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Role of Spiritual Intelligence in Post-Traumatic Growth of Frontline and Non-Frontline Medical Students

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Abstract

The COVID-19 pandemic has disturbed the lives of people across the globe. It affected the health care system majorly and challenged the health care workers. Amidst loss of lives, fear of infection, social distancing and so on, some individuals experienced positive changes in their lives which can be termed as post traumatic growth (PTG). Though some studies have been conducted on post traumatic growth of health-care workers, none have looked into its relationship with Spiritual Intelligence (SI). The present research was designed to study the role of spiritual intelligence in post-traumatic growth of frontline and non-frontline medical students. A total of 60 medical students, that includes 30 frontline and 30 non-frontline students, constituted the sample. Post Traumatic Growth Inventory (PTGI, Tedeschi & Calhoun, 1996) and Spiritual Intelligence Self Report Inventory (SISRI, King, 2008) were used to measure the variables in the study. Results indicated that post traumatic growth varied significantly between groups having higher and lower spiritual intelligence; particularly in 'personal strength', 'new possibilities' and 'spiritual change' components of post traumatic growth. The difference in post-traumatic growth of frontline and non-frontline medical students was not found to be significant except in the spiritual change component of post traumatic growth. The correlation between PTG and SI was found to be significant and positive. Results were interpreted with regard to current research in the area and implications were pointed out.

***Keywords**:* post traumatic growth, spiritual intelligence, frontline medical students, non-frontline medical students, COVID-19

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Introduction

The world came to standstill due to COVID-19 outbreak. People experienced anxiety, depression, stress and poor well-being duringCOVID-19 pandemic(Grover et al,2020). During this hard time, health care workers (HCWs) played a central role in the fight against COVID-19. They continued to provide services despite the threats of personal risk of infection, exhaustion, fear of transmission of virus to their family members, witnessing death at home and workplace and so on. These experiences affected their psychological and emotional health to a great degree (Sun et al, 2021).

The pandemic also made people realize the value of life, health and relationships. At the individual level, people developed new interests, habits, activities during the time of lockdown. These positive psychological changes such as developing appreciation, gratitude, new world view etc. is termed as Post Traumatic Growth (PTG, Tedeschi & Calhoun, 1995). Post traumatic growth is the term used to define positive psychological changes resulting from a struggle with traumatic or highly challenging life circumstances. Experiencing a traumatic incident or event like COVID-19 can have a transforming effect on a person's personality and encourage growth. Some studies indicate that the frontline nurses who fought against COVID-19 in health care centres experienced moderate PTG. (Peng et al, 2021). Studies also show that the experience of post-traumatic growth, including all its domains, was significantly different between frontline nurses and non-frontline nurses. (Li et al, 2022)

However, going through a traumatic event in life alone does not result in posttraumatic growth. Not every person who goes through a traumatic experience will always develop posttraumatic growth. Factors such as social support, personality traits, and other individual difference variables play a role too. Among predicting factors of PTG, spiritual intelligence is associated with adaptive growth. Spiritual intelligence involves meaning making of various life events thereby leading to adaptation with traumatic events. King (2008) defines spiritual intelligence as a “set of mental capacities which contribute to the awareness, integration, and

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adaptive application of the nonmaterial and transcendent aspects of one's existence, leading to such outcomes as deep existential reflection, enhancement of meaning, recognition of a transcendent self, and mastery of spiritual states".

The links of spiritual intelligence with post traumatic growth is indicative in related studies on spirituality. Some studies indicate that spirituality is significantly related to the level of PTG (Rzeszutek, Oniszczenko & Kwiatkowska, 2017). And greater levels of spirituality were associated with increase in participants' own PTG (Gesselman et al, 2017). A meta-analytic study (Shaw, Joseph & Linley, 2005) indicated similar findings. However, there is a dearth of studies on Spiritual Intelligence among health care workers which the present study intends to correlate with PTG. The objectives include:

- To compare the post traumatic growth of medical students who differ in spiritual intelligence.
- To compare the frontline and non-frontline medical students in terms of post traumatic growth.
- To examine the inter-relationship between components of spiritual intelligence and that of post traumatic growth.

