

# Review of the correlation between religion coping strategy and quality of life in intestine Cancer in patients with Ostomy

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## ABSTRACT

**Background:** Intestine cancer is one of the common cancer in elderly people with fetal complication. In this study the correlation between spiritual coping strategy and quality of life in Intestine cancer in elderly patients with ostomy by Sep 2018 was reviewed. **Method and materials:** In this study, internal databases for Persian articles, including SID, MagIran, IranMedex, and also www.irandoc.ac site for dissertations were reviewed as well as PubMed, ISI web of knowledge and Google Scholar databases were assessed to study English articles by Sep 2018 and 11 articles were entered into the study. **Results:** In this review, 3713 individuals were analyzed in the 11 selected articles, 6 articles in Persian and 5 articles in English including seven observational, three experimental and one phenomenological studies

**Conclusion:** This review study indicated that designing and implementing appropriate nurses' interventions for patients with ostomy and their families can provide the enhancement in their self-efficacy in the spiritual, mental and social aspects and the most improvement for their quality of life by reinforcing their coping strategies. Also, group training for these patients can have the greatest impact on the mental and spiritual dimension.

**Keywords:** Colon cancer, coping strategy, quality of life, Ostomy, Psychology, spirituality

## Introduction

The population growth of 65 years and older is 2.5% resulted in aging in general population [1]. Therefore, aging of population will be one of the main challenges facing countries in the coming years, which society will have to face. If the elderly people have bad health status, this situation will be threatening, and its consequences will be imposed on society and individuals [2].

Eighty percent of elderly people over the age of 65 are suffering from a chronic disease, and one of these chronic diseases that occurs is cancer [3]. Cancer is one of the most important diseases

of the present century and is the second leading cause of death after cardiovascular diseases. It is considered as a crippling disease in the community and the person after diagnosis suffers from psychological disorders and low quality of life [4].

Of the various types of cancers, colon cancer is known to be one of the most common causes of mortality in the world, and more than 90% of the patients are over 50 years of age and the mean age of the patients at diagnosis is over 72 years old [5]. Although, cancer can be cured in early diagnosis, but it is in the third place regarding the prevalence and in the second place regarding the mortality as well as 10% of all cancers are related to colon cancer. Colon cancer after breast cancer is the second most common cancer in women, and has been assigned the fourth place after the stomach, prostate and bladder cancer [6].

One of the problems of patients with colon cancer after the surgical treatment is ostomy. An ostomy deflects the pathway to the stool through a stomach opening to the outside. Still stomatal statistics are not accurately defined. There are no accurate statistics on the number of patients with ostomy in our country, but according to the Iranian Ostomy Association, there are about thirty thousand patients with ostomy in the country [7]. People with ostomy undergo complications in all dimensions

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of quality of life, including physical, psychological (depression, loneliness, suicidal attitude, shame feelings and low self-esteem) and social functions<sup>[8]</sup>.

According to the results of studies on patients with various types of cancer, more than 30% of patients have not appropriate quality of life<sup>[9]</sup>. Religious concepts and psychology of religion have been considered important in recent years, especially in relation to quality of life<sup>[10]</sup>.

One of the many types of coping strategies that has attracted the attention of mental health professionals is the spiritual coping strategy<sup>[11]</sup>. Religion as a managerial system plays an important role in interpreting events. Therefore, religions in the nature of cognition are a kind of spiritual coping and play a substantial role in coping with stressful events<sup>[12]</sup>. According to what was stated, a review study was performed on the correlation between spiritual coping and quality of life in patients with ostomy due to colon cancer.

## Methods

### Search strategy

In order to study the published articles in this field, internal databases for Persian articles, including SID, MagIran, IranMedex, and also www.irandoc.ac site for dissertations were reviewed as well as PubMed, ISI web of knowledge and Google Scholar databases were assessed to study English articles by Sep, 2018. The key words used in this search were cancer, ostomy, quality of life, colon cancer, colostomy, religion, spiritual coping, chemotherapy and Iran, or a combination of them in medical subject indexes or abstracts. The list of references in the specified articles were also reviewed for further relevant studies.

### Inclusion criteria

After collecting articles, their characteristics and abstracts were entered into the reference software, and duplicates were removed using this software as well as the re-reading of the titles. In the next step, by reviewing the titles, the studies that are not related to the purpose of this study were excluded and then, from the remaining studies, referring to the abstract of the article as well as the full text, the relevance of the articles was assured. Studies were limited to studies that were performed only on humans. Finally, the studies published in Persian and English were included in this systematic review. When several studies from a single cohort or population are published, only the results from the latest study find the conditions necessary to enter this analysis.

