

The Impact of Religious Practices on Depression and Anxiety Among Moroccan Cancer Patients

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Research

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Abstract

Background: Many researchers have associated between religiosity with a lower level in depression and anxiety among patients with chronic diseases and especially in cancer patients.

The aim of this study is to examine the association between spirituality and depression among Moroccan cancer patients. Another aim resides in to examining the association between spirituality and anxiety among Moroccan cancer patients.

Methods: 1054 cases were included. Cancer profile, socio demographic and spiritual characteristics were considered. The data were firstly analyzed using the validated HADS scale arabic version. The statistical significance was tested using Chi-square test. The Odds ratios were also computed for the likelihood of being in depression and/or anxiety.

Results: The results obtained revealed that the performance of religious practices such as reading Quran, doing Roquia , and the consideration of cancer as a divine test are factors that significantly decrease the risk of having depression and/or anxiety. However women wearing the “hijab” have three times higher chances of having anxiety compared to other women that do not wear the “hijab”. Patients considering cancer as a divine punishment have significantly higher odds of having anxiety and/or depression. Regarding charity, pilgrimage, visit of “marabouts”, use of medicinal plants and fasting are found to be insignificant predictors of depression and anxiety.

Conclusions: The current evidence indicates that religiosity is important to patients facing cancer. Religiosity is not just protective in nature, but it can also be therapeutic. Praying, reading or listening to the Quran, as well as considering cancer as a divine test have been shown to reduce the level of depression and anxiety . In conclusion, the spiritual aspect plays an important role in the quality of life of cancer patients.

Background

Many researchers have associated between religiosity with depression and anxiety among cancer patients [1, 2, 3, 4, 5, 6]. Religiosity has been found to predict a decline in anxiety and depression symptoms and an increase in liveliness. Additionally, religiosity has been shown to improve mental health as well as lower cancer-related distress [7].

In Muslim countries, numerous studies indicated a high correlation between religiosity and depression/anxiety among cancer patients. In other words, an increase in the quality of life has been noted in spiritual cancer patients [8, 9, 10, 11, 12, 13, 14, 15]. Muslim cancer patients had increased their connections with God “Allah” upon their diagnosis with cancer. Once diagnosed with cancer, patients become more cognizant of the crucial role of spirituality. In the same vein, spirituality seems to be associated with a lower prevalence of depression, especially with higher levels of worship. Additionally, spirituality has been shown to be a vital coping strategy for patients with chronic pain [16, 17].

There are no studies, to our knowledge, which treated the relationship between religiosity with relevance to depression and anxiety among cancer patients in the Moroccan context.

Morocco is a Muslim country by conviction. For Muslims, religiosity is manifested in the fundamental religious practices the most important of which are prayer (Salât) - five times a day [18], along with the profession of faith (Shahada), the fasting during the holy month of Ramadan, almsgiving (zakat) and the pilgrimage to Mecca (Hadj) [19].

The aim of this study is to examine the association between religiosity and depression among Moroccan cancer patients. A secondary aim resides in investigating the association between religiosity and anxiety among Moroccan cancer patients.

Methods

A hospital-based cross-sectional study was conducted in a tertiary care hospital, The National Institute of oncology (NIO) in Rabat. NIO is the leading oncology center in Morocco, recruiting more than 6000 new patients per year. The study took place from December 2019 to January 2021. Before conducting the study, ethical clearance was obtained from the research ethics committee of the faculty of medicine and pharmacy of Rabat 26/19.

Inclusion criteria

patient recruitment included all cancer patients followed at NIO who have given their written consent to participate in the study; all participants must be at least 18 years of age, histologically confirmed cancer regardless of its stage and current treatment.

Exclusion criteria

patients who do not meet the inclusion criteria above-mentioned are excluded from this study, as well as those with diffuse brain metastases that may have an impact on language or intellectual abilities that bias the questioning.

Sample size

With a response rate of 93.7%, 1054 patients consented to participate in the study completed questionnaires and HADS scale.

Data collection

to measure depression and anxiety we adopted the HADS scale Arabic version [20]. Also we adopted a questionnaire with questions adapted to the main psycho-socio-cultural and religious' characteristics of Morocco. The questionnaire was developed in consultation with a multidisciplinary medical team consisting of a psychologist, sociologist, a nurse executive, and medical oncologists.

