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Self-Management Support in Chronic Care: Competencies of Nurses at Tertiary Care Hospitals of Faisalabad

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Abstract

Objectives: To assess the competency level of nurses regarding selfmanagement support in chronic care **Study Design:** Study duration was 4 months from 2nd February 2022 to 30th May 2022 and including Madinah Teaching Hospital, Allied Hospital Faisalabad and District Headquarter Hospital Faisalabad. **Methodology:** total 384 nurses who were providing direct self-management support to the chronically ill patients admitted at study hospitals. Participant nurses' competency level was assessed by modified questionnaire on Nurses self-efficacy and performance with regard to self-management support in chronic care. Data is analyzed through Spss software. **Results:** Among all participants, females nurses with majority (72.4%) below 30 years of age. In the terms of educational level, majority (68.5%) of participants were diploma nurses. Only 7.8% of participants had prior training on self-management support in chronic care. Overall, (66.4%)



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of participants had less than 5 years of working experience and in chronic care between 1 and 5 years (65.4%).Finding revealed that Majority of the nurses were competent in self-efficacy and in their performance (80% & 86% respectively indicated by total self-efficacy and performance more than 50%.**Conclusion:** Findings showed that nurses with competency and selfefficacy have better performance as compared to those who are trainee and have less expertise.

Keywords: Chronic care, competencies, performance. Self-efficacy, Selfmanagement support

Introduction

Self-management is the ability and desire of a professional with a chronic illness to manage his or her own daily life by efficiently dealing with symptoms, medications, and lifestyle changes. Self-management support refers to the assistance provided by healthcare professionals to help patients effectively manage their chronic illness based on their individual needs and abilities. Self-management support covers various aspects such as symptom recognition, symptom management, treatment, lifestyle modifications, as well as the psychosocial, cultural, and spiritual implications of chronic illness. Effective self-management support maximizes patient's autonomy, enhances health and wellbeing, and increases the energy efficiency of health services thus, resulting in reduced financial burden on the healthcare system (Aboumatar, Naqibuddin, & Chung, , 2018)

Chronic illnesses of diabetes mellitus, cardiovascular disease, and chronic respiratory disease of cancer are most prevalent and leading cause of death worldwide. Every year, 41 million individuals die as a result of chronic illnesses, accounting for 7 out of 10 deaths worldwide. Professionals with Low and middle-income countries account for 85 percent of all these deaths, where four out of every five individuals are living with chronic illnesses. Pakistan is a low middle-income country with an estimated 227.8 million population making it the world's fifth biggest country by population. The overall prevalence of four major chronic illnesses in Pakistan is: diabetes 26.3% (Basit, Fawwad, H, & Shera, 2017); cardiovascular disease 26.9% ((Zubair, Nawaz, Nawaz, Nangval, & Amjad, 2018); chronic respiratory disease 9.38% (Masjedi, Ainy, Zayeri, & Paydar, 2018); and breast cancer 23% (Sarwar & Saqib, 2017). According to a study, chronic illnesses in Pakistan, accounted for more than 60% of total deaths in 2018 (Murphy, et al., 2018). In addition to the increased risk of morbidity and mortality, chronic illnesses, also have a huge economic impact associated with recurrent hospitalization and healthcare costs, putting strain on already debilitated health-care system of the country (Murphy, Palafox, Walli-Attaei, Powell-Jackson, & Rangarajan, The household economic burden of non-communicable diseases in 18 countries., 2020).

Chronic illness places a significant burden on individuals, their families and health care system as a result of the difficulties faced in managing the complex



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care that requires ongoing adjustments in lifestyle and self-care behaviors, changes in care plan and meeting the rising demand for health services (Hessler, et al., 2019).). Self-management is major component in chronic care that enables individuals to manage their own health care and optimize their outcomes with help of family, community, and health care providers (Schulman-Green, Jaser, Park, & Whittemore, 2016). Health care providers, in particular, help patients by utilizing self-management–based support strategies, decreasing the occurrence of complications (Kang, Kim, Rhee, Lee, & Yun, 2021), improving their quality of life (Mackey, Doody, Werner, & Fullen, 2016) and ultimately reducing healthcare cost (Aboumatar, Chung, Chaudhry, Kim, & Saunders, 2018)

