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Post-Traumatic Growth in Bereaved Individuals: Impact of Social Support and Socio-demographic Variables

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Abstract

Background. Social support and socio-demographic characteristics have been explored in past studies which have examined post-traumatic growth. The main aim of this study was to examine whether social support and socio-demographic variables (age of deceased, education level of participants, and nature of death) are related to post-traumatic growth. Exploring mean group differences on social support and post-traumatic growth were also focused.

Method. Data were collected from 260 bereaved parents and spouses in the age range of 20 –90 years (M = 45.20, SD = 14.57). Social Support Questionnaire-Short Form (Sarason et al., 1987) and Post-traumatic Growth Inventory-Short Form (Cann et al., 2010) were used to asses social support and post traumatic growth.

Results. Results indicated positive and weak relationship of social support with post-traumatic growth. Mean group differences on socio-demographic characteristics were found to be statistically non-significant and not meaningful. Age of deceased and education level of participants significantly predicted post-traumatic growth; however nature of death and social support did not significantly predict post-traumatic growth.

Conclusion. The findings draw attention to enhancing the quality of social support and considering the socio-demographic characteristics in devising support plans for extremely distressed individuals. Limitations of the study and directions for future researches are discussed.

Keywords. *Social support, socio-demographic variables, post-traumatic growth, bereavement*

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Introduction

Post-traumatic growth as concept emerged from positive psychology in 1990s. it was coined in book Trauma and Transformation (Tedeschi & Calhoun, 1995). Post-traumatic growth refers to adaptive psychological transformation (Munsoor, 2019; Naik & Khan, 2019) in areas such as perception about self, others and life philosophy (Tedeschi & Calhoun, 1996). According to the original measurement model of post-traumatic growth, these three domains are further reflected in five dimensions which include personal strengths (e.g., increased self-reliance); new possibilities (e.g., changed direction in life); relating to others (e.g., increased interpersonal closeness), appreciation of life (e.g., changed priorities, appreciation of each day); and spiritual change (e.g., stronger faith, deeper understanding of spirituality) (Tedeschi & Calhoun, 1996).

Experience of growth is expected to possibly happen in context of struggling with extremely stressful events such as bereavement. Though, traditionally, negative outcomes after loss of loved ones and other negative events have been documented (e.g., Baral & Bhagawati, 2019; Sveen et al., 2019; Waugh et al., 2018; Zhou et al, 2019)., yet there have also been reports of growth in aftermath of adverse events including bereavement (Barrett-Bernstein et al., 2019; Su et al., 2019; Weir, 2020). For the sake of present study, post-traumatic growth is understood as positive changes experienced as result of coping with loss of child or spouse.

Social support is conceptualized as a person`s perception of being valued and cared for (Taylor, 2007). Social support as a potential protective factor may help in dealing effectively with hard times (Xanthopoulos & Daniel, 2013). Research also indicates that social support can facilitate experience of growth after adversity (e.g., Nisa & Rizvi, 2017).

Literature has mentioned that coping strategies (i.e., social support) and socio-demographic characteristics impact the outcome of bereavement (e.g., Starcevic, 2019). According to Aflakseir et al (2018) coping through social support is a significant predictor of post traumatic growth.

Positive association of social support with growth has been observed in a range of samples such as survivors of different types of cancer (Barrett-Bernstein et al, 2019; Chen et al., 2019), individuals bereaved by violent and natural death (Drapeau et al., 2019), diabetic older adults (Senol-Durak & Durak, 2018), burn survivors (Su et al., 2019), and people living with HIV (Rzeszutek, 2017). However, some recent studies have observed no evidence of relationship between social support and post-traumatic growth (e.g. Hill & Watkins, 2017; Wu et al., 2016).

No study could have been found in obtainable extant literature that had examined age of deceased in relation to post-traumatic growth. Violent and sudden death of significant other has been reported to be linked with less post-traumatic growth (Fisher et al., 2020). There have been inconsistent findings on relation of education level with post traumatic growth (Aliche et al., 2019; Rahmani et al., 2012; Sörensen et al., 2019; Vanhooren et al, 2018).

Since 1990s there has been abundance of researches on post-traumatic growth globally. However, research on post- traumatic growth in Pakistan is in emerging phase. There have been studies on post-traumatic growth but hardly any study in Pakistan has examined impact of social support and socio-demographic characteristics on post-traumatic growth in a sample of bereaved parents and spouses. Importantly, the present study focused both sudden and expected causes of death which had rendered the participants bereaved. To build on and to address the gaps in the extant literature, the present study focused mainly on discovering relation of social support and socio-demographic characteristics with post-traumatic growth. Among the socio-demographic characteristics, age of deceased, educational level participants and nature of death (sudden and violent death/natural death due to illness) were the focus of the present study. Moreover, the study also tried to clarify if there were any meaningful differences on social support and post-traumatic growth in relation to socio-demographic characteristics of the study participants. Following hypotheses were formulated for the present study:

H1: More education will predict higher post-traumatic growth.

