

**THE RELATIONSHIP BETWEEN THE LEVEL OF THE QUALITY
OF LIFE FOR OSTEOPOROSIS PATIENT'S AND THE NURSING
ROLE IN HOSPITALS OF MOH AT MAKKAH CITY:
DESCRIPTIVE DESIGN 1437-1438H**

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ABSTRACT

Backgrounds: Osteoporosis an important health care issue, so, the nursing play a significant role in improving the QOL of those patients. The QOL is varying from person to person and for the nurses, it is essential that they have positive and motivational perception regarding health promotion and QOL which will play an effective role in the patient care.

Purpose of the study: the purpose of this study is to find the relationship between the level of the QOL of patient's and the nursing role degree.

Method and sample: Descriptive quantitative method was used in the current study. The study population consisted of two groups: Nursing with number 107 for each hospital (totally n= 321), and osteoporosis patients with the number 90 for each hospital (totally n= 270). The study was conducted at three governmental hospitals in Saudi Arabia at Makkah city which are King Faisal general hospital, Hera general hospital, and King Abdul-Aziz hospital.

The Tools: The first tool used is a questionnaire to assess the level of awareness of the nursing role in improving the quality of life of patients with osteoporosis (prepared by the researcher). And the Second tool is, a quality of life questionnaire prepared by the RAND Corporation "The SF-36 is a standardized questionnaire derived from a large set of questions used in the US medical outcomes study in the mid -the 1980s".

The Statistical Methods: (SPSS) was used, to calculate the relation between the level of the QOL of patients and the nursing role degree the Pearson Correlation was used

Results of this study: there is a positive significant correlation between the total degree of nursing role and the total degree of QOL ($r=0.58^{**}$, $P\text{-value} \leq 0.05$). **Conclusion:** The nurse plays an important and active role in improving the quality of life for patients with osteoporosis, as shown by the results of performance levels. Nurse helps to improve the weaknesses that influenced the lives and quality of these patients, through a variety of job skills.

Recommendation: This research is not the final word on QOL and attitudes towards osteoporosis, for there is a lack of studies on the unique perspectives of people with osteoporosis.

These study results can provide a starting point from which to develop actions aimed at improving health care and quality of life for people with osteoporosis.

Keywords: Quality of life (QOL), osteoporosis and nursing role, eight health concept of quality of life.

Conceptual Definition

Nursing role: “are the protection, promotion, and optimization of health and abilities, Prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and Populations” (Nursingworld.org, 2012).

Nurse-patient relationship: A therapeutic nurse-patient relationship a helping relationship that is founded on nurturing of faith and hope, mutual trust and respect, assisting with the gratification of the patient’s emotional, spiritual and physical needs and being sensitive to self and others using knowledge and skills. The moment when you and your patient come together it results in healing and harmony which creates a caring relationship (Pullen & Mathias, 2010).

Nurses’ perceptions of patients’ QOL: This perception is important since, in the clinical area, health care professionals from perception about QOL of patients based on different sources of information. These perceptions can also be formed for patients who can communicate and whose QOL can be determined by interacting with the patient. Such bases are used by doctors to make clinical decisions, change or modify programs or treatment for patients (Bahrami, Parker & Blackman, 2008).

Introduction

Osteoporosis as a bone disease can be treated and prevented by assuming certain actions such as, increasing physical activities, Vitamin D & C supplement, reducing the intake of caffeine, salt & tobacco, and balanced diet all can help in both prevention and treatment of the disease (Johnell & Kanis, 2006). This disease is known for its “silence” because it sets in quietly without any warning signs. The patients usually suffer from fractures that temporarily or permanently deprive them of their mobility, their quality of life (QOL) and their autonomy (Niams.nih.gov, 2015).

The QOL is explained as a perception of the individual about the status of his/her life, subjected to the culture and value system in which he/she has to spend time in the terms of their expectations, goals, concerns, and standards (World Health Organization [WHO],int, 1997). It is assumed as a subjective perception of an individual about their available position in life. To fulfill the great and unique requirements for the healthy lifestyle of patients, both patients and nurses are expected to have a proper understanding of the QOL. In the part of the patient, the meaning of QOL is varying from person to person and also being affected accordingly. For the nurses, it is essential that they have positive and motivational perception regarding health promotion and QOL which will play an effective role in the patient physical care, treatment, happiness, emotional or psychological care, and general well-being. Thus, having a positive perception of QOL becomes mandatory for the nurses because it can positively affect the patient’s physical, emotional, and social aspects of life (UKEssays, 2013).