Despite fact that patients with chronic illnesses may encounter a range of healthcare experts, self-management support is primarily accomplished by professional nurses because patients have a high level of trust in them (van Hooft, Dwarswaard, Bal, Strating, & van Staa, 2016) . Patient-family's education and support towards self-management has become an important aspect of nursing's role in providing safe, high-quality care around the world (Pinchera, Lawless, Pinchera, & DelloIacono, 2018).Nurses serve as educators, coaches, gatekeepers, and clinicians in self-management support for chronic care. Coach nurse is in direct relationship with the patient's daily activities, clinician nurse in treatment adherence, gatekeeper nurse with lowering health-care costs and the educator nurse with inspiring patients and their families on how to manage their disease (Coates, 2017). Practice nurses help patients know about- and manage their diseases by improving their knowledge and clinical and self-management abilities (Zimmermann, Swami, Krzyzanowska, Rydall, & Rodin, 2018).

The growing health and economic burden of chronic illnesses in Pakistan, the prevention and control in terms of effective self-management needs immediate attention. Nurses work as a part of health care team to help ill patients in meeting their self-management support needs. Self-management support, a broad term encompassing a variety of approaches and attributes; requires particular knowledge and skills from nurses. This study focuses on assessment of nurses' competencies in providing self-management support to chronically ill patients at tertiary care hospitals of Faisalabad.

Literature Review

Self-management support is assistance provided by various healthcare professionals in the hospital setting, particularly nurses, to help patients manage their chronic conditions. Nurses play a variety of roles in self-management support including coaches, educators, clinicians, and practice nurses by utilizing various skills based on their knowledge, attitude and abilities (Coates, 2017) The following literature review addresses the competency level of nurses during their practice of self-management support in care and reports findings from literature retrieved.



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Pub Med, Google Scholar, and Sci-hub were accessed to conduct literature searches between 2015 to 2022. Key terms used for literature search included: "self-management support", "self-management support needs", "self-management needs", "self-care needs", "chronic care", "chronically ill patient", "nurses", "competencies", "knowledge", "skills", and behaviors. Boolean operators "OR" and "AND" were used as conjunctions to combine key words in search. Studies published in English language were included.

Nurses' role is vital in self-management support to patients with chronic illnesses. A qualitative in nature study is explored in nurses' perceptions and role in providing self-management support in chronic care. However, there is uncertainty that how nurses define their success and what might create feelings of disillusionment. 16 nurses participated in interviews. The findings revealed that nurses' meaning of self-management support in chronic care was to maintain and promote health of patient with chronic condition. It involved maintaining patient's health by optimal medical management and keeping follow-ups (Duprez, van der Kaap-Deeder, Beeckman, Verhaeghe, & Vansteenkiste, 2020)

Another study in Netherland, explored nurse's perspective about selfmanagement support for patients with cancer. 45 Dutch nurses participated in six online focus groups and were inquired about how they assist patients and informal care givers dealing with advanced cancer in coping with physical and emotional issues in their everyday lives. Professional Nurses informed that they discuss needs, wishes, individual's situation and background of the patients and provide specific information about cancer as an advanced disease and its complications. The findings revealed that nurses neither give advice to patients about managing physical and psychological problems themselves, nor explain about follow-up arrangements. The nurses in this study appeared to overlook essential aspects of self-management support, such as ensuring about practical counseling, collaborative goal setting, and follow-up arrangements (Slev et al., 2017)

In 2020 Duprez and his coworkers identified nurses' profiles based on their interaction styles when patients are in self-managing position about their chronic illnesses. Four basics interaction styles based on Self Determination Theory included autonomy support (motivating and non-directive), its structure (motivating and directive), control (demotivating and directive), and chaos (demotivating and non-directive). Data was collected from 389 nurses while they were counseling chronically ill patients. The results of this profile approach revealed that four distinct profiles exist: motivating, chaotic, active, undifferentiated values. Likewise its and Demotivating chaotic profile involved a dominant presence of chaos whereas; an active profile involved all styles. Undifferentiated profile included an average presence of all styles. (Duprez, van der Kaap-Deeder, Beeckman, Verhaeghe, & Vansteenkiste, 2020)



