ORIGINAL RESEARCH

Relationship between spirituality and suicidal ideations among patients with major depressive disorder

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Received: September 24, 2018 **Accepted:** December 6, 2018 **Online Published:** December 28, 2018
DOI: 10.5430/jnep.v9n4p113 **URL:** https://doi.org/10.5430/jnep.v9n4p113

ABSTRACT

Background and objective: Suicide still constitutes to be a critical and risky issue requiring preventive strategies. There is evidence to suggest that spirituality is vital to the process of discovering meaning in life and plays an important role in dealing with suicidal desire. The aim of this study was to investigate the relationship between spirituality and suicidal ideations among patients with major depressive disorder.
Methods: Design and participants: A descriptive correlational design was utilized in the current study. A purposive sample of 181 patients with major depressive disorder was recruited. Setting: The study was conducted at inpatient psychiatric department of Tanta University and Neurology, Psychiatry, and Neuro-Surgery Center. Both hospitals are under the supervision and direction of the ministry of higher education. Tools: Four tools were used to collect data; socio-demographic and clinical characteristics structured interview schedule, Beck Depression Inventory, Daily Spiritual Experience Scale, and Scale for Suicide Ideation.
Results: The current study indicated a statistical significant negative correlation between depression and spirituality. Also, a statistical significant negative correlation was found between spirituality and one subscale of suicide which is active suicide desire subscale. On the other side, there was a statistical significant positive correlation between depression and total score of suicide.
Conclusions: Higher levels of spirituality may help buffer risk of active suicide desire and promote protective effect against depression. Recommendation: interventions that aim at increasing spiritual involvement and practice may be beneficial in reducing depressive symptoms and suicide desire.

Key Words: Suicide, Major depressive disorder, Spirituality

1. INTRODUCTION

Suicide is the primary emergency situation; it represents a major problem for public health as well as economic and social areas.[1] Rates of suicide have increased by 60% over the last forty five years worldwide. 95% of those who commit suicide has mental disorders and 80% of them diagnosed with major depressive disorder.[2,3] Suicide attempts among patients with depression are strongly linked with the existence and severity of depressive symptoms. It is predicted by lack of support, time spent in depression and previous suicide attempts.[4]

Suicide still constitutes a critical and risky issue requiring preventive strategies.[5] Psychopharmacology used to prevent

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suicide in patients with depression has more complications.[6] Moreover, electroconvulsive therapy (ECT) also causes some complication along with treatment and is contraindicated for some patients.[7] Another treatment for these patients is psychotherapy which focus on spirituality, it's introduced and considered an important treatment after somatic therapy for those patients.[8,9]

Spirituality is an individual's beliefs about life, death, illness, health, and one's relationships to the universe. It is not an individual creation; it is formed by larger social circumstances, beliefs, and values of the extensive culture. It is also a personal quality that attempts for inspiration, respect, and purpose in life. The term spirituality and religious are often used interchangeably. Religious is an organized system of beliefs about the knowing power that govern the universe and offer guidelines for living in harmony with the universe and others. It is defined as reverence for God or the fear of God. It is also has been described as a specific manifestation of one's spiritual drive to create meaning in the world and to develop relationship with God.[10–14]

Spirituality helps people to create a sense of purpose in life, inner self, other people, God, and nature, helps improve personal and professional relationships, and provide peace in mind by renewing hope. Moreover, it helps increase self-worth, self-confidence, self-esteem, self-control, and help people to accept their problems and faster recovery from stress and other symptoms of mental illness. Spirituality affects mental health in positive way and creates an environment conductive for personal wellbeing. There is evidence indicated that people suffering from numerous mental health problems such as anxiety, stress, depression and suicide benefit from spirituality.[15,16]

Several suggestions have been present to explain the effect of spirituality on suicidal behavior. For example, some researchers believe that it is the moral objections to suicide of some religious ethnicities; or lower aggression level in religiously affiliated persons; or the stronger social control and social integration offered by the religious group (including friendship network and family integration).[13–16]