H2: Sudden/violent death will predict reduced post-traumatic growth.

H3: Social support will predict higher post-traumatic growth.

Method

Sample

A total of 260 bereaved parents and spouses took part in the present study. The participants were included in the study through a combined approach of purposive convenient and snowball sampling technique. Inclusion and exclusion criteria were (*a*) a period of 24 months was necessary to have been passed since the death;(*b*) secondly, in case of bereaved parents, it was necessary that both parents agreed to participate in the study otherwise single parent was not included in the study; (c) thirdly, the participants were supposed be residents of Baluchistan Province irrespective of their ethnicity.The participants included 145 (55.8%) female and 115(44.2) male; 135(51.9%) parents and 125 (48.1%)spouses. Age of the sample was between 20 to 90 years (M = 45.20, SD = 14.57). Among participants 128 (49.2%) were bereaved by natural death and 132 (50.8%) were bereaved by sudden/violent death. Education level of the participants included illiterate 118 (45.4%), up to primary 23 (8.8%), up to middle 16 (6.2%), up to matriculation 34 (13.1%), Intermediate 17 (6.5%), Graduation 28 (10.8%), Master/equivalent 20 (7.7%), and MPhil/PhD 4 (1.5%). Age of the deceased was divided into the following categories: One year and below 27 (10.4%), up to five years 11 (4.2%), up to ten years 13 (5 %), between eleven to twenty years 35 (13.5%), between twenty one to thirty years 55 (21.2%), between thirty one to forty years 43 (16.5%), between forty one to fifty years 25 (9.6%), between fifty one and sixty years 22 (8.5%), between sixty one and seventy years 16 (6.2%), and above 70 years 13 (5%). Among the deceased 89 (34.2%) were female and 171 (65.8%) were male.

Instruments

The participants completed self-reported scales of Social Support Questionnaire-Short Form, Post-traumatic Growth Inventory-Short Form along with a demographic sheet and an informed consent form.

Social Support Questionnaire-Short Form. Social support was measured by the Urdu adapted version of Social Support Questionnaire-Short Form, originally developed by Sarason et al. (1987). It is a 6-item scale to assess the number of available significant others that could provide support and the second part of the scale assess the satisfaction of the participants with the available support. The present study has used only the second part of the scale. Response options are rated from 1(*very dissatisfied*) to 6 (very satisfied). The Confirmatory Factor Analysis of the scale was conducted and it showed good model fit, with χ^2 (*df*) =64.39 with value of CFI=0.99, IFI= 0.99 and RMSEA=0.04. Alpha reliability value of the scale scores for the present sample is .88.

Post-traumatic Growth Inventory-Short Form. Post-traumatic growth was assessed by Post-traumatic Growth Inventory-Short Form developed by Cann et al.(2010) and adapted in local context by Aziz (2012). This Inventory consisted of 10-items,used to assess the experience of positive changes in five domains and each statement is responded to with options from 0 (I did not experience this change as result of my crisis) to 5 (I did experience to a very great degree).The present study has used it as a single dimensional construct. The CFA of the scale was conducted and it showed adequate model fit, with χ^2 (*df*) =70.04 with value of CFI=0.92, IFI= 0.93 and RMSEA=0.06. Alpha reliability value of the scores on this scale for the present sample is .78.

Procedure

Participants in the present study were bereaved parents and spouses. In the context of cultural norms of Balochistan and the distress provoking nature of bereavement related data, it was not easy to conveniently collect data. Through the use of personal acquaintances and then snow-ball technique the researcher accessed the bereaved parents and spouses at their residence or workplace and obtained their consent for completing the scales. The participants were ensured about the privacy of their data and they were also given the choice to quit completion of the scales if they felt uneasy due to the distressing nature of bereavement experience. Each participant completed the scales individually and independently, however they were provided guidance by the researcher if the participants asked for regarding completion of the scales. Response rate of returning the scales in completed form was 95%.

Approval of the present study was obtained from the Institutional Review Board under IRB Number: F.No.D-107-1(03)/Ph.D./2014-Admin. Permission of the original author of Social Support Questionnaire-Short Form was obtained via email for the translation and use of the scale for the research.

Statistical Analysis

Statistical analyses were performed through SPSS (22 VERSION). Confirmatory Factor Analysis (CFA) was performed using Amoss in SPSS to ensure the construct validity of the two scales of the study (social Support Questionnaire-Short Form and Post-traumatic Growth Inventory-Short Form; *See Instruments section for CFA results*). Descriptive statistics on the on the sample were obtained along with Cronbach`s alpha of the scales. Skewness and kurtosis were examined to address the normality of social support and post-traumatic growth variables. Pearson`s correlations were used to explore relationships between the variables.