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A study in Norway, investigated healthcare professionals' views on knowledge and skills needed for patient education and support on self-management with coronary heart disease (CHD). 19 healthcare professionals including nurses, physiotherapists, and cardiologists participated in interviews. The findings revealed that knowledge, as well as advanced communication skills are vital for patient education including the ability to form personal relationships with patients, as well as identifying their learning needs, fostering an effective discourse, offering tailored advice and lifestyle counseling. Based on the findings, the study suggested trainings of healthcare professionals in order to develop their competencies for enabling patients to effectively self-manage their CHD (Svavarsdóttir, Sigurðardóttir, & Steinsbekk, 2016) A quasiexperimental study in Thailand, evaluated the postulates of collaborative goal attainments, self-management support strategy for self-management in patients with hypertension to reduce the risk of cardiovascular disease. Results of study argued that proportion of individuals in experimental group (80.6%) who achieved optimal blood pressure regulation (SBP 140 mmHg) was higher than the control group (44.1%). Furthermore, the experimental group's mean self-management behavior scores were considerably higher than that of control group. The collaborative goal-setting nursing programme focusing on behavior modification through empowerment was found to be effective in control of blood pressure as well as improving self-management behaviorism this population. This study emphasized on nurses' use of selfmanagement support strategies that include fostering dialogue on collaborative goal-setting, encouraging patients to self-monitor their blood pressure, cultivating empowerment by sending texts and making follow-up phone calls (Ladee, Lagampan, Pichayapinyo, Mayurasakorn, & Lagampan, 2020)

A correlation research carried out in Belgium, investigated nurses behaviors in supporting patients' self-management, as well as the relationship between person-related and socio-structural elements. 477 Nurses caring for patients affected with chronic diseases such as nephrology, cardiology, endocrinology, were included. Results revealed that nurses had a low self-management support behavior overall. Nurses lacked skills in collaborative goal-setting, joint decision-making. Person related and socio-structural factors which affect nurses' behaviors in supporting self-management among patients were found to be self-efficacy, priority, (Duprez, van der Kaap-Deeder, Beeckman, Verhaeghe, & Vansteenkiste, 2020)

Observational study was carried out in the Netherlands. 107 nurses from primary care were invited to participate in routine consultations. The findings revealed that during the sessions, primary healthcare nurses provided selfmanagement guidance with details and well manner. However, there is a significant disparity in length, frequency, and number of topics covered. Whereas, Nurses tended to focus on improving a patient's medical treatment rather than on behavioral improvement. When nurses did help patients





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change their behavior, they were less likely to use behavioral counseling therapy that were likely to work, and when they did, they did so in an inconsistent and less explicit manner (Westland, et al., 2018)

In Rotterdam, Netherlands, an exploratory study analyzed nurses' selfreported behaviors in terms of self-management support and those factors which are influenced those behaviors. The findings revealed that participating nurses exhibited a substantial imbalance between self-reported self-efficacy and behavior in self-management support. Professional Nurses considered insufficient time and patients' lack of knowledge as impediments to selfmanagement support in chronic care, but this has had no effect on their actions. (Ladee, Lagampan, Pichayapinyo, Mayurasakorn, & Lagampan, 2020) Foundation for self-management support is nurse-patient interpersonal relationship. Nurse competency is essential for providing self-management support to chronically ill patients in hospital settings. Furthermore, nurses must believe that they are in a unique position to assist patients with selfmanagement by providing education, counseling behavioral training and psychosocial support. Nurse-led education and support will boost patients' self-efficacy, self-reliance thereby, contributing to their empowerment towards effective self-management.

Objective

Objective of study was to investigate competency level of nurses regarding self-management support in chronic care

Operational Definitions

1. Self-Management Support (SMS)

Self-management support (SMS) refers to strategies, approaches or interventions administered by nurses in chronic care to increase patient's self-efficacy in effectively managing their condition based on their individual needs and abilities (Lenzen et al., 2017)

2. Chronic Illness

Chronic illness as well as chronic disease is defined as condition that lasts for more than one years and needs an ongoing medical supervision or limit activities of daily living or both. Major chronic illnesses or chronic diseases such as diabetes, <u>heart disease</u>, chronic respiratory disease and <u>cancer</u> (CDC).