However, there are contradictory findings regarding the relationship between spirituality and suicide. Some studies found that, spiritual involvement can safeguard against depression, anxiety, substance use disorder, hopelessness, and suicidality.[17–19] It is also linked with positive emotions, such as greater life satisfaction, well-being, and optimism. These feelings help to counteract the negative emotions that trigger depression and suicide.[20] Furthermore, more spirituality protects against suicide by increasing the ability to cope with unavoidable life stressors, and deepening one's sense of purpose or meaning in life.[9,21,22] More precisely, spirituality may help cognitive reappraisal; the ability to change one's thinking about emotionally charged situations and/or the ability to experience negative emotions without suppression.[23]

On the other side, spirituality may create high standards that are difficult to live up resulting in a sense of failure and guilt, social isolation and increase severity of depressive symptoms.[24] According to some investigations; religion is associated with depression and suicide.[25] Others studies found that there is no association between spiritual beliefs, and suicide attempts.[25,26]

Therefore, further nursing researches in this area are needed to understand how spirituality impacts suicidal act. Given the sufficient attention to patients' spirituality by all staff in psychiatric hospitals could be an additional resource in psychiatric nursing care and psychotherapeutic treatments targeting suicidal acts.

1.1 Aim of the study

The aim of the study was to investigate the relationship between spirituality and suicidal ideation among patients with major depressive disorder.

1.2 Research questions

What is the relationship between spirituality and suicidal ideation among patients with major depressive disorder?

2. Subject & method

2.1 Research design

A descriptive correlational design was utilized in the current study.

2.2 Setting

The study was conducted at two settings:

1) The inpatient psychiatric department of Tanta University with a capacity of 31 beds divided into two wards for male (17 beds) and two wards for female (14 beds).
2) The Neurology, Psychiatry, and Neuro-Surgery Center with a capacity of 28 beds divided into one ward for male (18 beds) and one ward for female (10 beds). Both hospitals are under the supervision and direction of the ministry of higher education.

2.3 Subjects

A purposive sample of 181 patients with major depressive disorder (MDD) was recruited. The sample size was calculated using Epi-Info software statistical package. The criteria used for sample size calculation were as follows: 95% confidence limit and expected prevalence of suicide 80% with

a margin of error 5%. Based on the above-mentioned criteria the sample size should be N > 175, the sample size was increased to 181 patients to increase reliability of the study results. The patients were chosen according to the following criteria:

2.3.1 *Inclusion criteria*

(1) 21 years old or above.
(2) Diagnosed with major depressive disorder according to DSM-5 criteria.
(3) Able to communicate in a relevant and coherent manner.

2.3.2 *Exclusion criteria*

Any evidence of organic brain disease, mental retardation, substance use disorder, and or other psychiatric comorbidity.

2.4 Tools of the study

Four tools were used to collect data for this study.

Tool I: Socio-demographic and clinical characteristics structured interview schedule: It was developed by the researchers after reviewing the related literature. Socio-demographic data includes patient's age, sex, level of education, occupation, income, residence, and cohabitation. Clinical characteristics includes; diagnosis, duration of illness, number of previous suicide attempts, ways of previous suicide, and presence of any physical disease.

Tool II: Beck Depression Inventory II (BDI-II) It was developed by Beck & Brown (1998).[27] It is used to identify and assess depressive symptoms in patients with psychiatric disorders. The scale composed of 21 items rated on four-point likert scale ranging from 0-3. The total score range is 0 to 63 with higher score indicating severe level of depression. The score divided as follow: 0-13 indicates none or minimal depression, 14-19 indicates mild depression, 20-28 indicates moderate depression, 29-63 indicates severe depression.

Tool III: Daily Spiritual Experience Scale (DSES): It was developed by Underwood (2002) to assess ordinary or daily spiritual experiences and how they are an everyday part of an individual's life of participants.[28,29] The scale consisted of 16 items; for the first 15 items it was rated on 6-point Likert scale that ranging from never or almost never = 1 to many times a day = 6, for the item number 16; it was rated on four -point Likert scale that ranging from not close at all = 1 to as close as possible = 4. Higher scores indicate better spiritual experiences. Patients with a score < 50% denote poor spiritual experiences, 50%-75% indicate fair spiritual experiences and > 75 denote good spiritual experiences.