The Socio demographic characteristics include: age, gender, marital status, spoken language, ethnic group, educational status, professional situation, social security, medical coverage, monthly income and residential status.

The religious characteristics include

religiosity, Religious customs (practicing believer, non practicing believer), practicing prayer (yes/no), fasting (yes/no), pilgrimage (yes/no), charity (yes/no), reading or listening of holy "Quran" (yes/no), wearing the veil (yes/no), cancer is divine test (yes/no), cancer is divine punishment (yes/no), practicing Rokya (yes/no), visit of marabouts (yes/no), use plants medicinal (yes/non).

Medical characteristics

type and stage of cancer follow-up treatment, treatment effects was collected from electronic medical charts "ENOVA".

Statistical methods

The obtained cronbachs alpha was 0.782. Qualitative variables were described by frequency and percentage, and quantitative variables by median. The statistical significance was tested using Chi-square test. A p-value of was considered statistically significant.

The data were firstly analyzed using univariate and bivariate methods both to the percentage of presence or absence of anxiety and depression. The Odds ratios were also computed for the likelihood of having depression and/or in anxiety.

Data analysis: the data were analyzed using SPSS software version 2020.

Results

Socio-demographic characteristics of the studied patients (Table I)

Table I presents the socio-demographic characteristics of the patients with a median age of 51 years. The most affected age group is between 40-60 years with a percentage of 58, 70%. Women represent the majority of the population studied 76, 70%. Regarding marital status, 74% of the participants are married. Concerning the provenance 47.7% of the participants live outside the Rabat region and 26,2% come from rural areas.42.2% of the participants are illiterate patients, with a female predominance (sex ration F/M=4). 68.1% are unemployed and only 32.9% are employed. Regarding the patient's monthly income 68.1 % have no income at all. 21, 8% have an income below the SMIG (guaranteed inter-professional minimum wage) which is 270€/month. Regarding the medical coverage, 65.9% of the participants have no medical coverage.

Medical characteristics of the studied patients (Table II)

Table II summarizes the medical characteristics of the patients enrolled in the study. 59.5% of patients have gynecological cancer, digestive cancer accounts for 18.2%, and lung cancer accounts for 12.2%. 85.8% of the participants are undergoing chemotherapy, and 24% of the patients are in a metastatic stage. For 35.5% of the patients, suffer from pain as a side effect. Nausea and vomiting are present in 20.5% of participants.

Association between anxiety and religious characteristics (Table III)

In the table III, the results obtained show that the determinants of anxiety are Prayer, reading and/or listening to the Quran, wearing "hijab", "Roquia". Furthermore, the consideration of cancer as a divine test or punishment has also been shown to be a great predictor of depression and/or anxiety. However, Pilgrimage, fasting, charity, visiting Marabouts and the use of medicinal plants mentioned in the Quran were not found to be significant predictors of anxiety and/or depression.

We notice that a woman wearing the "hijab" have 3 times higher chances of having anxiety compared to another woman that does not wear the "hijab". Patients considering cancer as a divine punishment have significantly higher odds of having anxiety (1.5). The results also reveal that practicing prayer, reading Quran, and doing Roquia decrease significantly the risk of having anxiety.

Association between depression and religious characteristics (table IV)

In the table IV, we found a significant association between depression and practicing prayer, reading the Quran, wearing the veil, doing Roquia, practicing believers and considering cancer as a divine punishment. Women wearing the "hijab" have 3 times higher odds of having depression compared to other women. Patients who regard cancer as a divine punishment have also higher chance of having depression (1,3) compared to other patients. Practicing prayer, doing Roquia, reading Quran and other spiritual practices have been found to decrease the risk of having depression. Charity, pilgrimage, visit of marabouts, use of medicinal plants and fasting are found to be insignificant predictors of depression.

Discussion

The current study found the significant association between lower levels of depression and anxiety with religious practices. Indicate that religiosity may have a positive effect on psychological wellbeing [21, 7]. Indeed, for anxiety, we have found that reciting or listening to the holy Quran can decrease the degree of anxiety and depression. This is in line with many studies [22, 23, 24, 25, 26]. Almerud et al (2003) describe the Holy Quran as a form of mystical music that contributes to the release of endorphins by stimulating alpha brain waves such as massage and music therapies. Yunitasari et al (2020) [22] showed that reading and listening to the Qur'an can make the body and mind more tranquil as well as make vital signs more stable. These results highlight those of Jayus et al (2017) [28] who also found that listening to the Quran reduce the level on anxiety and stress of patients. A similar study conducted by Babamohamadi et al (2017) [29] state that listening to the Quran in 60 hemodialysis patients, there was a decrease in the anxiety level in the intervention group. Hence the Qur'an will maintain a balance between various aspects

of human life [30]. This balance, is what we believe, will help form a positive reaction of the illness process. As is correctly Suhami (2016) [24] confirmed that praying and reading holy Quran book can improve the quality of life of cervical cancer patients.