Recently understanding the QOL becomes essential to improve the clinical practices of the nurses who will help in modifying the life of osteoporosis patients. QOL is an important assessment tool for nurses as a crucial field of health care (Starkweather, 2010).

Nurses play a significant and essential role in improving the QOL of the patients suffering from osteoporosis because they have professional knowledge regarding treatment and patient care. They should apply the concept and the practices of the osteoporosis to prevent and treat the disease, including signs, symptoms, factors, causes, prevention, and management of this health condition. Nurses have plenty of responsibilities to treat and manage the osteoporosis patient, such an example; evaluate results of the involved risk factor modification and their treatments, increase the awareness of the patient about their individual risks for the osteoporosis, make manually agreeable schedule for the treatment and care of the patient, and modification of their behavioral and physical lifestyle (John, 2009).

While providing an efficient care to those patients, nurses have an important impact on how and when the patient will be recovered. They have the skills to provide required care to patients. However, patients who are overwhelmed with depression, fear, worry, or stress can increase the struggle and difficulties for the educated, well-practiced, and experienced nurses. In order to communicate effectively with such patients, the building of the positive relation on the basis of trust and respect will become essential (Natalie, 2012). The nurse has skills and experience to positively change the quality of life of the patients suffering from osteoporosis. Some important skills such as, effective communication, critical thinking, and interacting with other team members of the interdisciplinary group will enhance the power of nurses to know and understand the requirements of the patients and attain the objectives of the osteoporosis management effectively (Iofbonehealth.org, 2006).

A study conducted in the Kingdom of Saudi Arabia by (El-Dessouki, 1999), on the sample of 483 Saudi females belongs to the age group of 52 to 62 years in the post-menopausal period, it was concluded that osteopenia is increasing by 34% and osteoporosis is growing by 24%. Other study conducted about Prevalence of osteoporosis and factors associated with osteoporosis Among the 100 Saudi women who were in the age group 40-75 years,

58% had low bone mineral density (BMD). 82% of the Saudi women had Vitamin D deficiency. Only 21% were exposed to sunlight, almost 16% of the women whose diet was not adequate had normal Vitamin D level, and some preference were doing regular exercise, 7% have habit of smoking and almost 47% of the women whose diet was not adequate had normal BMD (Oommen & AlZahrani, 2014).

In 2015, Al-Otaibi study of Osteoporosis Health Beliefs, Knowledge and Life Habits in Saudi Arabia ,among Women with a family history of that diseases had a mean BMI (24.8 ± 5.9) more than the other group, more than half 58% of them exercised three times or less weekly and almost 11% of them smoke. More than 22%, 13% of women without a family history of osteoporosis take calcium and V.D as supplement respectively. Based on the OHBS subscale mean to score the perceived susceptibility and lower in women without family history compared to the other group. The family history group had a lower mean score on calcium intake and exercise. A study conducted by Osman (2013). In Assir region about assessment of osteoporosis KAP among women, knowledge about the osteoporosis was very poor among study group in Assir region; almost 90% did not know the right answer. The highest score among questions of knowledge was that question about the increase chance of fracture. Regarding attitude and practice to prevent the osteoporosis, the total score is very poor. Especially among young females which are very serious. 90% of this group did not know the right answer. Almost 57% of patients had limited activity and 71% had no outdoor work at all or doing exercise.

This study gives comprehensive information about the osteoporosis disease and roles of nurses in care treat and improve the QOL of the patients. Moreover, this study also is a support for further researches in the field of QOL of osteoporosis patients & it is beneficial to improve the hospital efficiency, quality of patient care, and nursing care.

It is concluded that osteoporosis disease has a great reflection on all the elements of the patient's life perception with the respect of their QOL. And it is also finalized that professional nurses by the virtue of their practices and profession have a significant role in improving the perception of the QOL of the patients suffering from osteoporosis disease. Thus, there is no doubt that the given study determined the possible effects of the osteoporosis health condition on the QOL of the patients and the virtual role of nurses to improve the condition

Today, the objectives of nursing care can be classified into two folders, one is decreasing and prevent the disease symptoms and other is improve in overall QOL of the patient. It is also important for the patients who choose the nursing care to go parallels in both sides at the same time (Starkweather, 2010).

METHODOLOGY

The research approach for this study is quantitative approach; the aim of this study is to identify the relationship between the level of quality of life in patients with osteoporosis and the extent of the nursing role in improvement.

Research Design

The descriptive quantitative method was used in the current study through patients sample and nurses' sample, with Convenience sampling collected data.