Tool IV: Suicide Ideation Scale It was developed by Beck & Kovacs (1979).[30] The scale used to assess the intensity of current suicidal intention by rating several self-destructive thoughts or wishes and suicidal threat that have been expressed in overt behavior or verbalized to others. The scale composed of 19 items divided into three subscales namely; active suicide desire subscale; it involves an existing wish to die accompanied by a plan for how to carry out the death (items 1-8,10,11, and 15), passive suicide desire subscale; involves a desire to die, but without a specific plan for carrying out the death (items 5, 9, 14, and 19), and preparation subscale; which include specific plan for suicide (items 12, 13, 16-18). All items are rated on 3-point Likert scale that ranging from 0 to 2. Higher scores indicate high suicide intention. Patients with a score < 50% denote low suicide intention, 50%-75% indicate moderate suicide intention and > 75 denote high suicide intention.

2.5 Procedures

The study was accomplished according to the following steps:

- An official letter was addressed from the Dean of the faculty of nursing to the director of the psychiatric department of Tanta University hospital and neurology-psychiatry and neurosurgery center to request their permission and cooperation for data collection.
- Tool I, II, III, and V were translated into Arabic language by the researchers and then back translated. Results showed that the back translation were similar with the original one. Content validity was carried out by panel composed of five experts in the psychiatric medicine and nursing fields, and the required corrections were done accordingly.
- A Pilot study was carried out on 18 patients with Major Depressive Disorder (MDD) to ensure the clarity and applicability of the study tools. According to its results the necessary modification was done.
- The validated tools were then tested for their reliability by using Cronbach alpha and found to be 0.545, 0.807, and 0.821 respectively for tool II, III, and V and for the whole questionnaire the Cronbach alpha value was 0.748 which represent highly reliable tools.
- During the actual study, each patient with (MDD) who met the inclusion and exclusion criteria was referred to the researcher by the treated psychiatrist, who then verified the appropriateness of potential subjects using patients' health records.
- Each patient was contacted on an individual base and interviewed in privacy by the researchers, signed the informed consent and completed the study tools.
- Each interview lasted between 30 to 45 minutes. Data collection was completed over a period of 7 months

starting from 9-12-2017 to 14-7-2018.

2.6 Ethical considerations

- Study procedure was revised and approved by the ethical Committee of the Faculty of Nursing, Tanta University.
- Informed consent was obtained from the patients after explanation of the purpose of the study.
- The participant's right to refuse participation in the study and to withdraw from the study at any time was maintained. They also reassured about the confidentiality of their obtained information.

2.7 Statistical analysis

Data in this study were organized, tabulated and statistically analyzed using SPSS version 19. For numerical values, the range, mean, and standard deviations were calculated. The correlation between the study variables was calculated using Pearson's correlation coefficient. The level of significant was adopted at $p < .05$.

3. RESULTS

Table 1 represents the distribution of the studied subjects according to their socio-demographic characteristics. It was found that, 60.8% of patients were in the age group ranging from 30 to less than 40 years with a mean age of 38.81 ± 54.2. Slightly more than half of the studied patients (51.9) were male compared to 48.1% female. In relation to religion, more than two thirds of patients (69.1%) were Muslim while one third of them were Christian. 46.4% were married. As for educational level, more than half of the studied patients (56.1%) had primary education. Regarding occupation, 53.0% of patients were not working and vast majority of them (91.2%) did not have enough income. It was also found that 87.8% of patients lived with their families.

Table 2 shows the distribution of studied subjects in relation to duration of illness and hospital admissions. It was noted that, 55.8% of patients had duration of illness ranged between 5 to less than 10 years with a mean of 6.60 ± 4.0. Regarding numbers of hospital admission, the highest percentage of patients (30.9%) was admitted to the hospital six times and more with a mean of 4.70 ± 2.65.

