

Spiritual health and experience of suffering in patients with HIV/AIDS in Shiraz, Iran

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Abstract

Introduction: Acquired immunodeficiency syndrome (AIDS) is one of the biggest health challenges in the world, affecting both men and women not only physical but also psychological health. The aim of this study was to determine whether spiritual health was effective in reducing the experience of suffering in men and women with human immunodeficiency virus (HIV)/AIDS.

Material and methods: In this cross-sectional study, 112 female and 112 male HIV-positive patients were selected at the Shiraz Behavioral Disease Counseling Center, using convenience sampling method. To compare spiritual health between women and men, demographic specifications questionnaires, i.e., Schulz scale of experience and perception of suffering and Paleotezian and Alison spiritual health, were used. Data were analyzed using SPSS software, with p -value < 0.05 considered statistically significant.

Results: There was a significant relationship between existential suffer ($p < 0.016$), existential domain ($p < 0.0001$), and total spiritual ($p < 0.005$) with educational level. Also, there was a statistically significant relationship between dimensions of physical suffer I and II with sex ($p < 0.045$) and age ($p < 0.019$). In addition, dimensions of suffering and those of spiritual health in terms of gender had a significant relationship with $p < 0.005$, except for religious domain and physical suffer (dimension I and II).

Conclusions: Findings of the present study strengthen the importance of religious and spiritual health in the reduction of experience of suffering in patients with HIV/AIDS. Therefore, the use of spirituality as a strategy to deal with suffering caused by illness should be followed by healthcare providers.

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Introduction

Acquired immunodeficiency syndrome (AIDS) changes lives of people with the disease, and increases their vulnerability. Human immunodeficiency virus (HIV) infection is one of the biggest challenges in the field of health in the world; unfortunately, its' dimensions are increasing every day. This disease affects patients' quality of life not only physically but also mentally [1]. Diagnosis of AIDS causes considerable emotional and physical suffering, especially regarding treatment restrictions that include a lack of access to antiretroviral drugs. Emotional trauma caused by HIV/AIDS also increases suffering of these patients through shame and stigma [2]. Suffering caused by AIDS spreads beyond the experience of physical pain, and includes loss of financial, familial, psychological, and spiritual dimensions in life [3]. Moreover, suffering is different from pain as it is a set of responses that occurred in the past and will affect a person's future [4].

Suffering is often associated with mental health problems that are experienced physically (pain, illness, and eventually death) and psychologically (sadness, fear, anxiety, and frustration) [5]. Religion is a special type of emotional experience, and it means surrendering to superior power [6, 7]. Therefore, religion and spirituality are one of the main sources used to overcome suffering [8]. Some scholars believe that suffering makes people aware of the existence of God; in this way, they use religion and spirituality as a way to deal with pain and suffering [7].

Generally, religion involves an organized entity with practices about the power of God, while spirituality can be globally defined as 'humans' search for meaning in life' [9]. Positive religious coping was significantly associated with positive effect and life satisfaction. However, negative religious coping was significantly associated with high levels of depressive symptoms, and low levels of quality of life and life satisfaction [10, 11].

In a study, most of 32 HIV-positive patients, for more than 10 years reported that meditation, church services, and religious activities helped them to accept and pursue a normal life [12]. In Pinho's study, positive coping was used more than negative one in patients, who lived with AIDS diagnosis for an average of 9.92 ± 6.34 years [13]. It seems that religion and spirituality are one of the main strategies for adapting to severe diseases in Iran, in which most events are interpreted based on religious beliefs [14].

People who live with AIDS, experience a number of physical, mental, and social problems, including personal suffering, feeling of discomfort caused by the disease progression, and consequences of dealing with diagnosis of the disease [15]. In a study by Imasiku', 120 people living with HIV were investigated to examine a relationship between mental health and physical illness. This study showed a lower coping with the disease in patients with mental health problems than others; also, they experienced lower health and quality of life [16]. Providing strategies to reduce suffering of these patients is a significant goal [15], and also spirituality and

optimism are recognized as important psychological factors. Recent studies have specifically shown that spirituality is associated with improved cognitive safety indicators, and helps to reduce the disease progression [11]. Research has also reported that religious-spiritual adjustment has led to psychological well-being and a sense of life satisfaction in AIDS patients [17] and non-AIDS patients [18-20]. Therefore, examining a relationship between their suffering and spiritual health improves to provide health services and social services to these patients. Depressed patients often experience body-mind problems and may suffer from spiritual crises, particularly during acute stage of a disease, due to low self-esteem, and negative attitudes towards life goals. However, psychical care is the main treatment for patients with depression; spiritual health is a component of holistic care, and spiritual interventions could be effective [21].

