

Self-Transcendence and Spiritual Well-Being Among Stroke Patients

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ABSTRACT

Background: World Health Organization estimated 86% mortality related to stroke world widely occurred in developing countries including, Pakistan. Living a meaningful life after the manifestations of stroke literally demands self-transcendence, which means the reconstruction of life or getting up again with more full potential.

Objective: To identify self-transcendence and spiritual well-being among stroke patients and to determine the association between self-transcendence and spiritual well-being among stroke patients.

Materials and Methods: Analytical cross-sectional study of 210 stroke patients (three months and above inclusion eligibility criteria) were taken from the four rehabilitation centres of SGTH Swat, ATH Abbottabad, LRH and HMC, Peshawar, and responses recorded with validated and reliable questionnaires.

Results: The participants' mean score on the self-transcendence scale was 43.22, and on the spiritual index of well-being mean score were 40.83, respectively. Self-transcendence and spiritual well-being with other demographical variables found statistically significant ($p < 0.05$) on ANOVA and Post hoc test (Games-Howell). The positive strong correlations between the self-transcendence and spiritual well-being on Pearson correlation (r) were also found statistically significant ($r = 0.619$, $p < 0.000$).

Conclusion: The results of this study support the theoretical assumptions of Reed's theory in which during the vulnerability (stroke patients in this study) self-transcendence as an independent variable and protective factor have positive correlations with the outcome and dependant variable, called spiritual well-being. The findings also suggest implications for health care professionals to develop and deliver strategies to enhance vulnerable population self-transcendence for the outcome of spiritual well-being.

Keywords: Self-transcendence, Spiritual well-being, Stroke, Care.

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INTRODUCTION

Stroke is a neurological deficit due to an acute focal injury of the central nervous system by a vascular cause, and is one of the most common causes of morbidity and long-term disability in the world¹. Estimated, 80 million people living in the world experienced stroke, in which, over 50 million survivors, as a result, live with some form of permanent disability and also stand as a leading cause of the death worldwide (116 million deaths).^{2,3} Estimated stroke incidence in Pakistan is close to 250 per 100,000 populations, which means that every year 350,000 new stroke patients occur in Pakistan.⁴ Pushtuns' ethnic group in the country said to have the highest prevalence of high blood pressure and stroke.⁵ Living a meaningful life after the catastrophe of stroke literally demands for self-transcendence, which is, to get up again or rising above with full potential.³ Disability world report preface written by Stephen Hawking pinpointed that, how the

inclusion of such a professionals with self-transcendence can make contributions, fulfilment and flourishing of the society. Studies explored the role of self-transcendence and spiritual well-being positively associated in healthy individuals, twins, elderly cognitively intact persons, oldest old, homeless adults as well as in nursing home patients and specific community like (Amish).^{6,7} Life after stroke manifests physical, spiritual and psychosocial maladies like paralyses and sensory lapses, acute confusional states, disturb power of speech and memory like aphasia and dementia, and sequela of life-threatening consequences like apathy, depression, anxiety disorders, suicidal thoughts, impaired life quality,^{8,9} and so on, call for reassessing and reconstruction of life through finding global meaning, purpose and meaning in life, developing inner strength or posture and making transitions and strive for wellness or preparing for end of life care. Nursing is by all means in the era of theory utilization and holistically benefiting human beings through nursing theory, education, research, and practice.¹⁰ Transcendence along with healing is the concepts of prevailing interest for nurses to incorporate holism in nursing practices.^{11,12} Transcendence is a long forgotten term although found in many disciplines, such as in developmental psychology explained by scholars like Erickson, Maslow, Peck, Frankl and Jung etc, defined as "rising above, moving beyond time, fear, weaknesses and dependency".¹³

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A survey conducted in the thirteen most populous countries of the world during (2010 to 2014) with diverse cultures and religious beliefs, showed different percentages on the scale of religiosity, purpose, and meaning of life, in which, Pakistan stood the highest on that percentage of scales.¹⁴ Self-transcendence in nursing is a developmental process of attaining change and resilience towards maturity, in-depth self-understanding and acceptance, meaning of one-self and others, peaceful transition of life into death and supportive well-being. Self-transcendence as an aspect of spiritual health, integral part of nursing holism and the concept exists since Nightingale through Reed.¹⁵ Reed defined self-transcendence as a movement of self through expanding consciousness an iterative, reflective, non-linear process or expanding self-boundaries with multiple nursing intervention opportunities for the sense of well-being.^{16,17} Further, Reed explained that expansion of these boundaries are, "inwardly through self-awareness and introspection, outwardly by investing oneself in relationships with others and with the environment, and temporally by integrating perceptions of one's past and future to enhance the present".¹⁷ Well-being is a sense of feeling whole and healthy and thus an outcome of self-transcendence.¹⁸ The abstract and contextual nature of the construct spiritual well-being make it very difficult to define in a more explicit and empirical terms. However, attempted has been made to defined it in a simple and more understood way. In this regard, Ellison defined that "spiritual well-being originates from an intrinsic state of spiritual health and is an expression of it, same like the assessment and vital signs of one's person is an indication of a good physical health".^{19,20} Self-transcendence recognizes that all aspects of the human experience influence a person's well-being.²¹ As an example, nurses who have achieved high levels of self-transcendence were more promising towards their job than those with low self-transcendence.²² Further, interactions between nurses and patients can facilitate self-transcendence in patients, improving their health and their global well-being.²³ Understanding transcendence helps health care professionals to understand people's ways of developing the self and enduring during wellness and illness. It serves as a dual role of both encouragement and inspirational for the patient to achieve wellness, and as a motivation and purpose for the nurse as acting as a caregiver.¹⁶ The rationale of this study is self-transcendence and spiritual well-being