Table 3 illustrates the distribution of studied subjects in relation to total score of suicide, depression and spirituality. As for suicide score, it was observed that, 44.2% of the studied patients had moderate score of suicide compared to 14.4% only who had high score of suicide with a mean score of 40.56 ± 15.54. While, nearly two thirds of patients (64.8%) had fair score of spirituality with a mean score of 60.56 ± 6.93. About half of patients (49.7%) have moderate score of depression and the rest of patients had either severe or mild depression (28.1% and 22.1% respectively) with a mean score of 53.86 ± 6.85.

Table 1. Distribution of study subjects in relation to socio-demographic characteristics

Variables	Number (n = 181)	%
Age in years		
20-	6	3.3
30-	110	60.8
40-50	65	35.9
Range	23-50	
Mean ± SD	38.81 ± 54.2	
Sex		
Males	94	51.9
Females	87	48.1
Religion		
Muslim	125	69.1
Christian	56	30.9
Marital status		
Married	84	46.4
Single	26	14.4
Widow	40	22.1
Divorced	31	17.1
Educational level		
Illiterate	7	3.9
Primary	98	56.1
Secondary	59	32.6
University	17	9.4
Occupation		
Working	85	47.0
Not working	96	53.0
Monthly income		
Enough	16	8.8
Not enough	165	91.2
Living accommodations		
With family	159	87.8
Alone	22	12.2

Table 4 reveales correlation between suicide, spirituality and depression. It was noted that, there is a statistical significant negative correlation between depression and spirituality. This means increasing spiritual involvement is associated with decreasing level of depression (r = -0.259, p = .001*). Also, there is a statistical significant positive correlation between depression and total score of suicide (r = 0.719, p = .001*). On the other hand, there is a correlation between total suicide score and spirituality but not proved to be statistically

significant (r = -0.003, p = .968).

Table 2. Distribution of studied subjects in relation to duration of illness and hospital admissions

Variables	Number (n = 181)	%
Duration of illness in years		
< 5	51	28.2
5-	101	55.8
10+	29	16.0
Range	1-20	
Mean ± SD	6.60 ± 4.0	
Median	6	
Number of hospital admissions		
2	36	19.9
3	55	30.4
4	13	7.2
5	21	11.6
6+	56	30.9
Range	2-10	
Mean ± SD	4.70 ± 2.65	
Median	3	

Regarding the correlation between suicide subscales, depression and spirituality. It was found that, there is a statistical significant positive correlation between depression and three suicide subscales namely; active suicide desire subscale r = 0.636 and p = .001*, preparation subscale (r = 0.715, p = .001*) and finally, passive suicide desire subscale where r = 0.484 and p = .001*. On the other hand, a statistical significant negative correlation was found between spirituality and active suicide desire subscale only (r = -0.184 and p = .013*). Increasing in spirituality is associated with decreasing active suicide desire. While preparation and passive suicide desire subscales did not have any significant correlation with spirituality.

Table 3. Distribution of studied subjects in relation to total score of suicide, depression and spirituality

Variables	Number (n = 181)	%
Suicide intention		
Low	75	41.4
Moderate	80	44.2
High	26	14.4
Mean ± SD	40.56 ± 15.54	
Spirituality		
Poor	35	19.3
Fair	116	64.8
Good	30	16.5
Mean ± SD	60.56 ± 6.93	
Depression		
Mild	40	22.1
Moderate	90	49.7
Severe	51	28.1
Mean ± SD	53.86 ± 6.85	

Table 4. Correlation between suicide, spirituality and depression

Variable	Depression		Spirituality	
	r	*p*	*r*	*p*
Depression	----------	----------	-0.259	.001*
Spirituality	---------	----------	----------	----------
Total suicide score	0.719	.001*	-0.003	.968
Suicide subscales				
Active suicide desire	0.636	.001*	-0.184	.013*
Preparation	0.715	.001*	-0.118	.115
Passive suicide desire	0.484	.001*	0.004	.958

*p** = Significant

4. DISCUSSION

Comprehensive research evidence indicates that spirituality help prevent many physical and mental illnesses, reducing both severity of symptoms and rates of relapse, reducing distress and disability, and enhancing recovery. Therefore, psychiatric care should routinely include a spiritual screening.[31] The finding of the present study showed that, there is a statistical significant positive correlation between depression and suicide, this means when severity of depression increased the severity of suicidal intention increased also. Moreover, there is a statistical significant positive correlation between depression and three suicide subscales namely; active suicide, preparations, and passive suicide.