Method

Sample

A total of 60 medical students constituted the sample with 30 frontline (medical students who had provided service in hospital during the period of COVID-19) and 30 non-frontline medical students (medical students who did not provide service in hospital during the period of COVID-19) in the age group of 23-25 years. Snowball sampling method was employed for the selection of sample.

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Tools

Posttraumatic Growth Inventory (PTGI, Tedeschi and Calhoun, 1996) and Spiritual Intelligence Self-Report Inventory (SISRI 24, King, 2008) were used for collection of data along with biographical information sheet.

Procedure

Individual administration of the tools was followed by scoring. The sample was divided into high and low spiritual intelligence groups on the basis of SISRI scores through median split, and was then compared in terms of their PTGI scores. Similarly, comparison was also made on PTGI scores between frontline and non-frontline medical students. The researcher scored the data collected as per the scoring criteria and put them in SPSS software for statistical analysis.

Results

The first objective of the study was to compare the post traumatic growth of students having high and low spiritual intelligence scores.

Table -1

Results of t-test performed on post traumatic growth (PTG) scores among medical students having low spiritual intelligence (SI) and high spiritual intelligence (SI)

PTG score	N	Mean	SD	Df	t-score	P
Medical Students low in SI	30	55.30	14.891	58	-2.569	.013*
Medical Students high in SI	30	65.17	14.856			

*Significant at .05 level

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As indicated in Table-1, the mean PTG score of medical students having low spiritual intelligence is 55.30 and that of medical students having high spiritual intelligence is 65.17.There is a significant difference in post-traumatic growth among medical students of high and low SI groups (t =-2.569; p<.05).

Table -2

Results of t-test performed on components of post traumatic growth (PTG) among medical students having low spiritual intelligence (SI) and high spiritual intelligence (SI)

		M	SD	Df	t-score	P
Personal Strength (PS)	Medical Students low in SI	12.10	3.699	58	-2.039	.046*
	Medical Students high in SI	14.33	4.722			
New Possibilities (NP)	Medical Students low in SI	12.10	5.054	58	-2.798	.007**
	Medical Students high in SI	15.83	5.279			
Relating to Others (RO)	Medical Students low in SI	18.63	6.256	58	-.441	.661
	Medical Students high in SI	19.27	4.756			
Spiritual Change (SP)	Medical Students low in SI	3.87	2.596	58	-2.237	.029*
	Medical Students high in SI	5.40	2.711			
Appreciation of Life (AL)	Medical Students low in SI	8.60	3.971	58	-1.815	.075
	Medical Students high in SI	10.33	3.407			

** Significant at the .01 level

* Significant at the .05 level

So far as the components of post traumatic growth (PTG) among medical students having low spiritual intelligence (SI) and high spiritual intelligence (SI) is concerned, from table-2 it is

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evident that there is a significant mean difference between medical students having low and high SI in terms of personal strength ($p<.05$), new possibilities ($p< .01$) and spiritual change ($p<.05$) components of PTG.

The second objective of the study was to compare the frontline and non-frontline medical students in terms of post traumatic growth.

Table -3

Results of t-test performed on post traumatic growth scores among frontline and non-frontline medical students

PTG score	N	Mean	SD	Df	t-score	P
Frontline medical students	30	61.57	16.776	58	0.660	.512
Non-frontline medical students	30	58.90	14.411			

As indicated (table-3), there is no significant difference in PTG scores among frontline medical students and non-frontline medical students. One of the reasons for this might be because of the fact that COVID-19 pandemic had a global impact and affected everyone irrespective of whether they worked in a hospital or not. And the non-frontline medical students were kept as backup health care workers and they would be called at any time to work. So, they might have felt the same anxiety, stress and trauma as frontline medical students and therefore experienced similar posttraumatic growth.

To compare the mean scores in the components of post traumatic growth between frontline medical students and non-frontline medical students, t-test was performed.

