International Journal of Community Medicine and Public Health
Teli BA et al. Int J Community Med Public Health. 2022 May;9(5):2163-2167
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20221235

Original Research Article

Mediation effect of psychological factors on betrayal trauma and physical health symptoms among young adults

Bilal A. Teli[1]*, Samina Bano[2], Mohd A. Paul[3]

[1]Department of Psychiatry, S. K. I. M. S. Medical College and Hospital Bemina, Srinagar, Jammu and Kashmir, India
[2]Department of Psychology, Jamia Millia Islamia, New Delhi, India
[3]Department of Psychology, Government Degree College Kulgam, Jammu and Kashmir, India

Received: 03 March 2022
Revised: 22 March 2022
Accepted: 29 March 2022

***Correspondence:**
Dr. Bilal A. Teli,
E-mail: billz.bilal@gmail.com

ABSTRACT

Background: Betrayal trauma theory postulates abuse perpetrated by a caregiver or someone close to the victim results in worse mental health and physical health problems than abuse perpetrated by a non caregiver. Hence the present study was designed to study the mediation effect of psychological factors on high betrayal trauma and physical health symptoms among young adults.
Methods: young adults with history of trauma based on purposive were taken from Delhi. Out of 200 young adults, 100 were high betrayal traumas and 100 were low betrayal traumas with age group ranged from 20-30 years. In order to identify high betrayal trauma and low betrayal trauma the brief betrayal trauma survey, followed by Toronto alexithymia scale, trauma symptom checklist-40, Pennebaker inventory of limbic languidness and socio-demographic data sheet.
Results: The present study studied the mediation analyses and found that sexual abuse and sexual problem were mediates the association between high betrayal trauma and physical health problem.
Conclusions: The mediation effect by sexual abuse trauma and sexual problem was reported on high betrayal trauma and physical health symptoms It highlights to inform the health professionals about the diverse range of symptoms associated with betrayal trauma and highlights the urgency of immediate intervention of betrayal trauma and helps the health professionals in awareness of connection among betrayal trauma, psychological difficulties, and physical health complaints and make appropriate assessments and referrals.

Keywords: Psychological effects, Mediation effect, Physical health effects, Betrayal trauma

INTRODUCTION

The word "trauma" means a event which is highly stressful. It is an emotional response to a highly stressful event like an accident, rape or natural disaster.[1] Trauma is defined as a physical or psychological threat or assault to a person's physical integrity, sense of self, safety or survival or to the physical safety of another person significant to the person.[2] The Psychological trauma may occur during a single traumatic even (acute) or as a results of repeated (chronic) exposure to overwhelming stress.[3] Often, trauma is used to refer both to negative events that produce distress and to the distress itself. Traditionally, a traumatic stressor referred to a life threatening event.[4] There have been many studies assessing the long-term consequences of experiencing trauma. The bulk of these studies have linked abuse in childhood or adulthood with adult physical and mental health symptoms and disorders.[5-7] Such studies have shown a strong relationship between abuse traumas and a number of health problems. Although the researchers have not specifically sought to study the consequences of betrayal trauma, most abuse traumas can be classified as

betrayal traumas. Data consistealy reveal strong link between high betrayal trauma (HBT) exposure and psychological difficulties. Although HBT is linked to both psychological and physical problems but there is a paucity of research how HBT affects male and female and also the previous studies of psychological mediators between trauma and physical health complaints have produced mixed results and suggest that pathways may vary according to the examined stressors, mediators, and health outcomes.

Aim and objectives

The present study was designed to study the mediation effect of psychological factors on high betrayal trauma and physical health symptoms among young adults.

METHODS

Sample size and population

A Sample of 200 young adults with history of trauma on basis of purposive were taken for present study from different mental health centers in Delhi in 2019, which comprised of 100 high betrayal traumas and 100 low betrayal traumas.

Socio-demographic factors

It was used to collect information on the socio-demographic factors which are relevant in the context of experienced and witnessed trauma. It includes factors like gender (male and female), age (20-25 and 26-30 years).