3. Competencies

Competencies are the abilities to do something successfully or efficiently. Nursing competency is defined as "the ability to take action as a nurse by combining knowledge, abilities, attitudes, opinions, and experience" (Fukada, 2018). In this study nurses' competencies will be measured on 'Self Efficacy and Performance in Self-Management Support (SEPSS)' instrument borrowed from (Duprez, van der Kaap-Deeder, Beeckman, Verhaeghe, & Vansteenkiste, 2020)and modified according to the context.

Materials And Methods

Study Design: descriptive cross sectional research study design.

Settings: This study was conducted in Tertiary Care hospital of Faisalabad.





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Duration of Study: 4 months

Target population: Our study population was staff nurses who were providing self-management support to the patient in Tertiary Care Hospital of Faisalabad.

Sample Size:

Formula:

 $\frac{Z_{1-\alpha/2^2}p(1-p)}{d^2}$

= is standard normal variate (at 5% type 1 error (P<0.05) it is

1.96 and at 1% Type 1 error (P<0.01) it is 2.58. As in majority of studies *P* values are considered significant below 0.05 hence 1.96 is used in formula. *p* = Expected proportion in population based on previous studies or pilot studies.

d = Absolute error or precision – Has to be decided by researcher.

 $Z\alpha/2$ (Divide the confidence interval by two (2), and look at this area in Z table):

0.95 / 2 =0.475

The closest z-score for 0.475 is 1.96.

 $=\frac{1.96^2*0.5(1-0.5)}{0.05^2}$ $=\frac{3.846*0.5(0.5)}{0.0025}$

$$=\frac{3.846*0.25}{0.0025}$$

 $=\frac{0.9604}{0.0025}$

= 384.16

Sample size was **384** by using the sample size calculating formula.

Sampling Tool: This tool included 35 items which was further divided into six subscales which was subscale assess, subscale advice, subscale agree, subscale assist, subscale arrange and subscale overall competencies.

Sampling Technique: We used convenient non-random sampling technique to collect data.

Sample Selection

Inclusion Criteria: Graduated nurses working in hospital settings who have direct contact with patients suffering from different chronic diseases in tertiary hospitals of Faisalabad.

Exclusion Criteria: Student nurses, head nurses and nursing instructors who don't have contact with the patients care.

Data Collection Procedure: After getting approval from the departmental review committee, official permission for the data collection was obtained from the concerned committee, and then written consent was provided to the participants before becoming a part of research study. A brief description of the topic was provided and nurses understand the purposes of this study, after giving both verbal and written consent they were allowed to participate in



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research study and then they complete the questionnaire provided to them for data collection.

Data Analysis Procedure: SPSS was used as software during data analysis procedure by applying descriptive statistics.

Results

In this chapter overall finding of the project is divided into 3 sections. Section I will explain about the demographic and the clinical characteristics of the participants. While section II will discuss about the self efficacy and Section III will discuss about performance level of participants.

Section I

The socio-demographic and clinical characteristics of participants are now discussed in this section. This study included 384 female staff nurses who gave their agreement to participate. The majority (72.4%) of those who took part were under the age of 30 .In the terms of educational level, the majority (68.5%) of participants were diploma nurses. The majority (66.4%) of participants had less than 5 years of working experience and in chronic care between 1 and 5 years (65.4%). Only 7.8% of participants had prior training on self management support in chronic care .

Section II

Participant nurses overall competency level in self efficacy was assessed on 5point lickert scale (Not at all; Not sufficient; More or less; Sufficient; Good). Total scores ranged between 0 to 70. Based on median score (50%), nurses competency level was categorized into High competency in self efficacy (>=50%) and low competency in self efficacy (<50%). Based on these scoring total high competency in self efficacy (>=50%) is 80% and low competency in self efficacy (<50%) is 20%.



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- High competency in self efficacy (>=50%)
- Iow competency in self efficacy (<50%)</p>



Fig 1: Percentages distribution of studied sample according to the total self efficacy

Section III

Participant nurses overall competency level in performance was assessed on 5point lickert scale (Never; rarely; occasionally; frequently and always). Total scores ranged between 0 to 70. Based on median score (50%), nurses competency level was categorized into High competency in performance (>=50%) and low competency in performance (<50%). Based on these scoring total high competency in performance (>=50%) is 86% and low competency in performance (<50%) is 14%.