Another important finding confirmed the association between lower levels of depression and anxiety with practicing prayer. This finding is in line with numerous studies [31, 32, 33, 34]. In the same vein, prayer has been associated with well-being [35]. Furthermore, cancer patients who focus on what they are thankful for in life may spend less time ruminating over their illness, which may lead to lower levels of depressive symptoms [3]. Olver et al (2012) [36] surveyed 999 cancer patients in Australia. They discovered that prayer made small but significant improvements in these patients' wellbeing. Janiszewska et al (2008) [37] questioned 180 adult women with end-stage breast cancer in Poland and found that the act of praying is an effective coping mechanism for anxiety.

For cancer patients, prayer can even contribute to the wellbeing, calmness, freedom, hope, devotion and peace [18]. This finding was also reported by Rezaei et al (2008) [11] patients undergoing chemotherapy with heightened attitude towards prayers. They began to feel more calmness and peace. Furthermore, many patients report that prayer helps them relieve their pain which is manifested in significantly lessening stress, anxiety and depression [19].

It is interesting to note in this study "considering cancer as a divine test" reduces the level in depression and anxiety. To conclude, the impact of cancer onset varies according to the degree of religiousness [38]. Among practicing believers, religiosity has a positive influence on health and illness [7]. Cancer according to Muslims is a divine test dedicated to people who have strayed from the "right path". Or even pride in being chosen by "Allah" [38]. This behavior is manifested in praying, reading or listening to Quran, and praising God. Conversely, a lack there of can increase depression and anxiety symptoms [7].

Nevertheless, among the non-practicing believers, cancer as a divine punishment resulted in increased levels of depression and anxiety. To show scientifically that a lack of religiosity puts people at greater risk of developing anxiety and depression. This is in line with the research conducted by Kimberly et al (2011) [39] found a significant negative correlation between spiritual well-being and anxiety. Therefore, a sense of guilt among the study population is ingrained in their psyches, they believe that they deserve to be labelled as "bad Muslims" [9]. This way of thinking engenders psychological disorders, and in some cases, this practice goes against medical recommendations [40]. It is not uncommon to find that patients attribute their disease to an "educational God" [41]. Divine punishment seems to be particularly prevalent among cancer patients [42].

Another important finding noted is the presence of a significant association between practicing "Roquia" and lower level of depression and anxiety. The "Roquia" is a spiritual caring and unconventional therapeutic practice [43]. The "Roquia" is employed for diverse purposes, for instance, seeking protection and treating illnesses, such as fever and epilepsy. The "Roquia" uses Allah's words from the holy "Quran", his fair names and his attributes. Also, the "Roquia" uses the above-mentioned in addition the Dihkr (the words in ALLAH's remembrance) and established prayers [44, 45]. The research elaborated by Yunitasari

[22] found that spiritual caring with murottal reduces stress, anxiety, and depression in stage IIIb cervical cancer patients undergoing chemotherapy. Spiritual caring with murottal can reduce stress symptoms such as uneasiness, nervousness, short-temperedness, and intolerance of disturbances or delays.

Surprisingly, we found a significant association between wearing the veil “Hijab” and a high level of depression and anxiety. According to the result obtained more than 68% of participants systematically wear the veil. This phenomenon can be explained either to cover alopecia related to chemotherapy or to get closer to “Allah” as the return to the right path considering that they were “bad Muslims” [9]. This association has been supported by several studies [46, 47, 48,]. As a case in point, Reiche [49] asserts that damage to body image (alopecia, mastectomy, hysterectomy) can lead to stigmatizing behaviors from the immediate environment, avoidance of all social contact and leisure activities [42]. Alopecia calls into question femininity and the power of seduction, and often constitutes a narcissistic trauma that is difficult for women to accept [51]. The depreciation of body image can lead to the development of the depression and anxiety [47]. On another note, the Hijab is a visible expression of their faith and culture and a major determinant of being identified as Muslim [48]. Indeed, wearing this item of traditional Muslim clothing appears to exert considerable influences on how others perceive the individuals concerned [50, 51]. This perception is mostly viewed in a positive manner by the Muslim community. The “Hijab” is worn as a symbol of cultural identity, piety and modesty by Muslim women [52]. Hijabi Women are encouraged to wear this head-covering when in public as a means of limiting their physical attractiveness. [53].