Betrayal trauma (high and low betrayal trauma)

It was measured by the brief betrayal trauma survey (BBTS) by Goldberg and Freyd.[8] It is a 14-item self-report, measures trauma exposure and betrayal at two time-points before age 18 years and after 18 years of age, using a 3-point scale "never" "1 or 2 times" and "more than that. The respondents are to indicate how many times they have experienced different interpersonal and non-interpersonal traumas both before and after age 18. This scale was included to assess traumatic events other than parent or caregiver maltreatment, since a range of traumatic experiences impacts psychological functioning. Items were categorized into two levels of betrayal: high betrayal trauma exposure (e.g., traumas perpetrated by someone with whom the respondent was very close) and it was calculated by summing the number of traumas relatively high in betrayal to which the participant reported being exposed at least one time (possible scores range from 0 to 5); low betrayal trauma exposure (e.g., traumas Perpetrated by someone with whom the respondent was not very close) and it was calculated by summing the number of traumas with relatively low betrayal to which the participant reported exposure (possible scores range from 0 to 7).

Alexithymia

It was measured by the toronto alexithymia scale (TAS-20) by Parker, Bagby, Taylor, Endler and Schmitz.[9] It is the most frequently used measure of alexithymia. Participants respond to statements regarding their thinking about and discussion of emotional content using Likert scales that range from 1-5, with higher scores representing a greater degree of alexithymia, except for reversed-scored items. The TAS-20 contains three subscales: Difficulty identifying feelings, difficulty describing feeling, and externally oriented thinking and total Toronto alexithymia.

Physical health problem

It was measured by pennebaker inventory of limbic languidness (PILL) by Pennebaker.[10] It is a 54-item scale that assesses common physical symptoms and sensations over the past month. The PILL Total Score is calculated by summing participants' reports of the frequency of each of these problems using a Likert-type scale ranging from 0 (almost never) to 5 (almost daily).

Trauma symptom checklist-40 (TSC-40)

It was developed by Briere and Runtz.[11] It is a 40-items checklist, assessing symptoms commonly associated with the experience of traumatic events. The scale has six subscales: depression, anxiety, dissociation, sexual abuse trauma, sleep disturbance, and sexual problems. Respondents are asked to indicate how frequently they experienced each symptom on a scale of 0 ("never") to 3 ("very often"). Subscales are computed by summing the items that contribute to each subscale.

Procedure

Before getting socio-demographic information by using socio-demographic data sheet and ensuring that the respondent is meeting the exclusion criteria (being betrayal trauma), rapport building, consent seeking and respondents were informed the aims and objectives of the present study. The brief betrayal trauma survey (BBTS) was administered to identify as high betrayal trauma and low betrayal trauma. It was followed by administering of Toronto alexithymia scale (TAS-20), Pennebaker inventory of limbic languidness (PILL). The BBTS evaluated on spot to ensure whether the person is a target sample or not. Whenever an individual was found to be target sample the set of other questionnaires was given to him to get their scores of psychological and physical heath.

Statistical analysis

The multiple mediator models were assessed with SPSS Macro syntax for bootstrap developed by Preacher and Hayes in the prediction of physical health problems.

Results were also graphically presented.[12] Data was analyzed using the software package SPSS version 21.

RESULTS

In current bootstrapping because it is known as the most powerful and reasonable method of obtaining confidence limits for specific indirect effects.[13-14] Bootstrapping involves repeatedly sampling from the data set and estimating the indirect effect in each re-sampled date set, thus bootstrapping generally is appropriate for small to moderate samples.

Characterization of mediators and mediation

A variable is said to mediate when the relationship between a predictor variable and an outcome (criterion) variable if the predictor variable first has an effect on the mediator variable, and this in turn influences the outcome variable. Hence, a mediator (M) accounts for the relationship between a predictor variable (X) and the outcome variable (Y). Complete mediation exists if the predictor variable exerts its total influence via the mediating variable (M) and Partial mediation is given if the predictor variable exerts some of its influence via M, and it also exerts some of its influence directly on the outcome variable and not via M. Mediating effects of psychological factors in the association between high betrayal trauma and physical health problem are depicted in (Figure 1).

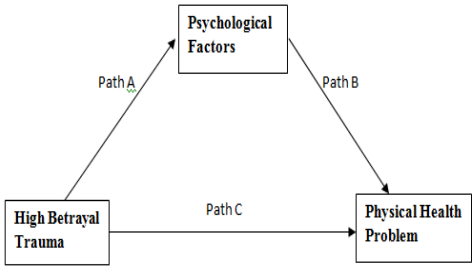

Figure 1: Mediator model in the prediction of physical health problems.