### Data extraction

Information about publication (first author's surname, year of publication, etc.), study design, number of samples studied, results of each article were extracted by two independent researchers. The observed differences in the evaluation of studies were solved by a third researcher. Based on the type of design study, specific qualitative methodology checklist for

Quality Assessment was used. Whenever 95% confidence interval was reported, we also reported it. If we did not have a confidence interval of 95%, we reported P value.

## Results

In this review study, 3713 individuals were analyzed in eleven eligible studies. Five articles were published in Persian language journals and six articles were published in English-language journals including seven observational, three experimental and one phenomenological studies. It can be seen in Table 1 indicating the results of the study eligible for the study<sup>[6, 13-21]</sup>.

The first study was conducted by Rafii et al.<sup>[6]</sup>. In this cross-sectional study, 84 patients with ostomy referring to the selected educational centers of Tehran University of Medical Sciences and the Iranian Ostomy Association were selected by census sampling. Data were collected using the City of Hope Quality of Life (COH-QOL)-Ostomy questionnaire. The results showed that half of the samples obtained 50-75% of total self-efficacy score (score between 84-112). The mean self-efficacy score of stoma care ( $8.55 \pm 6.11$ ) was higher than the mean social self-efficacy score ( $2.13 \pm 1.42$ ). Also, the majority of participants received a score of 7 and more (out of 10) for total quality of life and each of its dimensions. Considering the fact that there was a significant relationship between self-efficacy and different dimensions of quality of life of patients with ostomy in this study, nurses should design and implement appropriate interventions to strengthen the self-efficacy of these patients, especially in social dimension, which has the highest correlation with their quality of life and thus contribute to the quality of life of these people.

The second study was conducted by Naseh et al.<sup>[13]</sup>. In this descriptive-analytic study, 84 patients with stoma referring to the selected educational centers of Tehran University of Medical Sciences and the Iranian Ostomy Association were selected through convenience sampling. The quality of life of patients with ostomy were collected using an interview and its questionnaire. The mean and standard deviation of quality of life score for physical were, mental, social and spiritual aspect were  $7 \pm 1.5$ ,  $6.5 \pm 2.1$ ,  $6 \pm 2$  and  $6.6 \pm 1.6$ , respectively. The total quality of life was calculated  $6.1 \pm 6.6$ . According to the patients' responses, the highest and lowest mean score of quality of life in the physical dimension was allocated to constipation items ( $9.1 \pm 2.1$ ), in the mental dimension, the ability to remember the events ( $8.4 \pm 2.4$ ) and the difficulty of adapting with the ostomy ( $3.2 \pm 2.8$ ), in the social dimension, having enough privacy at home for stoma care ( $9.3 \pm 1.8$ ) and stressfulness of the disease for the family ( $1.1 \pm 1.9$ ) and in the spiritual dimension, the motivation for life ( $8.2 \pm 2.7$ ) and the satisfaction of spiritual needs by performing religious group activities ( $4.3 \pm 4.8$ ). Total quality of life was related to age, economic status, status of ostomy (permanent or temporary) and duration of ostomy ( $p < 0.05$ ). Nurses can nicely understand the challenges and factors associated with the quality

of life of patients with ostomy and, therefore, design and implement more appropriate care education programs for these patients and their families.

The next study was conducted by Sarabi et al. <sup>[14]</sup>. In this cross-sectional study, 300 patients with ostomy were selected from educational hospitals in Tehran. Data were collected using a modified quality of care questionnaire from a patient's perspective during three months. Nurses respect, proper communication at the time of providing the information especially about taking shower with ostomy had the highest levels and the information provided in the Iranian Ostomy Association, the way of providing ostomy equipment and enough time to speak with the patient had the lowest average, respectively. The results of this study showed that, although overall patient satisfaction with nursing care was high, but in some aspects of care, more studies are required to be done to improve satisfaction and quality of care.

The next study was carried out by Rajabipour et al. <sup>[15]</sup>. This was a quasi-experimental study of two groups before and after using purposive sampling method on 70 patients with colon cancer in the Iranian Ostomy Association and Rasoul Akram hospital in 2013. The intervention was based on a practical work book of motivational interview with a nurse (researcher), a psychologist who was aware of the motivational interview (as facilitator of the group), and a nurse familiar to the ostomy in two groups of 12 and a group of 11 patients. Data were collected using a questionnaire of quality of life in patients with ostomy who were measured before and one month after intervention. The results of this study showed that the motivational interview significantly increased the quality of life in the post-test (mental health, ( $P < 0.0005$ ), social health ( $P < 0.0008$ ), spiritual well-being ( $P < 0.003$ ), and physical health ( $P < 0.002$ ). Also, there was a significant difference between the components of social, mental, spiritual and physical health in the two control and intervention groups. The results of the study showed that the implementation of "group motivational interview" made a significant difference in the quality of life score of patients with intestinal cancer with permanent ostomy. Since the implementation of this method is associated with improving the quality of life of patients with ostomy.