concepts would have been helpful for a healthcare worker especially nurses to incorporate spirituality and transcendence in holistic health care of the patients.

MATERIALS AND METHODS

A simple descriptive cross-sectional study design was used in the study, in which, 210 stroke participants data collected from the physiotherapy and rehabilitation centres of LRH, HMC, Ayub Teaching hospital, and Saidu Group of teaching hospitals during March, 2019 to May, 2019. The OpenEpi sample size calculator software was used to estimate the sample size and calculated as 207 participants (210 collected) by entering the parameters of prevalence 84%, 0.05 significance level, 95% confidence level, and bound of error 05% with design effect of 1 and default population size. Consecutive sampling strategy was utilized as stroke patients used to visit to on selected days for physiotherapy and rehabilitation activities as well as for their routine checkups from the physio-rehab consultants and physiotherapists in clinics. Proportionate sampling strategy was utilized by visiting to each center on selected days consecutively until the sample size met. The number of participants from each center was selected considering the patients flow in each center, respectively. In this regard, 60 participants' data were obtained from the Saidu Group of Teaching Hospital Swat centre, 52 from Ayub Teaching Hospital Abbottabad centre, 52 from Hayatabad Medical complex Hayatabad Peshawar and 46 participants were taken from Lady Reading Hospital Peshawar centre. All stroke patients having at least three months of symptoms were included in the study. Unwilling to participate, Transient Ischemic Attacks, Cognitively impaired (disoriented, delirium, comatose, unconscious etc), Post stroke complications like aphasia, mental health problems (depression, dementia, etc) were excluded because of possible confounders.

Data collected after approval from the Advance Studies Review Board and Ethical Board KMU through standardized questionnaire of (Likert type) Self-transcendence scale (STS) and Spirituality Index of Well-being (SIWB). The STS has validity range from 0.80 to 0.93 with test-retest reliability of 0.95 and SIWB Cronbach's alpha is 0.91. SPSS version 24 used for data analysis, and excel was used to drawn graphs.