Spiritual health is a significant factor in life that helps people adapt to serious illnesses, reduce their mental suffering, and increase their quality of life [22]. Research has also shown that feeling comfortable and empowered by religious beliefs can contribute to health and well-being. Although religious practices may not cure a patient, they can help a person feel better, and can prevent some health problems [23]. On the other hand, since technical interventions have incompletely dealt with issues encountered in life-threatening illnesses, other parameters including religion and spirituality have been considered in many societies [24].

In Rippentrop's study, more than 90% of people believed in a 'superior existence' [25]. In Strawbridge's study, people who attended religious centers more than once a week were 24% less likely to die [26]. Furthermore, for internalizing spiritual beliefs, broadening one's inner self via introspective activities, and developing one's external self through relationships with other worship services, can internalize spiritual beliefs through frequent private prayers. Also, a relationship with oneself has been explained as discovery of spirituality, one's inner self, and liberation from material and bodily desires [27].

Considering the limitations of studies in Iran, it is necessary to pay attention to this important issue in order to cope with psychological and spiritual problems caused by the disease. It is also important to internalize spiritual religious beliefs and strengthen them in patients because it causes them to be more receptive of their problems, and increases their self-confidence and self-esteem, all of which ultimately lead to reduced sensitivity of the patients' experience of suffering.

The aim of this study was to determine whether spiritual health was effective in reducing the experience of suffering in men and women with HIV/AIDS at the Behavioral Disease Counseling Center in Shiraz.

Material and methods

Participants

This cross-sectional (analytical and descriptive) study was conducted with 112 female and 112 male patients with HIV, who were referred to the Shiraz Behavioral Disease

Counseling Center, with the approval of ethics committee of the Shiraz University of Medical Sciences, project No. 15355, ethics code: IR.SUMS. REC.1396.S735.

Convenience purposive sampling method was used among those referred to the center during the sampling period from August to January, 2017. Participants met the inclusion criteria of the study, such as positive HIV test, existence of a medical record in the center, age over 18, and Iranian citizenship; informed consent was obtained from every participant. Sample size was determined with a power of 90% and error of 5%. Study exclusion criteria were severe cognitive impairment, such as mental retardation, and mental disorders, and genetic disorders, such as Down syndrome in patients who were unable to understand questions to be answered.

Instruments

Data collection tools included a demographic characteristics check list, experience and perception of suffering scale, and spiritual health questionnaire.

Experience and perception of suffering

Scale of experience and perception of suffering was designed by Schulz *et al.* [28]. This scale measures three suffering dimensions, such as physical, psychological, and existential suffering experienced by patients during the last 7 days before the study.

Existential suffering included nine statements (with the purpose of life). Physical symptoms showed pain, nausea, shortness of breath, dry mouth, and lack of appetite. Moreover, psychological dimension indicated several symptoms related to distress, such as confidence, fear, irritability, depression, hopelessness, and abandonment [28].

Domain of physical suffering consisted of 9 items (in two parts) that patients experienced during the last 7 days prior to the study: the first part showed only the experience of a person with each physical pain symptom, and the second part presented the level of anxiety of each symptom of the first part.

Subjects had to determine their answer based on a four-point Likert scale, ranging from 'never' = 0 to 'always' = 3. Psychological dimension was measured by 15 items, which were scored from zero to three. Existential suffering was measured by 9 items, based on a 5-point Likert scale, ranging from 'very low' = 0 to 'very high' = 4 [28]. Reliability of this questionnaire in Iran was measured by Pirasteh Motlagh and obtained Cronbach's α value of 0.60 [6].

Spiritual health questionnaire

Spiritual health questionnaire was designed by Paloutzian RF, Ellison in 1938 [29]. This questionnaire consists of 20 phrases, 10 questions of which measure religious health, and the other 10 determine existential health (human existential philosophy in non-religious language), ranging from

20 to 120. Answers to these questions are classified on a 6-point Likert scale, ranging from 'totally disagree' to 'totally agree'. In the end, people's spiritual health is divided into three categories of 'low' (range, 20-40), 'medium' (range, 41-99), and 'high' (range, 100-120). Estimated Cronbach's α value for this questionnaire was obtained (0.82) by Abbasi [30].