Another study was conducted by Oraki et al. <sup>[16]</sup>. In this correlational study, 169 patients with ostomy participated in the Iranian Ostomy Association who had been less than 6 months of their surgery were selected. The required data were collected by the quality of life of patients with ostomy questionnaires, Spilberger's anger expression, and Goldberg and Hiller's general health. The results showed that physical and social dimensions had a significant relationship with all components of mental health. Mental dimension also had a significant relationship with anxiety, insomnia and depression. Psychological dimension was associated with anxiety and insomnia, social dysfunction and depression as well as overall quality of life with physical signs and depression. There was a significant relationship between internal anger with physical symptoms, anxiety, insomnia and depression as well as external anger with physical symptoms, anxiety and insomnia, and

general anger with physical symptoms. According to the results, two indicators of anger index and quality of life, together, predicted a total of 58% of the variance of general health. According to the results of the study, considering the relationship between anger and quality of life with general health of the patients with ostomy, life skills training and anger control can improve the quality of life of these patients and improve their physical and mental health.

The next study was carried out by Pouresmail et al. <sup>[17]</sup>. This descriptive correlational study was conducted on 76 patients with intestinal ostomy admitted to hospitals affiliated to Mashhad University of Medical Sciences in 2015 using convenience sampling method. Demographic and disease information questionnaire, ostomy self-efficacy scale and ostomy adaption questionnaire were used for data collection. The Pearson Correlation test showed there was positive and significant correlation between self-efficacy and the dimensions of adaptation including admission ( $p < 0.001$ ,  $r = 0.518$ ), mental activity with anxiety ( $p < 0.001$ ,  $r = 0.438$ ), social interaction ( $p < 0.001$ ,  $r = 0.488$ ) and anger ( $p < 0.001$ ,  $r = 0.384$ ). Multiple regression test showed that social interaction and admission dimensions had a significant correlation with patient self-efficacy. The results showed that the dimensions of social interaction and adaptation in relation to self-efficacy were very important. Therefore, it was recommended that in the care of patients with ostomy especially in the early post-operative months, designing and implementing appropriate educational and support interventions will help to adapt patients with physical appearance of the stoma and maintain their social interactions.

Another descriptive cross-sectional study using a mixed method design was carried out by Pittman et al. in 2004 <sup>[18]</sup>. In this study, 2039 veterans with colon ostomy entered into the study. The data collection tools included the city of hope quality of life, demographic and medical history, the veteran's administration health information system, and the Tumor Registry database. A self-administered survey questionnaire (MCOH-QOL-Ostomy) was sent by post to participants. The skin irritation, leakage, and adjustment were significantly associated to quality of life. Some variables including age, income, job, education for preoperative care, ostomy type, total quality-of-life scores and scores on all 4 domains of quality of life were related to the ostomy complications. Founding significant relationship among ostomy complications with effective factors can help to identify of patients at risk for preventing the complications and is an important step to reduce the negative impact of complications in patients with ostomy.

In the study of Altuntas et al. in 2012 <sup>[19]</sup>, Since 2007, daily group education programs were organized for patients with stoma and their families. The programs included lectures on stoma and its care, and social activities. Patients were also encouraged to have interaction with together in terms of future social events. In this study, 72 patients including 44 men (61.1%) with the mean age of  $56.8 \pm 13.6$  years with an ileostomy ( $n = 51$ , 70.8%), a colostomy ( $n = 18$ , 25.0%) or a urostomy ( $n = 3$ , 4.2%) were included. All patients completed

SF-36 before the programs. The comparison of pre-intervention and post-intervention scores of SF-36 questionnaire showed a significant improvement in all 8-scale profiles. According to the results, married patients living at rural area had the most improvement in life quality. Therefore, group educations may be useful for patients with ostomy, and ostomy therapy units should perform such an intervention.