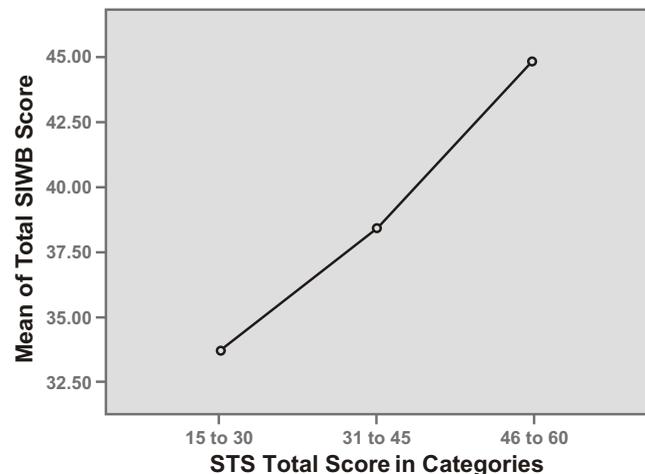
RESULTS

The participants selected for the study were 210 stroke adults having at least 3 months of having the disease without those complications specified in the exclusion criteria. In the demographic section of the study, results showed 128 male participants which accounted for 61% of the total population. The qualifications were categorized as no formal education at all 54.8%, Primary till Matric 30.5%, Intermediate 5.2%, and Graduation and above were only 9.5%. Majority of the participants (209) were Muslims. In marital status, 8 individuals were single, 4 had divorced, 32 were widowed, and 166 (79%) were married. Participants remained with no employment were 58.6%, Government employed were 11.4%, private employment were 3.8%, and those who have self-employment (business, farmers, shopkeepers etc) were 26.2%. Among those stroke individuals 39.5% were hypertensive, 14.3% were diabetics, 1.4% had some active or chronic cardiovascular disease, 1% Respiratory problem, 0.5% Renal disease, and 78 individuals (37.1%) fall in the category of more than one disease including the above. Initially five data collection centres were selected for the data collection but data were collected from only the four centres because of the successful obtaining permission from these four centres in which 60 individuals were selected consecutively from the physiotherapy and Rehabilitation centre of Saidu Group of Teaching Hospital Swat, 52 participants came into Ayub Teaching Hospital Abbottabad, 52 patients to Hayatabad Medical Complex Peshawar, and 46 participants were found in the Physiotherapy and Rehabilitation centre of the Lady Reading Hospital Peshawar. Participants' age in (years) and duration of stroke occurrence in (months) were kept open as continuous variables and means and standard deviations were derived. The age groups mean were 60 ± 13.32 standard deviation with standard error of mean 0.91, median 61.0 and the minimum age were 28 years and the maximum were 110 years. Similarly, total duration of having stroke in months had the mean value 14.74 ± 13.94 with standard error of mean 0.96 and median duration 9.00, the minimum months recorded after stroke were 3 months and the maximum time noted were 96 months.

The instrument measured the self-transcendence was Self-transcendence Scale (STS) which comprised of 15 questions on a likert type scale from “not at all” 1 mark each for a question to “very much” 4 marks for a question stating doing much

for enhancing self-boundary. The 15-item questionnaire carried 15 marks minimum and $15 \times 4 = 60$ maximum for a person on average. The scale were kept open continuous scale but categories were also formed in terms of better understanding and some statistical work-up in which; score 15 to 30 indicated low level of transcendence accounted by 1.9%, 31 to 45 moderate level of transcendence showed by the majority 66.2%, and score range 46 to 60 shows high level of transcendence yielded 31.9% results. These levels were formed and established under the guidelines of the tool developer. Similarly, the other Spirituality Index of Well-being (SIWB) scale having items with likert type responses also has a mean score on continuous basis which kept like that and also transformed into categories, in which scored 24 and below (low level of spiritual well-being) were expressed by the least 1.4%, followed by 25 to 48 (moderate level of well-being on spirituality index) showed the maximum 87.6% results, and the last category from score 49 to 60 (high level of spiritual well-being) responded by 11% participants.

The analyses after considering the demographic statistics, the statistical tests used were analysis of variance (ANOVA), Post Hoc (Games-Howell) and Pearson correlation tests for the association among variables.



Graph 01: STS Association with SIWB on Graph:

For determination of where the difference exists or which group differs specifically, Post hoc tests help. To evaluate the nature of the differences between the means further, Post hoc comparisons were conducted with the use of Games-Howell test since, the assumption of unequal sample sizes but equal variances or unequal variances assumed. Games-Howell is the most popular and

robust post-hoc in SPSS, in the case of unequal sizes as well as unequal variances, simultaneously.

Post-hoc Games-Howell revealed significant pair wise differences between the self-transcendence and the three categories of spiritual index of well-being scale as measured for self-transcendence. Post-hoc Games-Howell evaluated after ANOVA also appeared to be statistically significant on all the categories. The category scored ≤ 24 in comparison to 25 through 48 has a ($p < 0.028$), ≤ 24 in comparison to ≥ 49 has a ($p < 0.000$), and 25 through 48 with ≥ 49 has a ($p < 0.000$). (Table 01)

Table 01: Post-Hoc Games-Howell

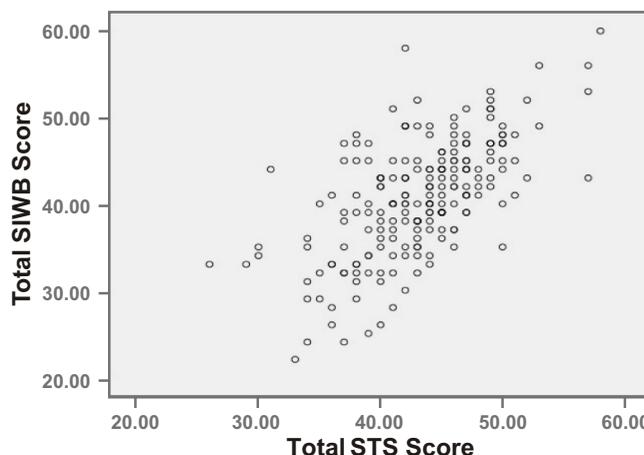
(I) SIWB New Categorical Variable	(J) SIWB New Categorical Variable	P Value Sig.
24 and below	25 through 48	.028
	49 and above	.000
25 through 48	24 and below	.028
	49 and above	.000
49 and above	24 and below	.000
	25 through 48	.000

*.The mean difference is significant at the 0.05 level.