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Table -4

Results of t-test performed on components of post traumatic growth among frontline and non-frontline medical students

		M	SD	Df	t-score	P
Personal Strength (PS)	Frontline medical students	13.70	4.632	58	.858	.394
	Non-frontline medical students	12.73	4.076			
New Possibilities (NP)	Frontline medical students	14.80	6.472	58	1.187	.240
	Non-frontline medical students	13.13	4.158			
Relating to Others (RO)	Frontline medical students	19.63	5.678	58	.958	.342
	Non-frontline medical students	18.27	5.362			
Spiritual Change (SP)	Frontline medical students	3.93	2.664	58	-2.028	.047*
	Non-frontline medical students	5.33	2.682			
Appreciation of Life (AL)	Frontline medical students	9.50	3.511	58	.068	.946
	Non-frontline medical students	9.43	4.074			

*Significant at .05 level

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From the table-4 it is evident that there is a significant mean difference in component of spiritual change (p= .047) between frontline and non-frontline medical students at 0.05 level. The mean score of spiritual change of frontline and non-frontline medical students are 3.93 and 5.33 respectively.

The third objective of the study was to find out the inter-relationship between components of spiritual intelligence and post traumatic growth.

Table-5

Pearson correlational matrix between components of Spiritual Intelligence and components of post traumatic growth

		Critical Existential Thinking (CET)	Personal Meaning Production (PMP)	Transcendental Awareness (TA)	Conscious State Expansion (CSE)	Total spiritual intelligence
Personal Strength (PS)	Pearson Correlation	.219	.390**	.167	.302*	.330**
	Sig. (2-tailed)	.093	.002	.201	.019	.010
	N	60	60	60	60	60
New Possibilities (NP)	Pearson Correlation	.270*	.364**	.439**	.170	.404**
	Sig. (2-tailed)	.037	.004	.000	.194	.001
	N	60	60	60	60	60
Relating to Others (RO)	Pearson Correlation	.112	.055	.113	-.064	.078
	Sig. (2-tailed)	.395	.675	.391	.625	.556
	N	60	60	60	60	60

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Spiritual Change (SP)	Pearson Correlation	.457**	.058	.323*	.206	.356**
	Sig. (2-tailed)	.000	.662	.012	.114	.005
	N	60	60	60	60	60
Appreciation of Life (AL)	Pearson Correlation	.159	.310*	.059	.350**	.261*
	Sig. (2-tailed)	.226	.016	.655	.006	.044
	N	60	60	60	60	60
Total post-traumatic growth	Pearson Correlation	.314*	.342**	.312*	.242	.388**
	Sig. (2-tailed)	.014	.008	.015	.062	.002
	N	60	60	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

From table-5 it can be found that the correlation between personal strength and personal meaning production; new possibilities and personal meaning production; new possibilities and transcendental awareness; spiritual change and critical existential thinking; and appreciation of life and conscious state expansion are significant ($p<0.01$). The correlation between personal strength and conscious state expansion; new possibilities and critical existential thinking; spiritual change and transcendental awareness; and appreciation of life and personal meaning production are significant ($p<0.05$).

Components of spiritual intelligence such as Personal meaning production, Critical existential thinking and transcendental awareness, significantly correlated with total PTG scores. Components of PTG such as Personal strength, New possibilities, Spiritual change and

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Appreciation of life significantly correlated with total spiritual intelligence scores. Overall there was a positive and significant correlation between spiritual intelligence and posttraumatic growth of medical students.

Discussion and conclusion

The significant and positive relationship between spiritual intelligence and posttraumatic growth opens up a new research area to investigate the underlying commonality of both these constructs. This may provide better insight into the facilitating aspect of human functioning that enables personal growth and helps the person to become what Carl Rogers (1963) termed as 'a fully functioning person'. This is in contrast to when a person is affected adversely by trauma and becoming less functional with clinical symptoms of Post Traumatic Stress Disorder. Secondly, from the results, it is implied that the enhancement of different components of spiritual intelligence among adolescents through training may enhance growth possibilities and build resilience in them. Thirdly, in the clinical settings, PTG can be considered as a strength in clients and therapists can capitalize on this aspect during counseling. Future research with a larger sample size employing both qualitative and quantitative methods of data analysis could provide better insights into the relationship between the variables under consideration.

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