In another study done by Jansen et al. in 2007 [20], all patients with ostomy in the Dutch Ostomy Association were included to complete a generic (RAND-36) and ostomy-specific (Stoma-QOL) QOL questionnaire. Additionally, open-ended questions on symptoms and adaptation to ostomy were included and finally 668 patients were selected including 379 cancer patients (80 % colorectal, 17 % bladder and 3 % other) and 289 non-cancer patients (38 % colitis ulcerosa, 22 % Crohn's disease and 40 % other) with a colostomy (55 %), ileostomy (31 %) and/or urostomy (16 %). Given adjustment for gender, age, type of ostomy and time elapsed since ostomy surgery, cancer ostomy patients scored higher (better) on Stoma-QOL ( $\beta=2.1$ ) and all RAND-36 domains ( $9.1 < \beta \leq 19.5$ ). In this study, patients with cancer had better ostomy-specific QOL and generic than patients with ostomy who had not cancer. In both groups of cancer and non-cancer ostomy patients, the ten most common complication affecting the life of patients were fatigue or insomnia, leakages, pain, bladder or bowel complaints, physical functioning or activity, travelling or being away from home, other daily activities (including work), clothing and diet.

Santos et al. in 2016 [21] reported in their descriptive, exploratory, cross-sectional study on the adaptation and validation of the City of Hope–Quality of Life–Ostomy Questionnaire (COH-QOL-OQ) to the Portuguese language in Brazil. A convenience sample of 215 adults living with an

ostomy was done. Slightly more than half (51.6%) were men, 59.1% undergone cancer-related ostomy surgery and 67.5% undergone colostomy surgery. World Health Organization Quality of Life-Short Version (WHOQOL-Bref) and the COH-QOL-OQ were used for collecting the data. The patients with ostomy obtained total scores of  $69.6 \pm 20.2$  for the WHOQOL-Bref and  $6.1 \pm 1.4$  for the COH-QOL-OQ. Patients with shorter times since their ostomy creation had worse scores regarding QOL ( $P=0.006$ ) and generic QOL ( $P=0.019$ ). Patients who did not practice religion ( $P=0.027$ ;  $OR=3.39$ ) and those without a partner/spouse ( $P=0.007$ ;  $OR=4.90$ ) had increased probability of having low scores on the WHOQOL-Bref. Shorter time since ostomy creation, lack of religious believes, and lack of a partner negatively affected the HRQOL of patients with ostomy.

In this study conducted by Cengiz et al. in 2016 [22], twelve participants undergone ileostomy or colostomy during 3 months were included in the study. The patients were selected from ostomy therapy clinic of Dokuz Eylül university hospital. A quasi-structured interview was used to collect data for content analysis. The questions were consisted of structures based on the Health Belief Model (HBM) to identify challenges to adaptation at home and home care needs in patients with stoma. Content analysis had four core themes: "restriction of daily life activities"; "factors affecting adaptation to stoma"; "need for health professionals"; and "emotional effects." The theme "need for health professionals" was stated by almost all patients. Indeed, all services provided by nurse specialists should start in the hospital and continue at home. Nurses aid are required for patients with ostomy to adapt with the possible challenges due to ostomy.

Table 1. The detail of studies entered into systematic review in Iran society

ID	Reference	Sample size	Design	Age (Mean $\pm$ SD)	Conclusion
1	Rafii et al. in 2011 [6]	84	Cross-sectional	Not reported	Nurses provide a framework for enhancing the self-efficacy of these patients, especially in the social dimension, by designing and implementing appropriate interventions, which has the highest correlation with their quality of life, and in this way, they can contribute to the quality of life of these patients.
2	Naseh et al. in 2012 [13]	84	Descriptive-analytic	Not reported	Nurses can use the challenges and factors associated with the quality of life of patients with ostomy, therefore, nurse can design and implement better educational-care programs for patients with ostomy and their families.
3	Sarabi et al. in 2011 [14]	300	cross-sectional	49.35 $\pm$ 11.37	Although overall patient satisfaction with nursing care was high helping their spiritual aspect, but in some aspects of care, further consideration is needed to improve satisfaction and quality of care.
4	Rajabipour et al. in 2014 [15]	70	Quasi-experimental	Men: 56.74 Women: 52.48	The implementation of "group motivational interview" make a significant difference in the quality of life score of patients with intestinal cancer with permanent ostomy. Regarding the relationship between anger and quality of life with general health of
5	Oraki et al. in 2015 [16]	169	Correlational	Not reported	patients with ostomy, life skills training and anger control can improve the quality of life of these patients and improve their physical and mental health.
6	Pouresmail et al. in 2017 [17]	76	Descriptive-correlational	35.49 $\pm$ 11.97	It is recommended that in the care of patients with ostomy, especially in the early post-operative months, the design and implementation of appropriate educational and support interventions should help to adapt patients with physical appearance of the ostomy and maintain their social interactions.
7	Pittman et al. in 2004 [18]	2039	cross-sectional	Not reported	Founding significant relationship among ostomy complications with effective factors can help to identify of patients at risk for preventing the complications and is an important step to reduce the negative impact of complications in patients with ostomy.