Statistical analysis

Measurement of a significant relationship between the variables and spiritual health was performed using Mann-Whitney, Kruskal-Wallis, and Spearman tests, and for non-normal distribution of variables, Kolmogorov-Smirnov test was applied. Non-parametric correlation analysis was performed using SPSS 23 software.

Ethical considerations

Before starting of the project, the volunteers were informed of the objectives and methods of implementation of the study. Their private and personal information were protected and if any disturbances occurred, necessary guidance was provided. After obtaining written informed consent, HIV-positive individuals filled the questionnaire in a solitary confinement environment, with any additional questioned answered.

Results

In total, 224 patients were enrolled in this study. Most men had primary-middle school education (47%), and most were self-employed (89.3%). The majority of women with HIV had secondary school education (30.4%) and were housewives (80.4%) (Table 1). According to Table 2, there

Table 1. Demographic characteristics of participants

Variable	Frequency – male (%)	Frequency – female (%)
Age		
18-28	4 (3.6)	30 (26.8)
29-39	49 (43.8)	52 (46.4)
40-50	42 (37.5)	26 (23.2)
Education		
Illiterate	6 (5.4)	3 (2.7)
Primary-middle school	42 (47.0)	32 (28.6)
High school	28 (25.0)	34 (30.4)
Diploma	20 (17.4)	26 (23.2)
High education	11 (9.8)	17 (15.2)
Job status		
Employed		10 (8.9)
Self-employment	12 (10.7)	12 (10.7)
Housewife	100 (89.3)	90 (80.4)

Table 2. Relationship between demographic variables with experience of suffering dimensions and spirituality

Variable	Physical suffer (dimension 1)	Physical suffer (dimension 2)	Psychologic suffer	Existential suffer	Existential – domain	Religious – domain	Total spiritual
Education							
Illiterate	2.19 ± 0.61	0.80 ± 0.61	24.11 ± 6.37	15.22 ± 5.67	29.77 ± 11.04	36.12 ± 10.56	65.89 ± 19.83
Primary-middle school	2.17 ± 0.55	0.82 ± 0.55	22.85 ± 6.36	19.04 ± 6.01	38.06 ± 8.14	44.95 ± 7.88	83.01 ± 14.76
High school	2.35 ± 0.57	0.64 ± 0.57	25.62 ± 5.79	21.77 ± 6.10	39.05 ± 7.94	43.10 ± 6.44	82.15 ± 13.36
Diploma	2.32 ± 0.44	0.67 ± 0.44	22.45 ± 5.23	21.06 ± 7.33	36.85 ± 7.97	40.26 ± 9.32	77.11 ± 15.33
Higher education	2.30 ± 0.68	0.69 ± 0.68	23.89 ± 7.88	20.82 ± 6.40	38.42 ± 9.07	34.68 ± 11.74	73.11 ± 17.72
<i>p</i> -value	0.294	0.294	0.81	0.016*	< 0.0001*	0.051	0.005*
Job status							
Employed	2.18 ± 0.50	0.81 ± 0.50	24.35 ± 5.72	21.75 ± 7.17	37.36 ± 10.21	39.10 ± 12.56	76.46 ± 20.60
Self-employment	2.27 ± 0.53	0.72 ± 0.59	24.09 ± 6.17	20.12 ± 6.15	37.67 ± 7.71	41.90 ± 9.54	79.58 ± 14.69
Housewife	2.31 ± 0.59	0.68 ± 0.53	23.31 ± 6.40	20.86 ± 6.37	38.64 ± 8.39	43.18 ± 6.86	81.82 ± 14.33
<i>p</i> -value	0.520	0.520	0.713	0.457	0.621	0.800	0.424
Sex							
Female	2.367 ± 0.53	0.632 ± 0.53	23.44 ± 5.99	20.27 ± 6.44	37.93 ± 8.07	41.67 ± 8.58	79.61 ± 15.43
Male	2.208 ± 0.58	0.791 ± 0.58	23.97 ± 6.44	20.39 ± 6.47	37.59 ± 8.64	42.02 ± 9.56	79.62 ± 15.63
<i>P</i> -value	0.045*	0.045*	0.669	0.952	0.853	0.595	0.966
Age	-0.156 (0.019*)	0.156 (0.019*)	-0.042 (0.532)	-0.105 (0.116)	-0.037 (0.586)	0.122 (0.069)	0.056 (0.406)

[†]Mean ± SD correlation (*p*-value). *Significant at 0.05 level.