Setting

This study was conducted at three governmental hospitals in Saudi Arabia at Makkah City which are King Faisal General Hospital with total bed capacity 300 Beds with the number of nursing 561, Hera General Hospital with total bed capacity 300 beds with the number of nursing 612, king Abdul-Aziz Hospital with total bed capacity 300 beds with the number of nursing 782. The major specialties in all this hospitals are surgical, medical, emergency, and general clinic.

All these settings are for providing health care to the large population in Makkah city including residents of Mecca City and patients coming for Hajj and Umrah, they have staff with various levels of education, experiences and skills from various nationalities.

Study Subject

The study population consisted of two groups: Nursing: with number 321 in the selected hospitals and It has been identified the sample size according to the equation Richard Geiger, bringing the number of nurses 107 for each hospital.

The equivalent Richard Geiger.

$$d = 0.05 \quad z = 1.96 \quad N = \text{population} \quad n = \text{sample size}$$

$$n = \frac{\left(\frac{z}{d}\right)^2 \times (0.50)^2}{1 + \frac{1}{N} \left[\left(\frac{z}{d}\right)^2 \times (0.50)^2 - 1 \right]}$$

Group II: patients with the number 270 according to the bed number in all the selected hospitals, determine the sample size according to the previous equation, reached the 90 patients for each hospital. Randomization sampling technique was used. Following the table of the number of distributed and collected questionnaires for samples of nursing and patients in appendix (F).

INCLUSION CRITERIA:

Patient samples:

Adult patients, Sex (female and male), without Comorbid diseases, Age from (18 to up), Patients in the medical surgical department with osteoporosis diseases or have a history of osteoporosis diseases, Patients in orthopedic clinics have osteoporosis diseases.

Nurse samples:

Medical-surgical nurse staff for the adult department, the Orthopedic nurse in the clinic, Nurse from both sex, multi-nationality, Age not less than 20, qualification diploma and above, experience not less than 6month in inpatients wards.

EXCLUSION CRITERIA:

Patient samples:

Comatose patients, mentally ill patients and Pediatric patients.

Nurse samples:

The nurse who are not providing direct care to the patient, eg: head nurse/charge nurse does not work with patients /supervisors, Nurses not work in medical surgical department or clinic of orthopedic, Pediatric nurse, Training nurse (intern nurse).

Instruments

To evaluate the quality of life for osteoporosis patients and the role of the nurses in improvement, quantitative data was collected by surveying selection of the participants, the researcher using the questionnaires to collected data from the selected samples according to the selection criteria by using two tools: questionnaire for assessing nursing roles in improving the quality of life of patients with osteoporosis & 36-item short Form survey from the RAND medical outcomes study.

- . The first tool: Questionnaire for assessing nursing roles in improving the quality of life of patients with osteoporosis.
- . The second tool: 36-Item short Form survey from the RAND medical outcomes study.

Methods of data collection

Data collection for this study was done by two-part questionnaire. This part consisted of closed questions regarding demographic data and the questionnaire is related to the nurse role to improve the quality of life for osteoporosis patients and questionnaire related to the quality of life for osteoporosis patients. After proposal approval from postgraduate studies deanship in King Saud university, the data collection journey was started by a series steps of filling application to obtain written approval from the biomedical ethics research committee at KSU and approval to collected data from ministry of health in Makkah region. After that, the arrangement was done with training and education center for each hospital, and explanation of the research aspects was done including title, aim. Significance, participation and tools. Data collection takes 2 months started Jamad to Rajab 1437H.

Statistical analyses

Quantitative analysis approach was used to analysis the data in this study. For quantitative data analysis the statistical package for social science (SPSS) version 21, it was used in this study. Depending on the nature of research and the objectives sought to be achieved, the data used the Statistical Package for Social Sciences analysis (SPSS), and extract the results according to the following statistical methods:

1. Frequencies and percentages: To learn about the research sample characteristics according to personal data.

2. Means, standard deviations: To calculate averages questionnaire phrases as well as college grades and sub-grades of axes questionnaire based on the research sample responses.
3. Pearson correlation coefficient.
4. Cronbach's alpha coefficient: to calculate the reliability.
5. Term equation to calculate the degree of practice where values from 1- 5.
6. Then determine the direction of the scale of the Likert Scale see in appendix (9).

