



Life Style Modification toward Improving Quality of Life and Effects on Caregivers' Burden: Development of New Nursing Theory

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Abstract

Nursing theories are provide the foundation of nursing practice throughout scientific structure to direct, guide nursing care and absolutely draw highlighted track for nursing future. Now days, individuals' life style changes because offast rhythm of life and the consequences effects on individuals' quality of life particularly on ill persons.

The aim of development new nursing theory is to alert nurses during giving care to modify patients' life style for improving quality of life and consequently reduce burden on family caregivers.

Keywords: New nursing theory; Lifestyle; Chronic illness quality of life; Burden; Family caregiver

Introduction

Development of nursing theories over time is very important to guide and direct nursing care which focusing on the restoration and promotion of health and prevention of disease. The new nursing theory based on three concepts that are life style status, quality of life and burden on family caregivers.

Life style effect on Patients' outcomes and when promoting lifestyle behavior required that nurse during caring shift from simple advice giving to a more counseling-based approach [1]. Behavioral risk factors management eg; diet, physical activity and smoking behavior. Furthermore the patient must become motivated to change his/her life style and become a believer in his/her abilities [2].

The life style of individual focusing on their diet, weight, physical activity, tobacco smoking and alcohol drinking, sleep pattern, stress management, analgesic, social relationship, pain tolerance, spiritual life. Therefore, it is likely that nurses are choosing an appropriate method of management therapy to achieve the maximum level of life modification. Fortunately, life style changes will simultaneously address according to health condition. As well as literature review reported that quality of life improved by modifying life style.

The Constitution of the World Health Organization (WHO) defines health as "A state of complete physical, mental, and social well-being not merely the absence of disease. Furthermore, the WHO defines Quality of Life as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [3].

Quality of Life (QoL) is defined as "a person's perception of his/her position life with a culture and value systems, and in relation to own goals, expectations, values and concerns" [4]. The term quality of life is still vague [5]. Nevertheless, Quality of Life (QoL) is becoming increasingly important as an outcome measure of health care. It ultimately reflects health, happiness, life satisfaction and wellbeing, and is influenced by internal and external factors [6].

Illness is an event in the person's life that affects all members of his/her direct environment. Perception of the burden of illness is defined as patients' assessment of how the disease interferes with their life in the personal, social, familial and occupational contexts [7-9]. The burden of illness is not only carried by the ill, but also by the caregivers in the family constellation. The caregivers' burden is a multidimensional phenomenon reflecting the physical, psycho-emotional, social and financial consequences of caring for an impaired family member [10]. In Egypt, the caregiver is usually the major source of support for the sick, and is usually a family member.

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Defiantly implementation of nursing theories based on theoretical framework which establishes the best-practice management for improving patient outcome, moreover fosters improved communication with other specialties and enhances the intervention of complex clinical condition by providing holistic comprehensive care.

Grace, reported that development of theory based on knowledge and practice, following by continuous evaluation of the effectiveness of established theory for meeting practices purposes that require the accurately represents of the phenomena concern to direct practice [11].

Classification of Nursing Theory

The nursing theories can be classified it to different categories based on function as descriptive, explanatory, predictive or prescriptive [12]. Polit et al. [11] also classified the nursing theories according the generalize ability of their principals as Meta theory, Grand theory, Middle range theory or Practice theory [12]. Furthermore Roper et al [12] illustrated nursing theories as Needs theory by Roper et al [13], Peplau developed an interaction theory by Peplau [14], and Roy classified the nursing theories as outcome theory developed by Roy [15] and humanistic theory by Paterson and Zderad [16].

These categories giving broad overview of the basic philosophical structure of the theories. The unique professionalism occurs in nursing, when nursing care guided by nursing theories and takes an interest to develop new nursing theory with clear vision to bridge the gap between theory and practice for improving general health outcomes.

The present theory developed underpinning the outcomes theories because the nurse is considering the changing force for caring enable individual to adapt with ill health looking for achieving the broad concept improve individuals' quality of life and consequently reduce burden on family caregivers.

Relationship among Concepts of Theory

The proposed theory designs a structure of knowledge for integrating three concepts with practice-shaped basic nursing science.



Aim

The aim of the present study is to develop the relationship between the persons' life style status, quality of life and the caregivers' burden.

Hypothesis

The persons' quality of life will be improved by modification of life style, in turn reduces the burden on family caregivers.

Significant for developing a new nursing theory

The new theory helps to define the three concepts to enhance patient and family caregiver outcomes. Furthermore, it is vital to have the theory to understand, analyses and interpret what nurses do, what is the exactly role. Nursing theory helps nurses to identify her position and their role, by providing the nurse powerful guidance for professionalism with a sense of responsibility and accountability

which finally formulate the nursing identity.

