



## Review Article

# Investigating a Relationship between Religiosity and Perceived Stress in Hospice Workers

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### Abstract

Hospice workers are placed in a high intensity field where death of patients is a frequent occurrence. Working in such an environment can cause higher than usual levels of stress for hospice professionals in direct contact with these patients. Religiosity has been seen as a potential buffer to high stress levels. However, minimal research has been conducted into the relationship between religiosity and stress levels in the hospice care team, which includes healthcare professionals, social workers, chaplains, music therapists and volunteers. This study examines if there is a correlation between a hospice worker's level of religiosity and their perceived stress levels. The results found that religiosity mediates perceived stress levels, that is, individuals with higher religiosity tend to have a lower perceived stress score. These findings provide insight into how hospice workers can improve their mental health in order to best serve their patients and prevent burnout in the field.

### Introduction

Workers in hospice care facilities face stressors in the workplace due to the nature of the job. Hospice is usually where patients are sent when they have less than 6 months to live as determined by their physician. Therefore, hospice workers are constantly confronting situations that are emotionally draining by taking care of these individuals who are nearing the end of their life. Writes that not only does working with hospice patients cause burnout and compassion fatigue, it also detracts potential employers in the hospice and palliative care field as well decrease retainment in the industry [1]. Found that religion can play a buffering role in the adults relationship with stress [2]. However, there is limited information specifically correlating the stress of hospice workers to religion. The role of religion plays a large role in the hospice field. [3] write that “when a patient is ‘looking death in the eye’, the anxiety and fear experience are mitigated by

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the religious and spiritual beliefs that help the individual find ‘continuity’ irrespective of the perceived finitude in life [3]. If religion plays a large role in helping hospice patients finding meaning in end-of-life, religion can play a role in mitigating hospice worker’s stress when working with such patients.

In order to understand how the hospice field can lead to increased stress levels on a worker, one must understand the hospice mission. Patients who choose hospice care focus on end-of-life comfort and support, rather than treatment and curing. Therefore, the hospice team is not only comprised of physicians and nurses, but also chaplains, social workers, music therapists and volunteers. All individuals in the hospice care team are trained to work in direct contact with patients who are nearing death. These individuals are faced with patients who are inevitably close to death and do not want a curing treatment. Therefore, a sense of helplessness can lead to increase with stress in the hospice care team. In order to see if religion can play buffering the high stress field of hospice, this research study employs the Perceived Stress Scale(PSS-10) originally developed by which is widely used to assess stress levels in young people above 12 years old and above [4]. Additionally, the Centrality of Religiosity Scale developed was conducted on participants to measure the “centrality, importance or salience of religious meanings in personality” [5]. Results from both quantitative surveys were analyzed to determine if increasing levels of religiosity can help to reduce stress levels in hospice worker in order to from stance on the role of religiosity in buffering stress in hospice workers.

### Methods

Participants were recruited from one for-profit and two non-profit hospice community organizations in the Dallas-Fort Worth metroplex. Participants were screened in order to ensure they were over the age of 18 and were living in the Dallas-Forth Worth Area. Additionally, participants were required to work in the hospice work place in direct contact with patients due to the nature of the study. Religious affiliation was collected although the Centrality of Religiosity accounts for differences in religion. Participants completed a survey which incorporated the PSS-10 as well as the Centrality of Religiosity survey as described below. In return for completing the study, participants were given a \$10 Target virtual gift card. The survey was disseminated through Qualtrics by word of mouth and approved by the Institutional Review Board at Southern Methodist University.

### Participants

Results from 19 hospice workers in the Dallas-Fort Worth area were recorded. The sample is a diverse representation of the roles of the hospice team including registered nurses (n=9), volunteers (n=4), chaplains (n=2), social workers (n=1), certified nurse assistant (n=1), volunteer coordinators (n=1) and music therapists (n=1). Religious affiliation was also varied as participants were Christian or of the Christian denomination (n=11), Hindu (n=1), not affiliated to any religion (n=3), or other (n=4). Age ranges of the participants was also diverse with participants in each category: 18-30 (n=5), 31-40 (n=2), 41-50(n=7), 51-60 (n=3) and 61- 70 (n=2).

## Materials

### Perceived Stress Scale

In order to measure the perceived stress of participants, the Perceived Stress Scale was administered [4]. While the original scale was a 14-item questionnaire, the shortened 10-item questionnaire was employed for this study. The total score achievable on the perceived stress scale ranges from a minimum of 0 to a maximum of 40, with each question being scored from 0 to 4. Score ranges from 0-13 suggest low perceived stress, 14-26 suggest moderate perceived stress and 27-40 indicate high perceived stress Table 1. The internal consistency of the PSS-10 was adequate with a Cronbach’s alpha a coefficient of 0.754 [6].

