed that many participants have already recovered and busy with their routine work and reported average or high category of psychological wellbeing.

Third hypothesis that there is no relationship between PTSD and psychological wellbeing, this hypothesis was not accepted because there is a negative correlation between both variables i.e. PTSD increases then psychological wellbeing decreases.

Similarly, all the six dimensions of psychological wellbeing construct are either related with a very low correlation coefficient or showed the negative correlation. Therefore, it is concluded that PTSD is over the all decreases the psychological wellbeing. To obtain more clear cut patterns of this relationship research can plan the study and collection of data immediate after the accident and also the sample size may be increased.

Limitations

The study was limited to 30 participants only and time available for conduction of research was limited. Study was possible after a gap of the accident happening so the responses of the participants might not have the same quality as it would have been immediate after the accident. Majority of the survivors or victims might have migrated to their villages and left the place of accident making it difficult to find out a large number of participants. Participants' intention and training towards research might have influenced the quality of responses.

Suggestions and Recommendations:

On the basis of findings obtained and above discussion it may be suggested that among the survivors or victims of accident people are less educated and most of them are uneducated as well as unemployed, engaged only in household work and thinking about the incident which lead them to stress, tension, trauma. So for them psychological techniques or awareness camp should be organized. Number of participants and amount of data may be increased for a study of similar nature in order to get clear patterns of findings. Families of survivors should be given psychological intervention for improvement in their psychological wellbeing. Counseling may be given to the direct and indirect victims and their family members so that they can again start their routine life with reduced PTSD level.

More research is recommended on victims of Amritsar railway accident considering other psychological variables. The findings guide to understand the impact of such uncontrolled accidents on railway track and attract the attention of all stakeholders that multifold impact on human life may be there other than taking many valuable lives. In Indian perspective it is highly in need to consider the presence of PTSD among victims that authorize personnel must attempt to regulate policies and steps to minimize such accident in future. DMRC way of working and regulating the railway services with the help of automation may provide some inputs for improvements. On rail and road it needs to concentrate at regular by observing people's behavior and guide them to be disciplined so as to minimize the possibilities of drastic accident in our transportation systems.

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