Ethical considerations

This research conforms to ethical requirements. The principles of informed consent, privacy, confidentiality and anonymity were applied in this study. The official approval was obtained from; The Head Director of Medical Surgical Nursing in Nursing College in King Saud University, KSU administration, committee of ethical consideration, The Ministry of Health (MOH) - Nursing Administration in the Makkah city, A Number of the Ministry of Health Hospitals in Makkah, including: General Director of King Faisal Hospital in Makkah, General Director of King Abdul-Aziz Hospital in Makkah, General Director of Hera Hospital in Makkah to collect data.

Ethical codes of conduct have been strictly adhered to at all stages of the thesis, ethical consideration have explained the aim of the study to all Participants either patients or nurses, It took the approval through verbal consent to participate in the search by patients and nursing, It has been keeping all the information that had been taken from participants in complete secrecy, anonymity also is not used to mention the participant's name.

RESULTS

Descriptive statistics:

Demographic characteristics of the study subjects (Nursing)

Table (1):

Nursing sample distribution according to Qualification

Qualification/s	Number of samples (n)	Percentage (%)
Diploma	169	52.3
Bachelor	146	45.2
Master	4	1.2
Ph.D.	1	0.3
Other	3	0.9
Total	323	100

(Sample size increased 2 questionnaires above the actual sample size)

Table (1) shows that the number of nurses with diploma was the largest in participation, constituting 52.3% of all the categories followed by holders of bachelor's at 45.2 % then, master's certificate. Finally, Ph.D contributed the least proportion with percentage of 0.3 %. The figure (1) clarifies the nursing sample distribution in appendix (F).

Table (2):

Nurses sample distribution according to Experience years

Experience year	Number of samples (n)	Percentage (%)
less than one year	64	19.8
1-4 year	105	32.5
5-9 year	119	36.8
more than 10 years	35	10.8
Total	323	100

The table above (2) shows the number of nursing Experience less than one year with percentage of 19.8%, 1-4 year experience was 32.5% and 5-9 year of experience taking the highest percentage of 36.8%. Finally more than 10 year of experience took the lowest percentage of 10.8%; the figure (2) clarifies the sample distribution in appendix (F).

Table (3):

Nurses sample distribution according to gender

Gender	Number of samples (n)	Percentage (%)
male	87	26.9
female	236	73.1
Total	323	100

The above table (3) shows that female had the highest percentage of 73.1 % while the percentage of male stood at 26.9 %. The figure (3) clarifies the sample distribution in appendix (F).

Table (4):

Nurses sample distribution according to age

Age	Number of samples (n)	Percentage (%)
20- 25	24	7.4
25-30	84	26.0
30-35	136	42.1
35- above	79	24.5
Total	323	100

Table (4) shows that the most age group of the nursing sample was 30-35 years old, hitting a percentage of 42.1% and the percentage of respondents belonging to age group 25-30 years was 26.0%.

The proportion of the sample belonging to age group 35 and above years was 24.2% while the percentage of respondents belonging to the age group 20- 25 years constituted the least percentage of 7.4%. The figure (4) clarifies the sample distribution in appendix (F).

Table (5):

Nurses sample distribution according to nationality

Nationality	Number of samples (n)	Percentage (%)
Saudi	189	58.5
non Saudi	134	41.5
Total	323	100

The previous table shows that approximately 58.2% of the nurses were Saudi while 41.5% were non Saudi. The figure (5) clarifies the sample distribution in appendix (F).

Table (6):

Nurses sample distribution according to Area of practice

Area of practice	Number of samples (n)	Percentage (%)
emergency	62	19.2
orthopedic outpatient	15	4.6
orthopedic inpatient	79	24.5
other(medical - surgical)	167	51.7
Total	323	100

The previous table (6) shows the sample distribution according to the area of practice. The highest number of participants was from the department of medical - surgical department constituting a percentage of 51.7%. The lowest percentage was from orthopedic outpatient with 4.6%. The figure (6) clarifies the sample distribution in appendix (F).

DEMOGRAPHIC CHARACTERISTICS OF THE STUDY SUBJECTS (PATIENTS)

Table (7):

Patients sample distribution according to gender

Gender	Number of samples(n)	Percentage (%)
male	77	28.5
female	193	71.5
Total	270	100

Table (7) shows that the highest percentage of gender was taken by female at 71.5 % and the rest were male at 28.5 %. The figure (7) clarifies the sample distribution in appendix (F).