All the following studies done by the authors and reported the relationship between theory concepts and concluded the importance to formulate these three concepts for helping nurses to decide what should know, what may need to know and how can apply to achieve the goals.

Study I

This cross-sectional descriptive study aimed at evaluating the relationship between patient QoL and the burden lying on the caregiver. The study was conducted in the dialysis unit of Suez Canal University Hospital, and Ismailia General Hospital. The population of this study consisted of patients maintained on hemodialysis therapy, as well as their caregivers. A sample of 95 patients and their caregivers was consecutively recruited. Data collection was done using the Kidney Disease and Quality of Life Short Form for patients and Caregiver Burden Interview for caregivers. To assess the relationship between scores of QoL and burden as dependent factors, and various quantitative factors, as independent factors, multiple stepwise backward regression analysis was used, and analysis of variance for the full regression models were done. Statistical significance was considered at p-value <0.05. Patients' mean age was 42.9 ± 1.6 year. The dialysis duration ranged from 7 to 156 months. The total QoL score was higher among male patients (53.7%), compared to females (46.2%), and the difference was statistically significant. Caregivers were mostly female (67.4%), not working (58.9%), with a mean age of 38.8 years. Slightly less than one third had no education. Significant variation in care givers burden was evident with a total score ranging from 9.1% to 83.0%. Burden scores were statistically significantly higher among caregivers who have chronic health problems, and those with additional sources of burden, compared to caregivers free from of these attributes. By multiple regression analysis, it was found that an increasing patient QoL was a significant predictor of decreasing total burden on family caregiver. Moreover, an increasing patient's age was a predictor of a decreasing total score of QoL. Therefore, caregivers of dialysis patients experience variable degrees of burden, which is inversely related to the patients' QoL score. It is recommended that community nurses have a more active role in helping caregivers to manage patients at home [17].

Study II

Quality of life (QoL) in End-Stage Renal Disease (ESRD) patients is an important outcome for both physicians and patients in selecting dialysis modality. We conducted a comparison between regular maintenance hemodialysis and regular peritoneal dialysis patients in two tertiary referral hospitals in King Saud University in Saudi Arabia. The study hypothesized that there might be cultural and socioeconomic factors modifying QoL in dialysis patients. The Cross-sectional study on hemodialysis and peritoneal dialysis patients. Approximately two hundred dialysis patients participated in the study, one hundred in each group of dialysis modality, from July 2007 to July 2008. We used a cross-sectional design and collected the date using the Kidney Disease Quality of Life (KD QoL SF) questionnaire. The results reported that patients in both groups had similar sociodemographic characteristics (age, marital status, and education). Mean age (SD) in the hemodialysis group was 47.5 (13.8) years and 51.0 (13.5) years in the peritoneal dialysis group. Males represented 53% and 43%, respectively. Mean duration of dialysis was 77.2 (75.5) months in the hemodialysis group and 34.1 (26.9) months

in the peritoneal dialysis group. The mean (SD) score was 49.5 (13.7) in the hemodialysis group and 61.3 (12.4) in the peritoneal dialysis group. QoL mean scores were significantly higher among peritoneal dialysis in all domains and in the total QoL, with the exception of the score of physical QoL, which was higher in the hemodialysis patients, compared to peritoneal dialysis patients, although the difference was not statistically significant. Multiple regression analysis indicated that hemodialysis was a negative predictor of QoL score, compared to peritoneal dialysis. Also, age, male gender, and dialysis duration were negative predictors of QoL score. The unique culture of Saudi Arabia, peritoneal dialysis patients have better QoL, compared to hemodialysis patients, validating the findings of research reports from other countries [18].

Study III

Hemodialysis (HD) is an important objective burden (task) on patient with end stage renal disease (ESRD) and the caregiver has a subjective burden which contributes to lifestyle changes, which result in depression, anxiety declining physical health, social isolation and financial strain. The study evaluated the subjective burden on family caregiver who cares patient on maintenance hemodialysis therapy. Sample of study around fifty main family caregivers for each patient on HD and the instrument were used by Caregiver Burden Interview (CBI) completed by caregiver as a major of subjective response to care giving.

The present study findings demonstrated that main age of caregiver was 40 (11.0) years, two thirds of females, and they were mostly married (78.0%) with children. The total family caregiver burden reported was 43.3 (21.7), role strain 50.0 (25.4) and the personal strain 39.5 (19.7). The total caregivers' burden significantly positively correlated with the patients' age ($r = 0.461$) and negatively correlated with patients' level of education ($r = -0.290$). Moreover the role strain, personal strain and total caregiver burden scores were statistically and significantly negatively correlated with their age ($r = -0.444$) and level of education ($r = -0.416$) and the total burden scores were ranked as moderately to severely burdened all family caregivers.

The Caregivers' appraisal, coping strategies, interpersonal relationship issues, and social support would need to be considered for caregivers of patients maintained on HD [19].