Table 3. Relationship between dimensions of suffering and those of spiritual health in terms of gender

Index	Spiritual health					
	Total spiritual		Religious domain		Existential domain	
	<i>p</i> -value		<i>p</i> -value		<i>p</i> -value	
	Male	Female	Male	Female	Male	Female
Physical suffer (dimension I)	0.235	0.248	0.072	0.167	0.419	0.295
	0.012	0.008	0.449	0.079	0.01	0.002
Physical suffer (dimension II)	0.235	0.248	-0.072	-0.167	-0.419	-0.295
	0.012	0.008	0.449	0.079	> 0.0001	0.002
Psychological suffer	0.448	0.483	0.222	0.375	0.622	0.551
	> 0.0001	> 0.0001	0.019	> 0.0001	> 0.0001	> 0.0001
Existential suffer	0.570	0.770	0.297	0.614	0.768	0.840
	> 0.0001	> 0.0001	0.001	> 0.0001	> 0.0001	> 0.0001

was a significant relationship between educational levels and existential suffer, existential domain, and total spiritual ($p < 0.05$). Job was not significantly associated with any of the study variables ($p > 0.05$). There was a significant relationship between gender and age with physical suffering (dimension I and 2) ($p < 0.05$).

In both genders, the dimension of existential suffering had a significant relationship with existential and religious dimensions of spiritual health and overall spiritual health ($r = 0.84, 0.61, 0.77$, and $r = 0.76, 0.29, 0.57$, respectively, in

females and males). In addition, in both genders, the dimension of psychological suffering had a significant relationship with existential and religious dimensions of spiritual health and overall spiritual health ($r = 0.55, 0.37, 0.48$, and $r = 0.62, 0.22, 0.44$, respectively, in females and males).

In both genders, the physical suffer (dimension I) had a significant relationship with existential dimension of spiritual health and overall spiritual health ($r = 0.29, 0.24$, and $r = 0.41, 0.23$, respectively, in females and males). Moreover, in both genders, the physical suffer (dimension II) had a sig-

nificant relationship with existential dimension of spiritual health and overall spiritual health ($r = -0.29, 0.24$, and $r = -0.41, 0.23$, respectively, in females and males).

In brief, it can be concluded (Table 3) that physical suffering (dimension II) was inversely related to the religious and existential dimensions, and was directly related to other domains and total spiritual health score.

Discussion

Suffering is not an integrated concept; rather various definitions refer to the multidimensionality of its' nature [31]. The aim of this study was to determine the relationship between dimensions of spirituality and those of feelings of suffering in men and women living with HIV. In this study, physical suffer in dimensions 1 and 2 had a relationship with age in HIV patients. Various studies reported different correlation between socio-demographic characteristics and spiritual health and experience of suffering. Mekuria's study reported that the average psychological domain and spiritual health scores in people under 37 was lower than in people over 37 years old [32]. Results of Degroote's review pointed that people with HIV had a lower physical health at older ages, but younger people experienced better mental health [33]. Although older people may complain of more suffering than younger people, they implement more spirituality into their lives to cope with their illness [34]. Typically, older people find spirituality more effective than young people in coping with the disease and associated suffering, pain, and stress, thereby feeling more comfortable and satisfied in life [35]. Moreover, a significant relationship was observed in educational levels with existential dimension of the experience of suffering as well as low level of education associated with more psychological suffering due to illness. Therefore, educational and professional interventions are considered essential factors for the success and acceptance of ways to cope with the illness, and improve mental and physical health [36]. The research setting, location, population, culture, sample size, and participants religion beliefs and spirituality could explain differences in various studies.

The result of this study showed the average physical suffering (dimension 2) in men was more than in women, the average of physical suffering (dimension 1) in women was more than in men. This result was somewhat similar to a study conducted by Cronje [37]; however, Rzeszutek's study pointed that the mean score of dimension 2 in women was more than in men [38]. The reasons for some differences in the results of these studies include community and contributing roles of social, cultural, and environmental factors. In our culture, both genders may increase their spirituality in not good health conditions, and spirituality might be helpful in coping with suffering.

There was a significant relationship between the experience of physical suffering and existential dimension and overall spirituality among both genders. The results of this study were consistent with those of Pirasteh Motlagh's study conducted in Iran, in which a significant negative relation-

ship between the experience of suffering and spirituality ($p < 0.05$) was observed. Therefore it can be concluded that spiritual health is a predictor of physical and psychological suffering [5].