Statement	Never=0	Almost never=1	Sometimes=2	Fairly Often=3	Very often=4
In the last month, how often have you been upset because of something that happened unexpectedly?					
In the last month, how often have you felt that you were unable to control the important things in your life?					
In the last month, how often have you felt nervous and “stressed”?					
In the last month, how often have you felt confident about your ability to handle your personal problems?					
In the last month, how often have you felt that things were going your way?					
In the last month, how often have you found that you could not cope with all the things you had to do?					
In the last month, how often have you been able to control irritations in your life?					
In the last month, how often have you felt that you were on top of things?					
In the last month, how often have you been angered because of things that were outside of your control?					
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

**Table 1:** The Perceived Stress Scale. Please indicate how often you have felt the things mentioned below in the last month.

### The Centrality of Religiosity Scale

In order to measure level of religiosity in participants, the Centrality of Religiosity [5] was administered to participants. This tool, which has been modified for use on major world religions, groups the five dimension of religiosity including public practice, private practice, religious experience, ideology and intellectual dimensions into the total measurement of religiosity Table 2. The English scale is a 15-item question, extended to be applicable to a wider scope of religions, that measures responses on a 5-point scale when assessing items ‘concerning prayer, meditation and religious services. To calculate the CRS, the total item score is divided by 15 to get an average CRS score between 1 and 5. Scores are categorized into three groups with a score of 1-2 considered not religious, 2.1-3.9 considered religious and 4.0-5.0 considered highly religious. The internal consistency of the CRS-10 was adequate with a Cronbach’s alpha a coefficient of 0.93 [5].

Statement	Responses
1. How often do you think about Religious issues?	1. Very often
	2. Often
	3. Occasionally
	4. Rarely
	5. Never
2. To what extent do you believe that God or something divine exists?	1. Very often
	2. Often
	3. Occasionally
	4. Rarely
	5. Never
3. How often do you take part in religious services?	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One or three times a month
	F. A few times a year
	G. Less often
	H. Never
4. How often do you pray?	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One of three times a month
	F. A few times a year
	G. Less often
	H. Never
5. How often do you experience situations in which you have feelings that God or something divine intervenes in your life?	1. Very often
	2. Often
	3. Occasionally
	4. Rarely
	5. Never

6. How interested are you in learning more about religious topics?	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all
7. To what extent do you believe in an afterlife-e.g. immortality the soul, resurrection of the dead or reincarnation?	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all
8. How important is to take in religious services?	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all
9. How important is personal prayer for you?	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all
10. How often do you experience situations in which you have the feeling that God or something divine wants to communicate or to reveal something to you?	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One or three times a month
11. How often do you keep yourself informed about religious questions through radio, television, internet, newspapers, or books?	F. A few times a year
	G. Less often
	H. Never
	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One or three times a month
F. A few times a year	
12. In your opinion, how probable is it that a higher power really exists	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all
13. How important is it for you to be connected to a religious community	1. Very much so
	2. Quite a bit
	3. Moderately
	4. Not very much
	5. Not at all

14. How often do you pray spontaneously when inspired by daily situations?	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One or three times a month
	F. A few times a year
	G. Less often
	H. Never
15. How often do you experience situations in which you have the feeling that God or something divine is present?	A. Several times a day
	B. Once a day
	C. More than once a week
	D. Once a week
	E. One or three times a month
	F. A few times a year
	G. Less often
	H. Never

**Table 2:** The Centrality of Religiosity Scale.

### Procedure

The current study was granted ethical approval by the Institutional Review Board at Southern Methodist University. Data collection was conducted over the course of four months. Permission for data collections at each of hospice organizations was granted. The researcher attended IDG (interdisciplinary group) of the hospice organizations. IDG is a team meeting of hospice workers biweekly in order to assure that staff is providing effective care to hospice patients. The researcher discussed the study at the beginning of IDG of the organization and handed out flyers and business cards with a QR code to the survey as well as contact information of the researcher. If workers wished to participate, the QR code would guide them to an informed consent form followed by the survey. The survey was a three-part questionnaire which included demographics, perceived stress scale and centrality of religiosity. At the end of the survey, the participants were guided to enter their email if they wanted the results of the study as well as the \$10 Target gift card for completing the survey (Table 3).

### Results

Participant Number	PSS Score	PSS Categorization	CRS Score	CRS Categorization
1	23	Moderate stress	3.87	Religious
2	9	Low Stress	4.93	Highly-Religious
3	21	Moderate Stress	2.80	Religious
4	17	Moderate Stress	4.80	Highly-Religious
5	8	Low Stress	4.67	Highly-Religious
6	21	Moderate Stress	2.0	Not-Religious
7	22	Moderate Stress	2.3	Religious
8	20	Moderate Stress	1.0	Not-Religious

9	20	Moderate Stress	1.60	Not Religious
10	21	Moderate Stress	1.40	Not Religious
11	23	Moderate Stress	1.33	Not Religious
12	20	Moderate Stress	3.27	Religious
13	16	Moderate Stress	4.33	Highly Religious
14	14	Moderate Stress	3.53	Religious
15	17	Moderate Stress	4.20	Highly-Religious
16	18	Moderate Stress	3.67	Religious
17	11	Low Stress	4.33	Highly-Religious
18	19	Moderate Stress	3.89	Religious
19	23	Moderate Stress	1.67	Not Religious