Strengths And Limitations

Among the many strengths of this study is the first study in Morocco that it investigates the association between religion, cancer, anxiety and depression. Secondly, the large size of the sample (1054 participants), as well as the number of socio-demographic and religious characteristics studied.

The Participants in this study were all Muslims cancer patients. Consequently, it is difficult to generalize the results of this study to populations that differ by race and religious affiliation. Further, other patients hold a secularist viewpoint and hold that religion remains a personal choice and should not in any way be linked to illness. Another limitation resides in that the study did not include patients who manifest their religiousness in different ways, such as yoga, hypnosis, and reflexology.

Conclusion

The current evidence indicates that religiosity is important to patients facing cancer. Religion is not just protective in nature, but it can also be therapeutic. Praying, reading or listening the Quran, and regarding cancer as a divine test can reduce the level of depression and anxiety. The conclusion that we may draw is that the religious aspect plays an important role in the care of the cancer patient. From the moment the diagnosis is made. The presence of religiosity can help the patient overcome the psychological burdens of the disease throughout the course of the illness.

Abbreviations

AMFROM

the Moroccan association for training in medical oncology

EROT

Research Team in Transrational Oncology

HADS

Hospital anxiety and depression scale

NIO

National institute of oncology

SMIG

Minimum Legal Wage

SPSS

Statistical Package for Social Science;

Declarations

Ethics approval and consent to participate

The protocol of study was approved by the biomedical research Ethics Committee, Faculty of Medicine and Pharmacy Rabat and was conducted with respect to legal aspects under Number 26/19. For all patients who agree to participate in the study, a written consent was obtained from all patients before they were enrolled in the study.

Consent for publication

Not applicable.

Availability of data and materials

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

Conflicting interests

The authors have declared not having any conflicting interests.

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Authors' contributions

FE exploited the data, analyzed the data, performed statistical analyses, and wrote and edited the manuscript; FZ, M J and LY co-exploited the data and wrote the manuscript; SB, M J and FZ contributed to the review and critical writing of the manuscript; HE designed and coordinated the study, and wrote the manuscript. All authors approved the final manuscript for publication.

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Tables

Table I: Socio-demographic characteristics of the studied patients

Variable		Effective	Percentage
Gender	Male	246	23,3
	Female	808	76,7
Age group	20-40	168	15,9
	40-60	619	58,7
	60-80	258	24,5
	Other	9	,9
Spoken language	Arabe	973	92,3
	Amazigh	81	7,7
Ethnic group	Arabe	866	82,2
	Amazigh	188	17,8
Level of education	Illiterate	445	42,2
	Qurranic	181	17,2
	Primary	230	21,8
	Secondary	151	14,3
	University	47	4,5
Place of residence	Urbain	746	73,8
	Rural	308	26,2
Marital status	Single	117	11,1
	Married	780	74,0
	Divorced	85	8,1
	Widowed	72	6,8
Social security	No insurance	689	65,9
	With insurance	313	29,6
	Paid	47	4,5
Professional category	Jobless	718	68,1
	Formal	107	10,1
	Informal	229	21,8

Patient's income	No income	718	68,1	
	Less than 270 \$	229	21,8	
	270 \$ and more	107	11,1	
		Median	Maximum	Minimum
Age		51,00	92,00	20,00

Table II: medical characteristics of the studied patients

Variables		Cases	Pourcentage
Localisation	Gynecomammary	613	58,2
	Lung	133	12,6
	Digestives	197	18,7
	Urological	48	4,6
	Orl	38	3,6
	Autre	25	2,4
Stage	Localised	801	76,0
	Metastatic	253	24,0
Treatment	Chemotheray	911	86,4
	Radiotherapy	22	2,1
	Surgery	121	11,5
Secondary effects of treatment	Nausea and vomiting	216	20,5
	Pain	374	35,5
	Respiratory gene	76	7,2
	skin allergy	83	7,9
	Asthenia	186	17,6
	Alopecia	95	9,0
	Other	24	2,3