In addition, in Imasiku's study, the correlation between physical suffering and spiritual health was lower than existential health and spiritual health. The correlation between existential dimension and physical illness was greater than the correlation between spiritual health and physical illness. Patients with better spiritual health had better disease compatibility than others; thus, they experienced better health and quality of life [16].

In Dalmida's (2015) study on 292 patients, the psychological dimension of women using spirituality and positive spirituality adaptation was $r = 0.18$, and in men it was $r = 0.12$. Female participants who were less engaged in worship during the day and had lower scores on spiritual health, also presented lower psychological and mental health scores (48.5 vs. 51.2), and the average physical health of women was 42.8 compared with men (51/8) [39].

A cross-sectional study conducted by Lindayani, aiming to assess the quality of life of people living with HIV in Indonesia, found that people living with HIV were more likely to suffer than others. Sixty-seven percent fatigue and 54.9% of sleep problems were among the most common symptoms that patients suffered from. Therefore, social support and spiritual interventions are among the necessary measures for this vulnerable group [40]. Another study evaluating the quality of life and its' dimensions in HIV patients, showed that the mean score of general health, physical health, and psychological health (dimensions of quality of life) in women were higher than that of men [41].

A study conducted by Ironson used spiritual health exercises, and reported that they have led to more AIDS survivors. It also prolonged first stage of the disease, and patients' disease progressed to AIDS at a slower rate; this group was physically and mentally in a better mood than those who did not use these exercises ($p < 0.05$) [42]. In this regard, in Rzeszutek 's study who investigated 206 men and 44 women to determine the amount of stress and anxiety symptoms associated with the disease in Poland. This study showed that the mean score of stress and anxiety among women was higher than in men; there were some differences with findings of the present study [38]. Some studies also showed gender differences in religious beliefs. They showed that females presented higher grades in religiosity than males. One of the reasons for gender differences in religiosity was related to different socialization levels among girls and boys [43]. Gender differences in Li's study showed significant associations between tangible support and coping only among illiterate HIV-positive males. Moreover, due to socio-cultural values, such as low status of women in some countries, women were more stigmatized than men [44]. Rural isolation, environmental factors, and difficulties in coping with HIV diagnosis due to lack of support in stigmatizing HIV across cultures increase stress. However, prayer can be described as an essential support in managing medicines [45].

It seems the acceptance of spirituality depends strongly on gender (women believe the spirituality more than men) [46]. In some cases, due to social differences between men and women, some behaviors were more challenging for women, and it was more socially acceptable for men to accept this challenge. Therefore, men use less spirituality to adapt to their bad habits [47]. Generally, females spend more time with their families and respect the rules set. Furthermore, when they grow up, they follow spiritual pillars of the family [48]. Gender differences were also visible in the general population, additionally to other chronic diseases. Women performed better than men in terms of psychological health. Although more pressure was imposed on women by the society, in many contexts, men were more likely than women to be engaged in risky behaviors, such as drug abuse, unprotected sexual relationships, etc. Possible reason was different gender roles of men compared with women. Traditional role of women, which in many cultures is considered to be the only person involved in raising a child and the adherence of the spouse to the family, makes women find a way to fight their disease in this type of society. Therefore, in societies where women are ignored and rejected, empowering of women is a necessary step [49].

Stigma is also rooted deeply in the culture, and is a fundamental determinant of health that directly affects a patient quality of life and disease treatment outcomes. Stigma was more frequently experienced by patients who were poorer, employed, and those attending clinics at lower levels within healthcare system. HIV patients often lose their jobs due to negative perception of collaborators. It is difficult for these patients to earn money for their living [50].

Women in Hutson's sample reported very high levels of religious well-being in comparison with men. Stigma may be perceived as higher if HIV patients experience punishment. If they experience religion-based forgiveness, stigma may be perceived as lower [51]. In fact, it seems that in our study, religious dimension of spiritual coping did not have a relationship with physical suffering among both genders.

One of the limitations of the present study was a problem with accessing patients in the society. Therefore, sampling was performed among patients who referred to the center, which could be a barrier in generalization of the results in patients across the country.

This study examined the dimensions of spirituality with all the components of suffering in terms of gender. It also demonstrated the importance and application of spirituality as a way to deal with the suffering caused by the illness. Moreover, body literatures indicate that patients infected with HIV disease suffered pain and anxiety; therefore, they were required non-HIV-related health services, for instance, drawing on spirituality to cope with their disease.