In fact, these results were expected and logical and can be explained by more than one factor, the first one is; when a person feels of being depressed, feeling of helplessness, hopelessness, worthlessness, and guilt are occurring concur-

rently, and this can further fuel death wishes and suicidal behavior. Furthermore, symptoms of depression are disproportionate to any concurrent stressors or situation; being sustained for weeks, months and sometimes years; being unresponsive to reassurance or support; and having a prevalent effect on the patient. Patients have depressed mood most of the day for nearly every day; and suffering decreased interest or pleasure in life. On the same line, depression slows down or significantly reducing mental and physical activities. The patient feels unmotivated with a deep sense of pessimism and despair. All of these feelings make the patient think of suicide to relieve himself as well as, those who around him or her. In this respect, the researchers believe that depression that affecting the individual's daily performance and social relationships increase the emergence of suicidal thoughts and even attempting suicide.[32,33]

The second possible explanation for this result is the presence of some cultural attitude that causes the individuals to deny their emotional feelings, fearing the stigma of mental illness, and avoid seeking out proper treatment; patients may find it more acceptable and less stigmatizing to complain of physical symptoms such as headache. Unfortunately, when depression is not clinically diagnosed it may progressively worsen and end in tragic a consequence which is "suicide".

The second main finding of the present study was the presence of significant negative correlation between spirituality and depression. Increasing in spirituality is associated with decreased levels of depression. This result can be explained by the fact that, spiritual beliefs provide a sense of meaning and purpose during difficult life circumstances that assist with psychological integration. Moreover, it usually promotes a positive world view that is optimistic and hopeful, provide role models that help acceptance of suffering and offer a community support. Additionally, spirituality differs from other coping resources in that it is available to anyone at any time, regardless of financ, social, physical, or mental conditions.[34] All of these benefits help to relieve depression and assist patient to accept reality of illness.

Supporting this explanation, some evidences suggested that spirituality may help people to reduce the incidence and facilitate recovery from depression, buffer against suicide, cope better with life stresses, enhance social support and provide sources of hope and meaning.[20,35,36] Similarly, one landmark study stated that, spiritual practices was associated with greater subjective hope, comfort, purpose in life, and was perceived to reduce psychotic symptoms.[37] Moreover, some author said that spirituality does not play an important role in human growth and fulfillment, but there is also a link between a lack of spirituality and increased feelings of meaninglessness, hopelessness, and depression.[38–40] Along the same line, Rosmarin et al. (2013) found that, spiritual beliefs was associated with greater likelihood of treatment response as well as greater reductions in depression and self-harm as well as enhancing psychological well-being.[41] Moreover, Bonelli et al. (2012) suggests that, higher rates of depression are associated with lacking of a religious affiliation.[42]

Although there are many developmental, biological and environmental factors contributing to the occurrence and maintenance of depression, failure to cope with life stress is remain a major causative factor. An extensive array of research recommended that if spirituality involvement is capable of reducing life stress by helping people to cope better, then it may help to prevent the development of depression or speed the attenuation of a depressive episode and/or depressive symptoms.[19,20,22]

On the contrary, spirituality beliefs may create high standards that are difficult to live up, resulting in a sense of failure and guilt. Furthermore, those who unable to adapt to these standards may face refusal from their faith community, resulting in social isolation. So that, to what extent religion and/or spirituality helps to buffer against depression and speed its remission or serves to bring on depression or complicate its course has been studied using research methods within the social and behavioral sciences and still needs more researches to fully explore its effects on depression and answers about debated questions.[43]