Study IV

Physical functioning declines over time with dialysis therapy. In Hemodialysis (HD) patients, exercise has been established as a vital part of health promotion activities to improve all aspects of quality of life. A quasi-experimental intervention design was used, with pre and post assessments of the effects of implementation of an exercise program for hemodialysis patients at Mohail General Hospital in southern Saudi Arabia.

Questionnaires were used to collect the following data: Physical Fitness Measurement, KD QoL-SFTM 1.3, Borg's 15-point scale for Rating of Perceived Exertion (RPE), vital signs, and lab investigation of hemoglobin, serum phosphates, serum albumin, creatinine, fasting blood sugar, Kt/v, and urea. In the pre and post physical fitness scale as assessed by patients, there were statistically significant changes to the scores of all activities ($p < 0.001$). Regarding the correlations between pre and post-program Quality of Life (QOL), scores indicate weak to strong statistically significant positive correlations in all domains except for those of cognitive function, quality of social interaction,

and sleep. Moreover the patients' Borg scores showed statistically significant decreases throughout the three months of follow-up ($p < 0.001$). In addition, there were improvements in the adequacy of dialysis (kt/v) and in serum potassium levels ($p < 0.001$) from the first to the third months. Although the percentages of patients with hemoglobin level 11 gm/dl or higher increased from 41.1% in the first month to 60.3% in the third month, the difference was not statistical significance ($p = 0.067$). The implementation of the exercise program was associated with significant improvements in the scores of all domains of quality of life and the physical fitness scale [20].

Study V

End-stage renal disease and its treatments negatively affect quality of life. Self-care is an important approach for helping the patients deal with their problems. The aim of this study was to improve self-care and quality of life of hemodialysis patients through teaching and evaluating their quality of life. This cross-section design with pre-post assessment was conducted in the dialysis unit of Suez Canal University Hospitals, participants were 50 patients receiving maintenance hemodialysis. Data were collected using a structured interview questionnaire, and the Kidney Disease Quality of Life Scale Short Form. Statistically the results show significant improvements that were revealed in the scores of many domains of quality of life, $p < 0.001$, except the physical domain. Statistically significant associations were revealed between pre- and post-programmed improvement in the total quality-of-life scores. The statistically significant independent predictors of quality-of-life improvement were programmed attendance, dialysis duration and marital status [21].

Discussion

The presented theory suggests when primed for a goal of health promotion to improve patients' outcome, nurse persistently modify patients' life style based on patients' condition to improve their quality of life. Researchers reported that to improve patients' quality of life nurses should work on patients' life style throughout continuous health teaching, hence patients' quality of life will be improved, and consequently the burden on family caregivers will be decreased.

Recent studies have shown an association between life style and morbidity and mortality, Lie et al. [22] have studied the prevalence of asthma is associated with changes in life style which including poorer diet. Other study reported that the life style modification such increased level of activity, following diet regimen, stress management are very important modified factors of prevention of and the effective therapy for cardiovascular disease (CV) diseases, in addition strongly improved state of health and quality of life [23]. Furthermore, the quality of life for overweight adult women with polycystic ovary syndrome significantly improved during a 24-week lifestyle modification program [24, 25].

Langhorst et al. [26] 2007 were proven after three months of comprehensive life style modification program on quality of life in patients with ulcerative colitis and showed significantly greater reduction in anxiety scores and use of relaxation techniques was significant predictor of improvement in the psychological score.

Interesting study aimed to compare the lifestyle of hemodialysis patient and outpatients in the health clinic and found that the medical history of hypertension among hemodialysis was 34.6% greater than outpatients, and the salt consumption was 40.5% higher than

outpatients. Moreover, the relationship between patient and family caregiver reported more than two third of the study sample had problem in the communication because of illness burden [27].

Moghadasian et al. [27] reported that the chronic diseases and the associated life style risk factors, however life style is important factor that affects quality of life and has important role in prevention.

In fact, healthy lifestyle might improve overall health, and vice versa inappropriate life style effect on overall health. Literature review are proof the suggested nursing theory by changing life style and progressively gaining healthy habits which consider important indicators in all quality of life domains.

Nursing theories are essential for directing research, practice and education as well as reinforcement between those areas to define the body of nursing knowledge, promote further directions of nursing care as a profession for optimal patient care and outcomes [28].

Conclusion

The present theory provides a larger picture of the relationship between life style modification, quality of life and burden on family caregiver that facilitate the process of describing, explaining and predicting relevant concepts. Despite all concepts mentioned in the developed nursing theory not new concern for nursing practice, however it gives scientific structure for nursing care. Likewise, develop nursing theory can moving toward the conceptualizing nursing as a professional based on science. The power of nursing science comes from applying scientific research based on scientific theories.

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