Conclusions

In women and men, psychological and existential suffering had a significant relationship with two dimensions of spiritual health. However, in both men and women, there

was not any relationship in the physical dimension with religious dimension of spiritual health. In men, the domain of physical suffering, which consisted of the level of anxiety of each symptom of the first dimension of physical suffering was higher than women, while among women, the first domain of physical suffering (only the experience of a person with each of the physical pain symptoms) was higher than in men. It is recommended that healthcare workers focus not only on the treatment of patients, but also on counseling sessions with a solution to overcome the pain and anxiety caused by the progression of the disease to greatly help the inner peace of the patient. Due to pressures of life and family management, women are more likely to be harmed; therefore effective planning is useful to improve their peace of mind.

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Conflict of interest

The authors declare no conflict of interest.

References

1. Brown J, Hanson JE, Schmotzer B, Weibel AR. Spirituality and optimism: a holistic approach to component-based, self-management treatment for HIV. *J Relig Health* 2014; 53: 1317-1328. doi: 10.1007/s10943013-9722-1.
2. Duffy L. Suffering, shame, and silence: the stigma of HIV/AIDS. *J Assoc Nurses AIDS Care* 2005; 16: 13-20. doi: 10.1016/j.jana.2004.11.002.
3. Fochtman D. The concept of suffering in children and adolescents with cancer. *J Pediatr Oncol Nurs* 2006; 23: 92-102.
4. Fordyce WE. Pain and suffering. A reappraisal. *Am Psychol* 1988; 43: 276-283. doi: 10.1037//0003-066x.43.4.276.
5. Pirasteh Motlagh A, Nikmanesh Z. The role of spirituality in quality of life patients with AIDS/HIV. *SSU Journals* 2013; 20: 571-581.
6. Bahrami EH, Tashk A. Aspects of relationship between religious orientation and mental health and clarify of religious orientation scales. *J Psychol Educ* 2005; 34: 41-53.
7. Krause N, Bastida E. Religion, suffering, and health among older Mexican Americans. *J Aging Stud* 2009; 23: 114-123. doi: 10.1016/j.jaging.2008.11.002.
8. Barton-Burke M, Barreto RC Jr, Archibald LI. Suffering as a multicultural cancer experience. *Semin Oncol Nurs* 2008; 24: 229-236. doi: 10.1016/j.soncn.2008.08.002.
9. Büssing A, Franczak K, Surzykiewicz J. Spiritual and religious attitudes in dealing with illness in Polish patients with chronic diseases: validation of the Polish version of the SpREUK questionnaire. *J Relig Health* 2016; 55: 67-84. doi: 10.1007/s10943-014-9967-3.