Independent sample t-test and one-way ANOVA analyses were used to explore mean group differences on social support and post-traumatic growth. To test the hypotheses, a linear hierarchical regression analyses were used with socio-demographic variables (age of deceased, education level of participants, and nature of death) as predictors in first model and social support in the second model.

Results

Descriptive statistics of the sample were obtained on the study variables. The data had no missing values and there were no extreme outliers in the data. The mean scores for social support was 30.32(*SD*=7.81) with a score range of 6-36 and for post traumatic growth, it was 27.47(*SD*= 9.15) with a score range of 1-48.The values of skewness for social support and post traumatic growth were -1.84 and .005 respectively which were within the acceptable range of±1.96. The alpha reliability values for the test scores on social support and post-traumatic growth were .88 and .78 respectively (Table 1).

Table 1

Correlations between the Study Variables (*N* = 260)

Variables	*Range*	*M*	*SD*	α	*Skew*	1	2	3	4	5
Age of deceased	20-90	45.20	14.57			-	-	-	.01	-.17**
Educational level							-	-	-.02	.15*
Nature of death								-	.02	-.04
Social support	6-36	30.32	7.81	.88	-1.84				-	.08
Post Traumatic Growth	1-48	27.47	9.15	.78	.005					-

*$p < .05$; **$p < .01$

Table 1 indicates positive and weak relationship of social support with post traumatic growth. Age of deceased, education level of participants, and nature of death are marginally related to social support. The nature of death is negatively and weakly related to growth. However, age of deceased is significantly negatively and education level of participants is significantly positively related to post-traumatic growth.

Table 2

Mean diffrences across expected death and sudden death (*N* = 260)

	Expected Death (*n*=128)		Sudden Death (*n*=132)				95% CI		
Variable	*M*	*SD*	*M*	*SD*	*t(258)*	*P*	*LL*	*UL*	*Cohen`s d*
Social Support	30.14	7.90	30.49	7.74	-.36	.71	-2.26	1.55	.04
Post-traumatic Growth	27.88	9.16	27.08	9.15	.69	.48	-1.44	3.02	-.08

Note: ** $p<.01$, *$p<.05$; *CI* = Confidence Interval. *LL* = Lower Limit. *UL* = Upper Limit

Results of t-test analysis indicated (Table 2) that there are no statistically significant mean group differences on social support (t = -.36, p = .71) and post-traumatic growth (t = .69, p = .48) based on nature of death. No meaningful mean group differences on social support and post-traumatic growth were observed based on age of deceased and education level except the following: death of one year and below age group of deceased led to statistically significant higher level of post-traumatic growth as compared to age groups of 21 -30 years and 51-60 years; participants with education level of up to primary reported significantly higher post-traumatic growth as compared to illiterate participants (table not displayed).

For testing the hypotheses of the study, multiple linear hierarchical regression analyses were run in which age of the deceased, education level and nature of death were entered in the first step, and social support was entered in the equation in second step (Table 3).The results of the first stage showed that age of deceased, education level of participants and nature of death collectively explained 4.7 % of the variance (Adjusted R^2 = .035) in post-traumatic growth which was significantly different from statistical zero (F(3, 256)= 4.17, p = .007).

Social support was entered in the equation in second stage and the total variance explained by the model in post-traumatic growth was 5.5% (Adjusted R^2= .040). The introduction of social support explained additional .8% in post-traumatic growth after controlling for age of deceased, education level and nature of death (ΔR^2 = .008; (F (1,255) = 3.67, p= .006).

Age of deceased was statistically significant predictor of post traumatic growth. Education level of participants was observed as statistically significant positive predictor for post-traumatic growth; however nature of death (This variable was dichotomous and labeled as 1 = expected death and 2 = sudden/violent death) was negative but statistically not significant predictor for post traumatic growth (B =-.61, CI = -2.81 – 1.59). These findings resulted in acceptance of the first hypothesis and non-acceptance of the second hypothesis respectively. Social support was observed as statistically non-significant predictor for post-traumatic growth resulting in non-acceptance of the third hypothesis.

Table 3

Hierarchical Regression Analyses of predictors of Post-traumatic Growth (N = 260)

	Post Traumatic Growth		
	Model 1	**Model 2**	
	B	***B***	***95 % CI***
Constant	30.34**	27.23**	[26.03 – 34.66]
Age	-.56*	-.56*	[-1.11 – -.20]
Education Level	.52*	.53*	[.02 – 1.03]
Nature of Death	-.61	-.64	[-2.81 – 1.59]
Social Support	.01	.10	[-.036 – .24]
R^2	.047	.055	
F	4.17**	3.67**	
ΔR^2		.008	
ΔF		2.13	

*p< .05, **p< .01.