**Table 3:** Results of PSS scores and CRS scores including categorization for 19 participants.

### Descriptive Statistics

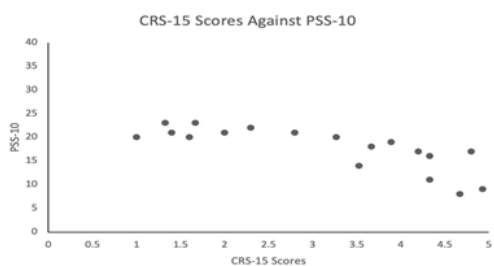
Scale	Mean	Standard Deviation
Perceived Stress Scale(PSS-10)	18.05	4.61
Centrality of Religiosity Scale(CRS-15)	3.14	1.32

**Table 4:** Descriptive statistics of the entire samples mean score on the two scales.

Table 4 describes the resulting means and standard deviations of the measures of the surveys of the sample of hospice professionals and volunteers who took part in the research. The Perceived Stress Scale has a mean score of (M=18.05, SD=4.61), showing that the participants had moderate level of perceived stress. The Centrality of Religiosity (CRS-15) had a mean score of (M=3.14, SD=1.32) showing that participants were on average moderately religious.

### Inferential Analyses

The CRS-15 scores of the 19 participants were plotted against the PSS-10 scores to determine if correlation statistics were appropriate to use to compare results. A slight negative correlation between CRS-15 Scores and PSS-10 was observed Figures 1-3.



**Figure 1:** Scatterplot of CRS-15 and PSS-10.

The Pearson Correlation Coefficient test was then conducted to see if there was a significant linear negative correlation. The Pearson's Correlation is used to show linear relationship between two variables. It is calculated as:

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

**Figure 2:** Formula of the Pearson Correlation Coefficient.

The calculated Pearson Correlation Coefficient was determined to be  $r(17)=-.72$ ,  $p=.000565$ ,  $p<0.01$ . Therefore, the relationship between religiosity and perceived stress was negative and significant.

The Spearman Correlation Coefficient determines if there is a monotonic relationship between the two variables and is less sensitive to outliers. It is calculated as:

$$r_s = 1 - \frac{6 \sum D^2}{N^3 - N}$$

**Figure 3:** Formula of the Spearman Correlation Coefficient.

The calculated Pearson Correlation Coefficient was determined to be  $r_s(17)=-0.74494$ ,  $p(2\text{-tailed})=0.00025$ ,  $p<0.01$ . Therefore, the relationship between religiosity and perceived stress was negative and significant Table 5.

Statistical Test	R value	P value
Pearson Correlation Coefficient	-.72	.000565
Spearman Correlation Coefficient	-.74	.00025

**Table 5:** Summary of the R values and P values determined by the Pearson Correlation Coefficient and Spearman Correlation Coefficient Test.

Since the R values using the Pearson Correlation Coefficient and the Spearman Correlation Coefficient are similar the strength and direction of the relationship between the two variables, religiosity and stress, that are correlated are similar. Therefore, the relationship between religiosity and stress is a negative correlation.

### Discussion

The primary hypothesis predicted that religiosity would be negatively correlated with levels of perceived stress and correlated with lower levels of perceived stress. The study examines if religiosity can buffer perceived stress in hospice workers. The findings suggest that there is a slight negative correlation between religion and stress. Therefore, the hypothesis of this exam was supported.

### Limitations

The results supporting the hypothesis of the study suggest that religiosity plays a role in buffering perceived stress. However, the average perceived stress levels of works can be analyzed. After conducting the Perceived Stress Scale, it was found that no participants

in the study were experiencing high perceived stress levels. It was assumed the hospice field was a highly stressful field due to the proximity of dying patients. Although the lower-than-expected perceived stress levels can be attributed to the small sample size, explanations are available as to why the average stress level in hospice workers was determined to be moderate although workers encounter experiences with death quite often [7]. Found in an ethnographic study of 24 hospice and palliative care professionals that workers view of end-of-life was that it is a meaningful stage of life, potentially decreasing death-related anxiety and fear.<sup>7</sup> Therefore, this lower-than-expected perceived stress among officials can be attributed to the mindset around death in the palliative and hospice care. Workers are passionate and see end-of-life in a non- negative setting.

### Future Research

The PSS-10 is a measure of perceived stress. This can cause limitations as the PSS-10 is a subjective scale. Therefore, future research can focus on measuring stress in biomarkers such as cortisol levels as well as the subjective measure of the PSS-10 to see if there is still a significant correlation between religiosity and stress levels. Another limitation was the scope of the study, which was restricted to hospice workers in the Dallas-Fort Worth areas. Future research can look into both hospice and palliative care professionals using a larger sample size. Finally, research into other fields in healthcare can be examined to see if they also have a similar correlation between religiosity and stress. Since the hospice and palliative care field focuses more on religiosity due to dealing with the after-life, examination into whether religiosity can buffer stress in other healthcare fields can be conducted.

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