10. Poteat T, Lassiter JM. Positive religious coping predicts self-reported HIV medication adherence at baseline and twelve-month follow-up among Black Americans living with HIV in the Southeastern United States. *AIDS Care* 2019; 31: 958-964. doi: 10.1080/09540121.2019.1587363.
11. Lee M, Nezu AM, Nezu CM. Positive and negative religious coping, depressive symptoms, and quality of life in people with HIV. *J Behav Med* 2014; 37: 921-930. doi: 10.1007/s10865-014-9552-y.
12. Arrey AE, Bilsen J, Lacor P, Deschepper R. Spirituality/religiosity: a cultural and psychological resource among Sub-Saharan African migrant women with HIV/AIDS in Belgium. *PLoS One* 2016; 11: e0159488.
13. Pinho CM, Gomes ET, Trajano MFC, Cavalcanti ATAE, Andrade MS, Valença MP. Impaired religiosity and spiritual distress in people living with HIV/AIDS. *Rev Gaucha Enferm* 2017; 38: e67712.
14. Nouzari R, Najafi SS, Momennasab M. Post-traumatic growth among family caregivers of cancer patients and its association with social support and hope. *Int J Community Based Nurs Midwifery* 2019; 7: 319-328. doi: 10.30476/IJCBNM.2019.73959.0.
15. Tesfay A, Gebremariam A, Gerbaba M, Abrha H. Gender differences in health related quality of life among people living with HIV on highly active antiretroviral therapy in Mekelle Town, Northern Ethiopia. *Biomed Res Int* 2015; 2015: 516369. doi: 10.1155/2015/516369.
16. Imasiku ML. Relationship between psycho-spiritual well-being and physical-illness behavior in HIV seropositive individuals. In: *Holistic Approaches to Infectious Diseases*. George A, Joshy KS, Sebastian M, Oluwafemi OS, Thomas S (eds.). Routledge; 2017; 231-248.
17. Trevino KM, Pargament KI, Cotton S, et al. Religious coping and physiological, psychological, social, and spiritual outcomes in patients with HIV/AIDS: cross-sectional and longitudinal findings. *AIDS Behav* 2010; 14: 379-389. doi: 10.1007/s10461-007-9332-6.
18. Dehestani H, Moshfeghy Z, Ghodrati F, Akbarzadeh M. The relationship of spiritual health and mother's forgiveness with her anxiety in the labor of the pregnant women. *Int J Womens Health Reprod Sci* 2018; 7: 174-179. doi: 10.15296/ijwhr.2019.29.
19. Ghodrati F, Mokhtaryan T, Akbarzadeh M. The effect of pregnancy-related religious training on religious attitudes among pregnant women. *J Midwifery Reprod Health* 2018; 6: 1296-1304.
20. Gilani TM, Ghodrati F, Yazdanpanahi Z, Amooee S, Akbarzadeh M. The effect of teaching religious principles on the infants' growth and development. *J Educ Health Promot* 2019; 8: 135. doi: 10.4103/jehp.jehp_81_19.
21. Kao CC, Lin YH. Spiritual care of patients with depression. *Hu Li Za Zhi* 2018; 65: 17-21 [Article in Chinese]. doi: 10.6224/JN.201806_65(3).04.
22. Tarakeshwar N, Vanderwerker LC, Paulk E, Pearce MJ, Kasl SV, Prigerson HG. Religious coping is associated with the quality of life of patients with advanced cancer. *J Palliat Med* 2006; 9: 646-657. doi: 10.1089/jpm.2006.9.646.
23. Szaflarski M, Ritchey PN, Leonard AC, et al. Modeling the effects of spirituality/religion on patients' perceptions of living with HIV/AIDS. *J Gen Intern Med* 2006; 21 (Suppl 5): S28-S38. doi: 10.1111/j.1525-1497.2006.00646.x.
24. Balboni TA, Vanderwerker LC, Block SD, et al. Religiousness and spiritual support among advanced cancer patients and associations with end-of-life treatment preferences and quality of life. *J Clin Oncol* 2007; 25: 555-560. doi: 10.1200/JCO.2006.07.9046.
25. Rippentrop AE, Altmaier EM, Burns CP. The relationship of religiosity and spirituality to quality of life among cancer patients. *J Clin Psychol Med Settings* 2006; 13: 31-37.
26. Strawbridge WJ, Cohen RD, Shema SJ, Kaplan GA. Frequent attendance at religious services and mortality over 28 years. *Am J Public Health* 1997; 87: 957-961. doi: 10.2105/ajph.87.6.957.
27. Rainville G. The interrelation of prayer and worship service attendance in moderating the negative impact of life event stressors on mental well-being. *J Relig Health* 2018; 57: 2153-2166. doi: 10.1007/s10943-017-0494-x.
28. Schulz R, Monin JK, Czaja SJ, et al. Measuring the experience and perception of suffering. *Gerontologist* 2010; 50: 774-784. doi: 10.1093/geront/gnq033.
29. Paloutzian RF, Ellison CW. Loneliness, spiritual well-being and the quality of life. In: *Loneliness: A Sourcebook of Current Theory, Research and Therapy*. Peplau LA, Perlman D (eds.). New York: John Wiley & Sons; 1982, 224-236.
30. Abbasi M, Farahani-Nia M, Mehrdad N, Givari A, Haghani H. Nursing students' spiritual well-being, spirituality and spiritual care. *Iran J Nurs Midwifery Res* 2014; 19: 242-247.
31. Fishbain DA, Lewis JE, Gao J. The pain – suffering association, a review. *Pain Med* 2015; 16: 1057-1072. doi: 10.1111/pme.12686.
32. Mekuria LA, SPRangers MA, Prins JM, Yalew AW, Nieuwkerk PT. Health-related quality of life of HIV-infected adults receiving combination antiretroviral therapy in Addis Ababa. *AIDS Care* 2015; 27: 934-945.
33. Degroote S, Vogelaers D, Vandijck DM. What determines health-related quality of life among people living with hiv: an updated review of the literature. *Arch Public Health* 2014; 72: 40.
34. Vance DE, Brennan M, Enah C, Smith GL, Kaur J. Religion, spirituality, and older adults with HIV: critical personal and social resources for an aging epidemic. *Clin Interv Aging* 2011; 6: 101-109.
35. Zimmer Z, Jagger C, Chiu CT, Ofstedal MB, Rojo F, Saito Y. Spirituality, religiosity, aging and health in global perspective: a review. *SSM Popul Health* 2016; 2: 373-381.
36. Delany-Moretlwe S, Cowan FM, Busza J, Bolton-Moore C, Kelley K, Fairlie L. Providing comprehensive health services for young key populations: needs, barriers and gaps. *J Int AIDS Soc* 2015; 18 (2 Suppl 1): 19833.
37. Cronje JH, Williams M, Steenkamp L, Venter D, Elkonin D. The quality of life of HIV-infected South African university students: experiences with the WHOQOL-HIV-Bref. *AIDS Care* 2017; 29: 632-635. doi: 10.1080/09540121.2016.1234688.
38. Rzeszutek M, Oniszczenko W, Firlag-Burkacka E. Gender differences in posttraumatic stress symptoms and the level of posttraumatic growth among a Polish sample of HIV-positive individuals. *AIDS Care* 2016; 28: 1411-1415. doi: 10.1080/09540121.2016.1182615.
39. Dalmida SG, Koenig HG, Holstad MM, Thomas TL. Religious and psychosocial covariates of health-related quality of life in people living with HIV/AIDS. *HIV/AIDS Res Treat* 2015; 1: 1000HARTOJ1101. doi: 10.17140/HARTOJ-1-101.
40. Lindayani L, Chen YC, Wang JD, Ko NY. Complex problems, care demands, and quality of life among people living with HIV in the antiretroviral era in Indonesia. *J Assoc Nurses AIDS Care* 2018; 29: 300-309. doi: 10.1016/j.jana.2017.10.002.
41. Derakhshanpour S, Yazdanpanahi Z, Akbarzadeh M. Comparison of the quality of life and its dimensions in men and women with HIV/AIDS in the high-risk behaviors center of Shiraz. *Women's Health Bulletin* 2020; 7: 41-46.
42. Ironson G, Kremer H, Lucette A. Relationship between spiritual coping and survival in patients with HIV. *J Gen Intern Med* 2016; 31: 1068-1076. doi: 10.1007/s11606-016-3668-4.
43. Collett JL, Lizardo O. A power-control theory of gender and religiosity. *J Sci Study Relig* 2009; 48: 213-231. doi: 10.1111/j.1468-5906.2009.01441.
44. Li L, Lin C, Liang LJ, Ji G. Exploring coping and social support with gender and education among people living with HIV in China. *AIDS Behav* 2016; 20: 317-324. doi: 10.1007/s10461-015-1232-6.
45. Konkle-Parker DJ, Erlen JA, Dubbert PM. Barriers and facilitators to medication adherence in a southern minority population with HIV disease. *J Assoc Nurses AIDS Care* 2008; 19: 98-104. doi: 10.1016/j.jana.2007.09.005.