The third main result of this study is the presence of negative correlation between total suicide score and spirituality but this correlation not proved to be statistically significant (r = -0.003, p = .968). However, a statistical significant negative correlation was found between spirituality and active suicide desire subscale. Although the present study results did not show statistical significant correlation between total score of suicide and total score of spirituality, it still seems that spirituality has a statistical significant negative effect on active suicide desire dimension. Increased spirituality is associated with decrease active suicide desire. Active suicide desire is very dangerous because it involves both an existing wish to die accompanied by a plan for how to carry out the death, while passive suicide desire involves a desire to die, but without a specific plan for carrying out the death.[44]

This result could be partly explained by the fact that spirituality may have strong effect on patients because they believe that God is the only who has the right to end the life of the person and they afraid from God punishment and afraid of going to Hell if they are going to end their life by themselves (these statements reported by many patients during our data collection). On the same direction with the present study

results, some author found that, the subjects report more moral objections to suicide as measured with the Reasons for Living Inventory and some patients stated that "I believe only God has the right to end a life," "My religious beliefs forbid it," "I am afraid of going to Hell," and "I consider it morally wrong".[45]

Moreover, a previous study found that, individuals with a spiritual affiliation reported less suicidal ideation despite severity of depression, hopelessness and number of stressful life events. Therefore, spirituality may provide a positive force that counteracts suicide desire when depression, hopelessness, and stressful events occurred.[46,47] Furthermore, the literatures indicated that people who have religious affiliation have a strong sense of faith and are strongly connected to their religious community. One of the most important protective factors in dealing with suicidal desire is lies in the resilience afforded by faith, religious belief, and acceptance of depression as a life challenge to be faced with hope and optimism.[20]

Contrary to the present finding, a study conducted by Pargament (2009) reported that a personal connection with God provides comfort, support, and hope in times of distress for many people. However, for some, this connection can be troubled and distressing. In response to negative life events, individuals may get angry at God, question if God cares about them, and doubt if God can do anything.[48]

Moreover, Ghadirian (2015) reported that it is hard to make generalizations that spirituality safeguard against suicide. Firstly; because of the nature of depression as a disease with biological and genetic causes, this may have significant effect on severity of symptoms including suicide and may outweigh effect of spirituality on the patients. Secondly, depression is basically a type of medical disorder that make the patient to process information with a negative bias toward themselves and their illness, which stems partly from the nature of their illness. Consequently, this negative and pessimistic view may lead to suicidal ideation and attempts.[49]

From another point of view, another previous study conducted by Huguelet et al. (2007) reported that, they didn't find the inverse relationship between religious commitments or spirituality and suicide attempts reported for the general population and depressed patients.[50]

The overall picture of the present study outcome is that, spirituality has significant effect on depression and active suicide desire subscale but not on total suicide score. Why this? is a question that still needs an answer. In this respect, further research on both the benefits and risks of spiritual life to psychiatric symptoms and treatment is important, considering that psychiatric nurses are more likely than other nurses to involve spiritual domains in the assessment and care of the patients.[51]

5. Conclusion and recommendations

Based on the results of the present study, it can be concluded that higher levels of spirituality may help buffer risk of active suicide desire and promote protective effect against depression.

Based on the results of the present study, the following recommendations are suggested:

- Assessment of spiritual involvement seems wise to be considered when assessing suicidal risk.
- Suicide prevention efforts that focus on spiritual practice and religious service attendance for depressed patients would be predicted to be most effective.
- Interventions that aim at increasing spiritual involvement and practice may be beneficial in reducing depressive symptoms and suicide desire. Studies have shown that spiritual intervention, such as mindfulness meditation, the repetition of a holy word/mantra, or centering prayer, can relieve stress, improve quality of life, psychological well-being, and faith. As well as bring about positive effects physiologically, psychologically, and spiritually.
- Psychotherapy that is based on spiritual practice can be enhanced and practiced by psychiatrist.

Conflicts of Interest Disclosure

The authors declare that there is no conflict of interest.

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