Self-transcendence score compared with the spiritual well-being find to be positively associated, i.e. Pearson correlation ($r = 0.619$, $p < 0.000$).

	Total STS Score	Total SIWB Score
Total STS Score	Pearson Correlation	1
	Sig. (2-tailed)	.619**
	N	210
Total SIWB Score	Pearson Correlation	.619**
	Sig. (2-tailed)	1
	N	.000

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



Graph 02: Scatter plot of association between STS and SIWB:

DISCUSSION

Self-transcendence with both the variables of ethnicity and religiosity were not statistically significant in this study and for ethnic groups showed a mean score of 42.4 on STS scale. This result was compared with Amish community which shows self-transcendence with a mean score of 49.72 out of total score 60 which shows high level of self-transcendence in them as compare to this study population who showed moderate level of transcendence (31 45) on average but the Amish community participants mostly were healthy people as compared to the stroke patients in the current study. However, the association of self-transcendence with the spiritual well-being in the Amish appeared to have the similar degree of significant positive association on Pearson correlation ($r = .52$, $p = .01$) as compare to the association of self-transcendence with spiritual well-being ($r = .62$, $p = 0.000$) in the current study.⁸ In the study upon homeless adults with no disease, the mean self-transcendence score 48.75 also tends to be high as compared to the mean scores of self-transcendence in this study. Likewise the association of self-transcendence with well-being ($r = .68$, $p < .001$) which showed approximate level of association with this study ($r = .62$, $p = 0.000$).²⁴ Contrasting to this association with cultural and ethnic groups, a study reported the contrasted findings mentioned that the concept of self-transcendence is not meaningful to Hispanic patients.²³ The interventions study on the self-transcendence of kidney disease patients that were on haemodialysis found the mean score of 43.18 which is equal with the mean transcendence score of the current study 43.22 and this means that self-transcendence is closely associated with disease, the mean score in the

interventions arm increased to the 48.64 in that study, showed the capacity of increase in the self-transcendence score by relevant interventions.²⁵ Interventions in the multiple sclerosis patients also gave rise to the mean score of self-transcendence and elevated it from 44.57 to 53.21 in those patients through interventions.^{26,27} Theoretically associated self-transcendence and spiritual perspectives with spiritual well-being serve as a source and predictor in the studies and also established relationships with physical and psychological health and well-being. Studies found empirically that association of self-transcendence promotion with physical health promotion and also used as a coping resource strategies self-transcendence, the only significant predictor for both adaptive and maladaptive coping variable to serve as a protective factor in colo-rectal cancer patients.²⁸ Another study of parental caregivers' well-being of the children undergoing cancer treatment, self-transcendence mediated the relationship between resilience and well-being in parental caregivers and also had some clinical implications.²⁹ Health care workers especially physicians and nurses have the obligations of the holistic care integration which includes psycho-socio-spiritual care along with physiological care in the emergent and evolving health care trends to focus and direct on that aspect of the person's life. Interpersonal relationship and collaboration requires for the healthy outcomes. Studies conducted on self-transcendence and nurse-patient interaction in cognitively intact nursing home patients for the outcome of multidimensional well-being and as a resource for hope and meaning in life found positive association among self-transcendence and constructs like meaning in life, interconnectedness dimension of hope, social, emotional, physical, functional, and spiritual well-being.^{7, 18} The strong correlations of self-transcendence, and well-being along with other variables on variances of interest showed consistency with the findings that of the other studies with substantial significant associations predict pragmatic mediator of physical, psychological, emotional and spiritual aspects of well-being and quality of life.³⁰⁻³²

CONCLUSION

The study serves nursing research by adding the body of knowledge about self-transcendence, and well-being in stroke individuals in Pakistani context by providing the evidence of the association of theoretical concepts through their

findings support. The participants in the presence of vulnerability (having stroke and also other comorbidities) despite have some self-transcendence for achieving spiritual well-being. The statistical significance of the findings empirically approve the theoretical constructs and being protective factors the self-transcendence has the capacity to be enhanced for the successful gain of spiritual well-being, happiness and quality of life. This study conducted upon the stroke individuals will also provide a basic mapping pathway to further investigate the role of these variables through more robust and explicit as well as longitudinal studies in a person life and serves as a basis for formulating interventions that will help to enhance well-being in vulnerable populations.

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DATA SHARING STATEMENT: The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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AUTHOR'S CONTRIBUTION
 The following authors full fill authorship criteria as per ICMJE guidelines;

Suliman M: Idea conception, drafting the work, final approval, agreed to be accountable for all the work.

Ghani N: Design of the work, data acquisition, critical revision, final approval, agreed to be accountable for all the work.

Sohail M: Data analysis, drafting of the work, final approval, agreed to be accountable for all the work.

Reed PG: Data interpretation, critical revision, final approval, agreed to be accountable for all the work.