Table III: Association between anxiety and religious characteristics

		Anxiety		OR and 95% CI	P value
		No	Yes		
Prayer	No	021 (02,00%)	294 (27,90%)	0,018 (0,011 -0,029)	,000
	Yes	591 (56,00%)	149 (14,10%)		
Hijab	No	262 (24,80%)	082 (07,80%)	3,296 (2,470-4,397)	0
	Yes	350 (33,20%)	361 (34,20%)		
Fast	No	586 (55,50%)	432 (40,90%)	0,574 (0,281-1,174)	0,193
	Yes	026 (02,50%)	011 (01,00%)		
Charity	No	485 (46,00%)	335 (31,80%)	1,231 (0,919-1,648)	0,093
	Yes	127 (12,00%)	108 (10,20%)		
Pilgrimage	No	609 (57,70%)	442 (41,90%)	0,459 (0,048-4,430)	0,441
	Yes	003 (00,30%)	001 (00,10%)		
Divine test	No	046 (04,40%)	052 (04,90%)	0,611(0,403-0,927)	0,013
	Yes	566 (53,60%)	391 (37,10%)		
Divine punishment	No	462 (43,80%)	298 (28,30%)	1,509 (1,150-1,978)	0,002
	Yes	149 (14,10%)	145 (13,80%)		
Roquia	No	332 (31,50%)	280 (26,50%)	0,690 (0,537-0,886)	0,002
	Yes	280 (26,50%)	163 (15,50%)		
Practicing believers	No	219 (20,80%)	206 (19,50%)	0,641 (0,500-0,823)	0
	Yes	393 (37,30%)	237 (22,50%)		
Marabouts visit	No	570 (54,00%)	414 (39,20%)	0,951 (0,582-1,552)	0,471
	Yes	042 (04,00%)	029 (02,70%)		
Medicinal plants	No	293 (27,80%)	216 (20,50%)	0,965 (0,756-1,233)	0,413
	Yes	319 (30,20%)	227 (21,50%)		
Reading the Quran	No	072 (06,82%)	134 (12,70%)	0,307 (0,224-0,423)	,000
	Yes	540 (51,20%)	309 (29,30%)		

Table IV: Association between depression and religious characteristics

		Depression		OR and 95% CI	P value
		No %	Yes %		
Prayer	N	011 (01,10)	304 (28,81)	0,012 (0,006-0,022)	0,00
	Yes	557(52,80)	183 (17,34)		
Headscarf	No	233 (22,08)	111(10,52)	2,356 (1,799-3,086)	0,00
	Yes	335 (31,75)	376 (35,63)		
Fast	No	545 (51,65)	473 (44,83)	0,701 (0,357-1,378)	0,19
	Yes	023 (02,18)	014 (01,32)		
Charity	No	450 (42,70)	370 (35,10)	1,206 (0,902-1,612)	0,11
	Yes	118 (11,20)	117 (11,10)		
Pilgrimage	no	565 (53,60)	486 (46,10)	0,388 (0,040-3,738)	0,37
	Yes	003 (00,30)	001 (00,10)		
Practicing believers	No	079 (07,50)	075 (07,10)	0,505 (0,394-0,648)	0,00
	Yes	489 (46,4%)	412 (39,10)		
Divine test	No	049 (04,60)	049 (04,60)	0,844 (0,557-1,279)	0,24
	Yes	519 (49,20)	438 (41,50)		
Divine punishment	No	423 (40,10)	337 (32,00)	1,307 (0,998-1,712)	0,03
	Yes	144 (13,70)	150 (14,20)		
Roquia	No	315 (29,90)	297 (28,20)	0,797 (0,623-1,019)	0,04
	Yes	253 (24%)	190 (18,00)		
Marabouts visit	no	570 (54,00)	414 (39,20)	0,793 (0,486-1,294)	0,21
	Yes	042 (04,00)	029 (02,70)		
Medicinal plants	No	293 (27,80)	216 (20,50)	0,969 (0,761-1,235)	0,425
	Yes	319 (30,20)	227 (21,50)		
Reading the Quran	No	054 (05,12)	151(14,40)	0,232 (0,16-0,325)	,000
	Yes	514 (48,7%)	335 (31,75)		