Table (8):

Patients sample distribution according to age

Age	Number of samples(n)	Percentage (%)
less than 25	9	3.3
25-34 year	47	17.4
35-44 year	93	34.4
45-54 year	92	34.1
55 above	29	10.7
Total	270	100

Table (8) shows that the largest group consisted of the patients between 35-44 years old, hitting a percentage of 34.4 % and the percentage of respondents belonging to age group 45-54 years was 34.1 %. The proportion of the sample belonging to age group 25-34 was 17.4 % while the percentage of respondents belonging to the age group 55 and above was 10.7%. The less than 25 were 3.3 %, the figure (8) clarifies the sample distribution in appendix (F).

Table (9):

Patients sample distribution according to Qualification

Qualification/s	Number of samples(n)	Percentage (%)
no study	15	5.6
Primary	38	14.1
Middle	27	10.0
Secondary	74	27.4
Bachelor	99	36.7
Master	17	6.3
Total	270	100 %

The previous table (9) shows that the largest in participating with percentage of 36.7 % were bachelor followed by secondary certificate at 27.4 % and the lower category were no study with 5.6 %; the figure (9) clarifies the sample distribution in appendix (F).

ANALYSIS OF THE RESEARCH QUESTIONS

Is there a relationship between the level of the QOL of patients and the nursing role?

To calculate the relation between the level of the QOL of patients and the nursing role degree the Pearson Correlation was used and the following table clarifies the results:

Table (15):

The Pearson Correlation between the level of the QOL of patient's and the nursing role degree

Dimension		Total degree of nursing role
Physical functioning	Pearson Correlation	0.35 ^{**}
	Sig. (2-Tailed)	0.01
Role limitations due to physical health	Pearson Correlation	0.43 ^{**}
	Sig. (2-Tailed)	0.01
Limitations due to emotional problems	Pearson Correlation	0.44 ^{**}
	Sig. (2-Tailed)	0.01
Energy fatigue	Pearson Correlation	0.54 ^{**}
	Sig. (2-Tailed)	0.01
Emotional wellbeing	Pearson Correlation	0.58 ^{**}
	Sig. (2-Tailed)	0.01
Social functioning	Pearson Correlation	0.49 ^{**}
	Sig. (2-Tailed)	0.01
Pain	Pearson Correlation	0.38 ^{**}

Dimension		Total degree of nursing role
	Sig. (2-Tailed)	0.01
General health	Pearson Correlation	0.53**
	Sig. (2-Tailed)	0.01
Total degree of quality	Pearson Correlation	0.58**
	Sig. (2-Tailed)	0.01

- *The high degree indicates high awareness of quality of life*
- Critical value equal to 0.11
- ** Correlation is significant at the 0.01 level (2-tailed).

Table (15) shows the result of the Pearson Correlation between the level of the QOL of osteoporosis patients and the nursing role degree. The Pearson Correlation test (r) is used to confirm whether there is an association between the level of the QOL of osteoporosis patients and the nursing role degree. In this table, there is a positive significant correlation between the total degree of nursing role and the total degree of QOL ($r=0.58^{**}$, $P\text{-value} \leq 0.05$). There is statistical significance between the total degree of nursing role and emotional wellbeing, energy fatigue, general health, social functioning, limitations due to emotional problems, role limitations due to the physical health, pain, physical functioning, with results ($r=0.58^{**}$, $P\text{-value} \leq 0.05$), ($r=0.54^{**}$, $P\text{-value} \leq 0.05$), ($r=0.53^{**}$, $P\text{-value} \leq 0.05$), ($r=0.49^{**}$, $P\text{-value} \leq 0.05$), ($r=0.44^{**}$, $P\text{-value} \leq 0.05$), ($r=0.43^{**}$, $P\text{-value} \leq 0.05$), ($r=0.38^{**}$, $P\text{-value} \leq 0.05$), ($r=0.35^{**}$, $P\text{-value} \leq 0.05$), respectively.

DISCUSSION

there is a relationship between the level of the QOL of patient's and the nursing role degree; there is a relation between the level of the QOL of patient's and the nursing role degree. This finding suggests the existence of a positive correlation between the nursing roles and quality of life for osteoporosis patients and can be traced to this result Increasing awareness that osteoporosis is an international health care concern that affects millions of individuals worldwide is one of the major roles that nursing plays. Skills such as critical thinking, interacting with other members of the interdisciplinary team and effective communication enable nurses to understand the needs of the patients and the goals of osteoporosis management. There are diverse nursing roles in the prevention of osteoporosis through enlightening groups of individuals regarding bone health. Notably, Nurses are instrumental in providing psychosocial support for individuals with osteoporosis. For many years, the nurses have had to deal with this chronic condition which has created anxiety regarding the prognosis, diagnosis, and treatment. Additionally, Nursing assessment and support assists individuals in maintaining their commitment and compliance to lifestyle modifications and treatment over the course of their lives, and in the modification of approaches as other conditions emerge. Nurses have played a vital role enabling individuals to deal with the disease appropriately by developing coping strategies and through pain management. Nurses provide ongoing remote telephone counseling and support, since the bone health of individuals being monitored over a longer period of time; as compared with other chronic illnesses thus it poses its own exclusive set of challenges and opportunities.