46. Jirásek I, Hurych E. The perception of spiritual health differences between citizens and physicians in the Czech Republic. *Health Promot Int* 2018; 33: 858-866. doi: 10.1093/heapro/dax024.
47. Holt CL, Roth DL, Huang J, Clark EM. Gender differences in the roles of religion and locus of control on alcohol use and smoking among African Americans. *J Stud Alcohol Drugs* 2015; 76: 482-492. doi: 10.15288/jsad.2015.76.482.
48. Sanchez D, Vandewater EA, Hamilton ER. Examining marianismo gender role attitudes, ethnic identity, mental health, and substance use in Mexican American early adolescent girls. *J Ethn Subst Abuse* 2019; 18: 319342. doi: 10.1080/15332640.2017.1356785.
49. Tran BX, Ohinmaa A, Nguyen LT, et al. Gender differences in quality of life outcomes of HIV/AIDS treatment in the latent feminization of HIV epidemics in Vietnam. *AIDS Care* 2012; 24: 1187-1196. doi: 10.1080/09540121.2012.658752.
50. Tran BX, Than PQT, Tran TT, Nguyen CT, Latkin CA. Changing sources of stigma against patients with HIV/AIDS in the rapid expansion of antiretroviral treatment services in Vietnam. *Biomed Res Int* 2019; 2019: 4208638. doi: 10.1155/2019/4208638.
51. Hutson SP, Darlington CK, Hall JM, Heidel RE, Gaskins S. Stigma and spiritual well-being among people living with HIV/AIDS in Southern Appalachia. *Issues Ment Health Nurs* 2018; 39: 482-489. doi: 10.1080/01612840.2017.1423426.