Multiple mediation analyses was performed utilizing the Preacher and Hayes SPSS macro.[12] We tested whether the relationship between high betrayal trauma and physical health problems was mediated by dissociation, anxiety, depression, sexual abuse trauma, sleep disturbance, sexual problem, difficulty identifying feelings, difficulty describing feelings, externally-oriented thinking. The estimates of 95% CIs and summary of mediation analyses are presented in (Table 1, Figure 2). The total effect of high betrayal trauma on physical health problem was significant (β=4.95, $p<0.01$). However, the direct effect, or the relationship between high betrayal trauma and physical health problem did not remain significant after controlling for mediators (β=1.60, p=0.207).

Table 1: Indirect effect of high betrayal trauma (HBT) on physical health problem through the proposed mediators (n=100).

Mediators	Point estimate	BC 95% CI	
		Lower	Upper
Dissociation	-0.1993	-1.6636	1.0448
Anxiety	-0.2005	-1.2445	0.1747
Depression	0.4151	-0.2951	1.6265
Sexual abuse trauma	3.6548	1.3421	6.4328
Sleep disturbance	-0.0349	-0.3937	1.0613
Sexual problem	0.7157	0.0078	2.1099
Difficulty identifying feelings	-0.1946	-1.1900	0.1361
Difficulty describing feelings	-0.7125	-2.5995	0.0706
Externally-oriented thinking	-0.0874	-0.8525	0.1849
Total	3.3564	0.2373	6.0412

BC, bias corrected; 5000 bootstrap samples; Total, total indirect effect of HBT on physical health problem through mediators R^2=0.69.

The total indirect effect of high betrayal trauma on physical health problem through the nine mediators was a point estimate of 3.3564 and a 95% bootstrap CI of 0.2373-6.0412. An examination of the specific indirect effects indicates that the specific indirect effect of high betrayal trauma on physical health problem through sexual abuse was a point estimate of 3.6548 and a 95% bootstrap CI of 1.3421-6.4328, and through sexual problem a point estimate of 0.7157 and a 95% bootstrap CI of 0.0078-2.1099. Hence, zero is not included in the confidence intervals, we can conclude that the indirect effect is significantly different from zero, and thus, sexual abuse and sexual problem mediate the association between high betrayal trauma and physical health problem. Moreover, the direct effect of high betrayal trauma on physical health problem was found nonsignificant, thus, both sexual abuse and sexual problem were complete mediators, accounting for approximately 69% of the high betrayal trauma physical health problem association.

DISCUSSION

To study the traumatic stress symptoms (including dissociation, anxiety, depression, sexual abuse trauma, sleep disturbance, sexual problem) and alexithymia as mediators between high betrayal trauma and physical health problems.

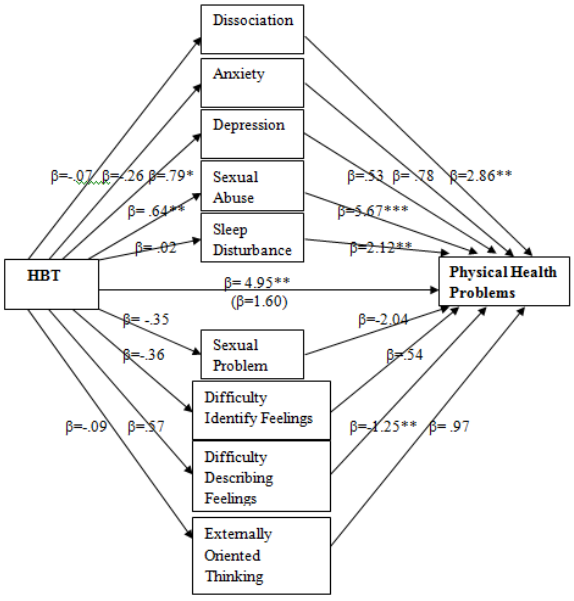

Figure 2: Multiple mediator model in the prediction of physical health problems. Note. B=standardized Beta coefficients. The value outside of the parentheses represents the total effect of HBT on physical health problems prior to the inclusion of the mediating variables. Value in the parentheses represents the direct effect, from bootstrapping analyses, of HBT on physical health problem after the mediators are included. **p<.01, *** p<.001.

