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Dominican Sisters Quality of Life Assessment

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Abstract

Background

The quality of life in older women has been found to decrease with poverty, poor health, decreased access to healthcare and low education, while marriage and children can both improve or decrease the quality of life. The information on the quality of life of older women living in faith based communities is lacking.

Objectives

The purpose of this study was to explore the quality of life and factors impacting quality of life in Sisters living in an assisted living facility.

Methods

The short form 36 Health Survey Questionnaire (SF-36) was used to measure quality of life of the Dominican Sisters living in an assisted living facility. Of 29 surveys, 12 (41% follow-up) were completed and scored. From the survey scores, the Cronbach alpha was used to determine the degree of internal consistency for each of the 8 domains in this population. A Spearman's correlation test was performed to determine if age and BMI had an influence on the 3 domain scores. A Mann-Whitney U test was done to determine if mean quality of life scores differed by the presence of chronic illness.

Results

The sample consisted of white, educated Sisters with a mean age of 83 years (+/- 7.5). The Cronbach alpha showed a low degree of internal consistency in 5 domains with only 3

domains (physical functioning, role functioning/physical, and role functioning/emotional) exceeding 0.70. The mean scores of physical functioning, role functioning/physical and role functioning/emotional were 47.1 (+/- 24.4), 50 (+/- 39.9), and 88.9 (+/- 39.9), respectively. There was no correlation between these 3 domains and BMI and age. Finally, there was no difference in the mean scores in the three quality of life domains and the presence of chronic illness

Conclusion

The Dominican Sisters scored similarly to other women on the quality of life domains of physical functioning and role functioning/physical. However, the Dominican Sisters scored a very high quality of life in role functioning/emotional. I hypothesize the security of knowing that they will always be cared for and the social community they live in contributed to this high score.

Background

The elderly community in America is growing and with that grows the need to assess their quality of life. A study conducted in 2011 found that a decrease in physical activity, higher health care, higher education, and living above the poverty line all increase one's quality of life. Access to healthcare is an important aspect of improving one's quality of life, due to the fact that living with an untreated illness or chronic pain can negatively affect one's life[1]. A prospective study identified that low-income individuals experience a high level of stress, which decreased their quality of life[2]. Education is also an important component of quality of life since higher education leads to higher annual pay[2].

Physical activity can be beneficial to one's health, but when this exceeds an individual's ability it is harmful to their body and increases the risk of injury[3]. Elderly individuals that live at their home risk physical injuries while doing household chores, using stairs, and bathing[3]. After an injury, their health can decrease further while staying in hospitals because there is an increased risk of infection which lowers quality of life[3]. These risks are decreased when someone is living in an assisted living facility because the staff is able to assist them with these tasks.

Marriage can increase one's health status when it is reported to be a healthy marriage, but when the marriage is strenuous, there is a correlation with increased health problems in women[3]. Specifically, a marital strain is correlated with an increase in cardiovascular disease due to an increase in blood pressure[3]. When someone has children, their stress levels can increase and this can also lead to high blood pressure[3].

The Dominican Sisters have dedicated their lives to serving God and various communities. Elderly nuns living in assisted living facilities have characteristics that should result in high quality of life; however, information is lacking on their quality of life. Due to their choice to live in a community setting, not get married, and have no personal possession, they have a very different lifestyle than the average American woman. The sisters, fortunately, have staff available to perform strenuous tasks for them and access to healthcare. Most of the Sisters have received higher education at Aquinas College which is correlated with an increase in quality of life. The sisters also avoid the added stress of being widowed or divorced which has been shown to decrease the quality of life in women[1].

The largest component of the Sister's quality of life is their faith. The Dominican Sisters have Chapel twice a day and allocated time to prayer. This is the life they have lived since entering the convent. The Journal of Happiness Studies collected data on the correlation between quality of life and religion. The study found that those that have strong faith also have higher happiness scores and strong community ties[4]. These community ties found in the church can lead to lower rates of death because of an increase in coping mechanisms and a decrease in stress. Regular church attendance was a large influence on the results of the study. It stated that those with a high attendance frequency had the highest quality of life. Since the Dominican Sisters have daily attendance at chapel, they should have a high quality of life. These factors lead me to believe that the Dominican Sisters will receive a higher quality of life scores than other elderly Americans.

Aim

The aim of this study was to measure the quality of life of retired, elderly Dominican Sisters and factors that might impact their quality of life.

Methods

Experimental Design

I handed out the demographic and short form 36 Health Survey Questionnaire (SF-36) surveys to the 29 Sisters for them to complete. Ten Sisters completed the surveys on their own and two of them received assistance (response rate 41%). I collected all surveys from the Sisters to score. Once all of the data was collected, I scored the surveys and conducted a statistical analysis to determine the associations of quality of life with the characteristics of the Sisters.

Subjects

Of the 29 Dominican Sisters living in the assisted living building, 12 completed all the questionnaires. Grand Valley State University Institutional Review Board approved the protocol and written informed consent was obtained from each participant and the Dominican Sisters Leadership Team.-Questionnaires and informed consents were locked in a file in Dr. Debbie Lown's research office, 328 Henry Hall. Although there was no identifying information collected in the survey, all responses were kept confidential

Variables

Demographic and Characteristic Variables

Subjects were asked to complete a survey that consisted of age, weight, height, and ethnicity. Body mass index (BMI) was calculated from the self-report height and weight.

Chronic disease

Subjects were asked to report if they had the following chronic diseases: diabetes, hypertension, arthritis, or heart disease.