This result is consistent with the goals of nursing practice for the particular setting since it will be determined by various factors in the implementation of QOL assessment. When the clinician inquires further into the QOL domains the patient highly values but rates low in satisfaction, the nursing process can ensue.

Together, the patient and nurse can begin planning ways to address these aspects of life-based upon the patient's experience and preferences. Notably, (King, 2006) states that this method can allow meaningful interaction between patients and nurses, enhance communication, align interventions with the aspects of life that are highly valued by the patient and empower the patient through autonomous decision making.

Additionally, (Millsopp, Frackleton, Lowe, & Rogers, 2006) articulates that QOL assessments would be effective if they are done throughout the health care experience as patient response and needs will vary depending on the stage of disease, the individual's circumstance, response to treatment both in the long run and in the long term as well as the treatment regime. Interventions to address QOL could be carried through on an ongoing basis and documented to provide continuity in care. There is need to acknowledge the prominence of osteoporosis amongst other chronic illness and this would mean that need to realize that raising the level of osteoporosis the quality of life of patients is vital.

Remarkably, QOL data can inform the clinician concerning the patient's coping and areas of life that require attention in terms of support, interventions, and/or resources and can also provide the patient with more meaningful information to make decisions this was hypothesized by (Detmar, Muller, Schornagel, Wever, & Aaronson, 2003). On the other hand, factors that appear important to health care professionals may not be congruent with the priority issues for patients it is important to make an assessment and analysis of QOL on an individual since it will help address the matter.

Nevertheless, evaluating and improving patient-centered practice alongside the Individualized assessment of QOL for the purpose of directing and prioritizing nursing care is dependable on the paradigm of medical-surgical nursing. The effect of various aspects or variables of the disease/illness experience for example fatigue and pain can be ascertained on the dimensions of QOL.

Nursing interventions have an indirect influence on the dimension of QOL for instance, providing teaching on self-management strategies for fatigue and a direct influence such as giving a specific medication for pain and which can be determined.

Orthopedic nurses, regardless of practice setting, are in ideal positions to assume leadership roles in promoting healthier behaviors in neighborhoods and communities with individuals, groups, and organizations. (Doheny & Deucher, 2001). Nurses, medical providers, researchers, and administrators share a desire to have patients' care supported by persuasive evidence that the care given produces the desired therapeutic outcome. A person's perception of his or her health is a unique and key factor in explaining and predicting outcomes. Patients' perceptions of their health-related quality of life help nurses evaluate the effectiveness of nursing care and innovations in care. Nurses may be aware that patients face challenges in following protocols to manage some conditions after discharge.

By utilizing and applying the quantitative research methods of the SF-36 questionnaire, it is possible to assess the dimensions of quality of life scientifically. Based on the results of the assessment of an individual's experience of the health-related quality of life, specific interventions, such as the administering of medicine or psychological counseling, can be done in order to improve the physical, psychological and social well-being of a person. The SF-36 questionnaire also makes it possible to compare the perceptions of, on the one hand, people suffering from ill-health with, and on the other hand, people enjoying good health. Except for a few studies, such as the work of Möller and Smit (2004), there remains, however, a significant lacuna in the literature regarding comparative data on the health-related quality of life of people living with chronic diseases and that of a population of healthy individuals. Further studies utilizing the SF-36 questionnaire as measuring instrument, may address this theoretical gap.

The alleviation of the psychological stage of the osteoporosis patients is possible through the assessment of the QOL of the patients. evaluating the functional changes and understanding the common health conditions that will support in designing a better osteoporosis treatment, the reversing bone loss, improving patient health, and reducing the risk of bone fractures will be gained (Madureira, Ciconelli & Pereira, 2012). There is no doubt that the nurses play a significant role in improving the QOL of the patients by providing them awareness how to manage and cope with the illness of osteoporosis by establishing an adequate intake of vitamin D and Calcium, avoiding smoking, doing physical activities, avoiding alcohol, and improving the living standards (American Nurse Today, 2010).

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