Even though trauma symptoms (psychological factors), exposure of high betrayal trauma (high betrayal trauma) and physical health problems correlated substantially with each other, findings showed that trauma symptoms (psychological factors) mediated the association between exposure of high betrayal trauma (high betrayal trauma) and physical health symptoms. In examining the relative contributions of nine mediators (dissociation, anxiety, depression, sexual abuse trauma, sleep disturbance, sexual problem, difficulty identifying feelings, difficulty describing feelings, externally-oriented thinking) in the meditational process. Only sexual abuse and sexual problem were emerged as significant mediators in the association between high betrayal trauma and physical health symptoms. Noteworthy, high betrayal trauma did not explain a significant portion of the variance in physical health problems scores when the mediators were taken into account, suggesting that the significant mediators completely mediated the relation between high betrayal trauma and physical health symptoms. This finding is largely consistent with and refines the results from previous research findings "traumatic stress symptoms mediated the relation between high betrayal trauma and physical health complaints among female nonclinical sample of young adults.[15] It highlights to inform the health professionals about the diverse range of symptoms associated with betrayal trauma and highlights the urgency of immediate intervention of betrayal trauma and helps the health professionals in awareness of connection among betrayal trauma, psychological difficulties, and physical health complaints and make appropriate assessments and referrals.

Limitations

Limitations of the current study were study relied entirely on self-report measures which may have resulted in biased responding, convenience sample was used, lack of power at some factors may have limited our results on such factors and finally, the study did not include additional variables related to young adults' prior trauma experiences and current coping.

CONCLUSION

The mediation effect by sexual abuse trauma and sexual problem was reported on high betrayal trauma and physical health symptoms It highlights to inform the health professionals about the diverse range of symptoms associated with betrayal trauma and highlights the urgency of immediate intervention of betrayal trauma and helps the health professionals in awareness of connection among betrayal trauma, psychological difficulties, and physical health complaints and make appropriate assessments and referrals.

Funding: Indian Council of Medical Research
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed. Washington DC: Vermont; 2005.
2. Finding help for young children with social-Emotional behavioural challenges and their families. Available at: https://www2.ed.gov/documents/students/supporting-child-student-social-emotional-behavioral-mental-health.pdf. Accessed on 20 January 2022.
3. Terr L. Too scared to cry, psychic trauma in childhood. UK: Hachette; 2008.
4. Jones E, Wessely S. Forward psychiatry in the military: its origins and effectiveness. J Trauma Stress. 2003;16(4):411-9.
5. Felitti VJ. Long-term medical consequences of incest, rape, and molestation. South Med J. 1991;84(3):328-31.
6. Felitti VJ. The relation between adverse childhood experiences and adult health: turning gold into lead. Perm J. 2002;6(1):44-7.
7. Kendall-Tackett K. The long-term health effects of victimization. Joining Forc. 2000;5(1):1-4.
8. Goldberg LR, Freyd JJ. Self-reports of potentially traumatic experiences in an adult community sample: gender differences and test-retest stabilities of the items in a brief betrayal-trauma survey. J Trauma Dissoc. 2006;7(3):39-63.

9. Parker JDA, Bagby RM, Taylor GJ, Endler NS, Schmitz P. Factorial validity of the 20-item Toronto Alexithymia Scale. Eur J Personality. 1993;7:221-32.
10. Pennebaker JW. The Pennebaker Inventory of Limbic Languidness (the PILL). In: Pennebaker JW. The psychology of physical symptoms. New York: Springer-Verlag; 1982.
11. Briere J, Runtz M. The trauma symptom checklist (TSC-33): early data on a new scale. J Interpers Viol. 1989;4:151-63.
12. Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behav Res Methods. 2008;40:879-91.
13. Briggs N. Estimation of the standard error and confidence interval of the indirect effect in multiple mediator models. Dissert Abstracts Int. 2006;37:47-55.
14. Williams J, MacKinnon DP. Resampling and distribution of the product methods for testing indirect effects in complex models. Struct Equ Modeling. 2008;15(1):23-51.
15. Lang AJ, Laffaye C, Satz LE. Relationships among childhood maltreatment, PTSD, and health in female veterans in primary care. Child Abuse and Neglect. 2006;30(11):1281-92.

Cite this article as: Teli BA, Bano S, Paul MA. Mediation effect of psychological factors on betrayal trauma and physical health symptoms among young adults. Int J Community Med Public Health 2022;9:2163-7.