Quality of Life

In this study, the SF-36 survey was used to measure the quality of life. The survey accounts for eight scales: physical functioning, role functioning/physical, bodily pain, general health, vitality, social functioning, role functioning/emotional, and mental health[5]. These domains account for the physical and mental variables that influence quality of life. The responses to the survey were recorded and the scores were found on a scale of 0-100 with higher values indicating a higher quality of life. The Cronbach alpha was also used to determine the degree of internal consistency in this sample[6].

Statistical Analysis

Once all of the domains were scored, the Cronbach alpha was used to determine validity in this unique population. Despite the removal of questions in each domain, only 3 domains (physical functioning, role functioning/physical, and role functioning/emotional) had Cronbach alpha greater than 0.70. Therefore, this paper only summarizes and explores the relationships between these 3 domains and subjects' characteristics. Spearman's correlation was used to test for associations between the 3 domain scores, age, and BMI. Mann-Whitney U test was used to compare mean SF-36 scores (physical functioning, role functioning/physical, and role functioning/emotional)) in those with and without chronic illnesses. A two-tailed alpha level of 0.05 was used for all statistical tests.

Results

Demographic Information

As shown in Table 1 the sample was mainly white, educated Sisters with an average age of 83 (+/- 7.5) years. These Sisters reported a high amount of visits to the chapel averaging 20

(+/-29) visits per week. However, they reported low social support with low contact with friends and family as they only average 8 (+/- 9.2) visits from each per month. The Sisters were overweight with an average BMI of 28 (+/- 4.3) kg/m^2.

Table 1: Demographic Variables (n=12)

Age (years)	Height Feet, inches	Weight (pounds)	BMI* Kg/m2	Chapel Visit (no.)	Friends (no.)	Family (No.)
81	5'3	133	23.56	4	5	6
90	5'2	160	29.26	100	10	3
79	5'5	182	30.28	4	20	30
75	5'4	207.5	35.61	0	No Response	8
89	5'8	165	25.09	10	5	5
82	5'7	183	28.66	25	8	22
96	4'10	140	29.26	60	6	1
75	5'2	128	23.41	9	10	3
91	4'11	159.8	32.27	5	3	0
74	5'7	210	32.89	5	8	4
77	5'3	188	33.3	7	8	8
89	4'11	110	22.21	12	5	17

*BMI=Body mass index

Quality of Life Scores

The mean scores with standard deviations for the 3 quality of life domains are cited in Table 2.

Table 2: Mean Scores (SD) for Domains (n=12)

Physical Functioning	Role Functioning/Physical	Role Functioning/Emotional
47.1 (+/- 24.4)	50 (+/- 39.9)	88.9 (+/- 29.6)

The relationships between QOL scores and demographic and health variables

Table 3 indicates there was not a significant correlation between age, BMI and the 3 quality of life domain scores.

Table 3: Spearman's correlation between SF-36 quality of life scores, age and BMI* (n=12)

Domain	Age (years)	BMI*
Physical Functioning	0.0478	0.307
Role Functioning/ Physical	-0.115	0.509
Role Functioning/Emotional	-0.356	0.207

*BMI= body mass index

Chronic Illness Influence on Mean SF-36 Domain Scores

The Sisters reported a high percentage of arthritis (50%) and low percentage of heart disease (17%) and hypertension (25%). As shown in Table 6, there was no difference in the mean scores of physical functioning, role functioning/physical, and role functioning/emotional by the presence or absence of chronic diseases.

Table 6: Mean scores (SD) for each subscale on the SF-36 by presence/absence of chronic diseases

Variable	Physical Functioning	Role Functioning/Physical	Role Functioning/Emotional
Heart Disease	51.6 (+/- 10.2)	58/3 (+/- 52.2)	66.7 (+/- 57.7)
No Heart Disease	45.5 (+/- 28.8)	47.2 (+/- 38.4)	96.3 (+/- 11.1)
Diabetes	70 (+/- 15)	41.6 (+/- 14.4)	100 (+/- 0)
No Diabetes	39.4 (+/- 22.4)	52.8 (+/-45.8)	85.1 (+/- 33.7)
Hypertension	56.6 (+/- 36.6)	66.6 (+/- 28.9)	100 (+/- 0)
No Hypertension	43.8 (+/- 20.8)	44.4 (+/- 42.9)	85.2 (+/- 33.8)
Arthritis	55.8 (+/-22.2)	54.2 (+/- 40.1)	85.7 (+/- 37.8)
No Arthritis	37.5 (+/- 23.3)	45.8 (+/- 43.1)	93.3 (+/- 14.8)

Conclusion

This was a unique study exploring the quality of life of Sisters living in an assisted living facility. There is minimal data collected to determine the quality of life for those living in a convent. This study reports the quality of life on this underrepresented population. A unique finding of this study was the low internal consistency of the SF-36 in this population. This was a surprising finding as previous research has indicated high internal consistency of the SF-36 domains in the elderly[7]. Future studies exploring quality of life in women living in faith communities should consider use of a different questionnaire.

In a study conducted by Maglinte et. al., they reported physical functioning and role functioning/physical scores in women similar to those found in this study[8]. This study did find that the Sisters had a higher role functioning/emotional score as compared to the women in

Magilinte study. Their higher score could be due to their strong faith. Their in home chapel, which averages 20 visits a week, and designated prayer times allow them to be connected with their religion on a regular basis. It could also be due to their community lifestyle. The Sisters live with their close friends and peers, which assures they have frequent communication and decreases the likelihood of isolation. Finally, theassisted living facility gives them security. Staff is available to help them with tasks, so they know their physical needs will be met.

Limitations

The main limitation of the study was that the selected quality of life tool, SF-36, was largely not valid in this sample. The second limitation was the small sample size. It is also possible that those that feel they have a lower quality of life did not complete the survey.

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