Overall, the results of the hierarchical regression showed that age of deceased and education level are statistically significant predictors of post-traumatic growth and the introduction of social support in second stage (ΔF = 2.13, p = .14) did not create statistically significant change in the overall model (Table 2).

Discussion

In this study, it was observed that social support is very weakly related to post-traumatic growth and it does not significantly predict growth in bereaved individuals. Sorensen and colleagues have also reported insignificant relationship of received support with post-traumatic growth (Sorensen et al., 2019). However, other studies have reported statistically significant association of social support with post-traumatic growth (Aliche et al, 2019; Cui et al., 2017; Drapeau et al., 2019; Mesidor & Sly, 2019). One of the possible reasons for non-significant association in the present study might be the fact that the available support did not meet the psycho-social and emotional needs of participants (Shang et al., 2020) and this non-efficacy of the available social support might be a reflection of the local society in which providing social support is treated more like a social norm rather than a sophisticated coping mechanism.

Moreover, the inconsistency between present study findings on social support as predictor and that of past studies may be explained through understanding the delicate nature of social support. An important dimension of social support is satisfaction with available support. It is possible that social support is abundant around the bereaved parents and spouses, yet the psycho-social and emotional needs of the bereaved are not matched by the available support. As mentioned earlier, in local context, providing and receiving support from significant others are viewed as a kind of social norm rather than active mechanism of dealing with the loss. It is therefore, perhaps, that social support in the present study showed very weak relation with growth and failed to significantly predict post-traumatic growth in bereaved parents and spouses.

The present study indicated that sudden/violent death is statistically non-significant predictor of reduced post-traumatic growth. Though this finding is in line with the assumption of the present study (Hypothesis: 2), however, it is statistically non-significant that's why it does not justify the acceptance of the second hypothesis of the present study. Past studies have reported that sudden/violent death is statistically significantly related to less post-traumatic growth (e.g. Fisher et al., 2020). Individuals bereaved by sudden and violent death report experience of less post-traumatic growth as such individuals go through more intense grief and distress. The severe nature of grief possibly interferes with the cognitive resolution of the traumatic experience.

The findings in the present study indicated education level significant positive predictor of growth. Past studies have examined education level with reference to post-traumatic growth and they have reported mixed findings. Some studies have reported association of more education with higher post-traumatic growth (Rahmani et al, 2012), some studies have observed negative association of education with growth (e.g., Sörensen et al, 2019; Vanhooren et al., 2018), and still other studies have documented no meaningful relation of education level with growth (Aliche et al., 2019). Relevant explanation for findings on education level may be the possible role of some explanatory factor or contextual factor in relationship between education level and growth. This calls for further research on clarifying the mechanisms and factors involved in relationship of education level with growth.

There have been hardly any studies focusing age of deceased in relation to post-traumatic growth. The present study addressed this gap and examined age of the deceased as predictor of growth and the results indicated that age is a statistically significant negative predictor of growth which implies that younger age is related with higher growth. However, analysis of variance indicated no meaningful mean group differences on post-traumatic growth in relation to age of deceased *(see result section)*. Absence of clear and meaningful differences on age of deceased indicates that the effect of age might be intermingled with other factors such as relationship of bereaved with the deceased, socio-economic dependence of the bereaved on deceased, and possibly other contextual factors. The present study also did not observe statistically significant differences on social support and post-traumatic growth based on age of deceased and nature of death. Past studies have also indicated mixed findings in this regard. The findings on mean group differences in the present study call for further empirical researches to bring forth a clear picture of these differences.

Conclusion

The findings of the present study call for attention to enhancing the quality instead of quantity of social support to help extremely distressed individuals. It further calls for careful consideration of socio-demographic characteristics by mental health professionals in their support plans for the bereaved and traumatized individuals.

Limitations

The correlation and cross-section design of the present study does not allow for the causal inference of the findings and time-related changes in the relationship of the study variables. Since the data were collected only from parents and spouses and only from Balochistan Province therefore the findings of the study may not be generalized to other significant relationships of the deceased and populations of other regions.

Ethics and Consent to participate

Ethical approval obtained

Consent for Publication

Consent Approved by the authors

Availability of data and materials

Not Applicable

Competing Interest

None

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None

Authors' Contribution

S.A.A conceptualized the idea, design and completed the entire article (introduction, literature, analyses, discussion and conclusion). Edited the manuscript before submission. M.A.H contributed to the analyses, discussion, conclusion and formatting of the article.Approved the revised version before submission.

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