8	Altuntas et al. in 2012 [19]	72	Experimental	56.8± 13.6	Group educations is useful for patients with ostomy, and ostomy therapy units should perform such an intervention.
9	Jansen et al. in 2007 [20]	Case: 379 Control: 289	Mixed-method	Not reported	Patients with cancer had better ostomy-specific QOL and generic than patients with ostomy who had not cancer.
10	Santos et al. in 2016 [21]	215	Cross-sectional	Not reported	Shorter time since ostomy creation, lack of religious believes, and lack of a partner negatively affected the HRQOL of patients with ostomy.
11	Cengiz et al. in 2016 [22]	12	Phenomenology	54.41 ± 19.14	Nurses aid are required for patients with ostomy to adapt with the possible challenges due to ostomy.

## Discussion

In a study conducted by Ramsey et al., quality of life in patients with colorectal cancer was studied. In the first three years after diagnosis, quality of life decreased and after three years it was increased. The results of this study showed that people with long-term intestinal cancer may experience high quality of life, although deficiencies in other variables, especially in the socio-economic situation are observed [5].

In the study of Hayati and Mahmoudi et al. conducted in 2008, strategies for coping with stress in women with breast cancer were studied. In the area of problem-based stress management, more than half of the samples were in the moderately level, less than half of the samples were good and the low percentage was used coping styles. In relation to emotional-focused stress coping strategies, the most commonly used questions were related to the question "I pray and resort to God" and the question "I hope things will get better" and often answer was "always"

The results showed that most patients with breast cancer had been used some strategies such as religious strategy, positive attitude, hope and optimism, acceptance of the truth of the disease, efforts to treat the disease, internal control, positive reviews, worry, social support requests and intentional forgetting. Most of the coping strategies were positive by Iranian women, and religious beliefs were used as an important source of individual to adapt to the disease in these women [23].

A study was conducted by Nejat Ahmadi and Moradi in 2014 on the relationship between mind awareness, coping strategies and perceived stress with the quality of life among patients with cancer. In this regard, 134 cancer patients (61 women and 73 men) were selected as outpatients and admitted to hospitals in Tabriz using convenience sampling method. Data collection tools consisted of the perceived stress questionnaire, the shortened forms of coping with stressful questionnaire, the questionnaire for assessing the quality of life of patients with cancer and the mind-awareness, attention, consciousness questionnaire. Stepwise regression showed that mindfulness and emotional coping strategies can predict the quality of life of patients with cancer, while in the case of perceived stress based on findings, it can be stated that alerted individuals evaluate life-threatening situations with less stress and use more adaptive strategies to deal with stressful situations, especially using less avoidance strategies. The findings of this study suggest that using methods for increasing the awareness and training of adaptive coping strategies can promote a positive evaluation of stressful

conditions and ultimately increase the quality of life of patients with cancer [24]. In a study done by Taheri et al. in 2014, spiritual wellbeing and religious coping strategies were reviewed in hemodialysis patients and used the pargament religious coping scale [25].

The results showed that more than half of the patients in the spiritual health scale had higher scores than the mean score, and most of the samples had a higher score on the positive religious-scale strategies, and this score had lower score in negative religious strategies. There was a direct and significant relationship between spiritual health and positive religious coping strategies. There was a significant negative relationship between spiritual health and religious coping strategies. There was no significant difference between spiritual health and the use of religious coping strategies in both genders. As the age increased, the spiritual health increased, so that it was statistically significant. The findings showed that the spiritual well-being of hemodialysis patients was relatively favorable. Considering the positive impact of effective religious strategies on increasing spiritual health, focusing on strengthening religious strategies in routine care can improve the quality of spiritual health and ultimately improve the quality of psychological life of these patients [25].

## Conclusion

According to the results designing and implementing appropriate nurses' interventions for patients with ostomy and their families can provide the enhancement in their self-efficacy in the spiritual, mental and social aspects and the most improvement for their quality of life by reinforcing their coping strategies. Also, group training for these patients can have the greatest impact on the mental and spiritual dimension.

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## Conflict of interest

The authors declare that there is no conflict of interest in this study.



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