Iow competency in performance (<50%)</p>



Fig 2: Percentages distribution of studied sample according to the total performance



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The study esteemed to what extent nurses do in the terms of self-management support. However, nurses had a unique position in order to deliver the selfmanagement support to chronically ill patient's .Recognizing that SMS is a multifaceted problem; we attempted to develop a more comprehensive view of the SMS environment in tertiary care. The study accomplished by assessing the rules and structures of interventions components across all conditions rather than confining our research to a specific condition strategy.

In Neither land, the Study was conducted on nurses who used BCT as a part of self-management support. Findings of this study stated that, nurses tackled both health and self-management subjects during their appointment. Overall major part of the study which consistently used BCTs were review behavior goal(s) (56.4%) and feedback on behavior (51.3%).However, there were significant differences in the duration, frequency, and number of subjects covered. During meeting, nurses addressed about health and self-management issues briefly and fragmentarily. All Nurses rarely focused on behavior change in depth, and their explicit and consistent use of BCTs which was less in nature (Westland et al., 2018). In contrast, in our study nurses used self-management interventions (collaborative goal setting, decision making etc) that's why our nurses provided SMS effectively in order to deal with chronically ill patients.

Another study was conducted in Rotterdam University of Applied Sciences, The Netherland. According to this study, its mean (sum score) of self-efficacy was 16.96 (3.03), which identifies that mostly nurses are self-confident about their intrapersonal skills and their support competencies. Nonetheless, a large gap between self-efficacy and self-management support behavior was observed. This implies that believing in one's competence to help patients' self-management may not necessarily correspond to actual practice. Nonetheless, they were inhibited at times in putting the plan into execution. In contrast, in our study nurses had sufficient capability in self efficacy and good performance in 5A's phase's .They had competency at time in putting the plan into action

Self-management support is implemented from a narrow medical perspective and consists largely of informing patients, which is the lowest level of patient participation. Overall, this research reveals significant inadequacies in nurses' present self-management support. In terms of patient involvement in chronic condition management, nursing still has a long way to go .Above findings appear to suggest that SMS behavior specifically requires a level of advancement through training and education.

Chronic care nurses must widen their understanding of what selfmanagement support involves and their role within it. Nurses may provide a more complete meaning to their accomplishment in the care of patients living with a chronic illness by taking a more reflective approach toward patients' self-management behavior.



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Our study was conducted in tertiary care hospitals in Faisalabad. According to the findings of our study, nurses had sufficient self efficacy and maximum performance in order to provide self-management to chronically ill patients. As compared to other studies, our staff nurses had competencies in collaborative goal planning, shared decision making, and follow-up organization.

Conclusion

The purpose of the study was to investigate the abilities of nurses in Faisalabad's tertiary care institutions to support patients with chronic illnesses in managing their own care. The results of this investigation demonstrate how important nurses are in enabling patients to effectively cope with their long-term illnesses. The findings show that nurses in Faisalabad's tertiary care institutions have differing degrees of proficiency in offering assistance with self-management. To give the best care, some nurses needed further training and education, while others showed sufficient understanding and abilities. The results of the study also highlight how crucial it is to incorporate self-management assistance into the practice of nursing. Patients who received nursing assistance with self-management claimed better medical results, higher levels of satisfaction with assistance, and an improved quality of life.

Recommendation

• Future study should expand on these findings for optimal SMS service design and up skilling healthcare personnel to properly support patients in this collaborative process if the collaborative partnership strategy is to be more extensively used.

• Managers and educators should consider these influential variables to improve self-management support.

• Raising staff nurses' understanding of the necessity of selfmanagement support in dealing with chronic conditions.

• It is obvious that sufficient training, support, and organizational change will be required to enable nurses in general practice to provide self-management support in chronic disease.

• To begin, SMS should be presented as a combination of medical, emotional, and role management. It should incorporate all phases of the 5A's framework, as well as a collaborative approach. Special emphasis should be placed on developing competencies in goal planning and collaborative decision making, as these are deficiencies in current practice.

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