

Application of Henderson Theory on Nursing Care for Bullous Pemphigus Patients at Khartoum Dermatology Hospital, Sudan

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Abstract

Background: Bullous Pemphigus (BP) is a group of life-threatening autoimmune bullous diseases characterized by flaccid blisters and erosions of the mucous membranes and skin. Autonomy and Independence theory adopted by Virginia Henderson to care for people affected by bullous pemphigus diseases help nurses during their job to assist those patients. **Main body:** The aim of this study was to assess the effect of application of Henderson theory on nursing care for bullous pemphigus patients.

Patients and methods: quasi experimental pretest- posttest design carried out on 31 nurses working in Khartoum dermatology and venereology hospital.

Results: Virtually 63% of nurses didn't have perfect knowledge regarding nursing care for pemphigus diseased patients based on the concept of Henderson theory following application program, nurses knowledge rose to 80.73%. The percentage revealed statistically significant improvement on nurses knowledge (P-value < 0.001). The practical activities of the nurses showed significant improvement on physiological concepts assessments from 49.06% to 77.7%. Emotional and mental concepts from 14.00% to 68.8, social and spiritual concepts from 22.00% to 71.1%, (P-value < 0.001).

Conclusion: Utilization of Henderson theory into clinical practice induced significant change on knowledge and practice among nurses in respect to nursing care for pemphigus diseased patients.

Recommendations: Utilizations of theory and theory-based evidence to structure their practice, it improves the quality of care and safe time.

Organization of regular educational program which gives a chance to reassess proper application of nursing theories concepts in clinical practice.

Keywords: Henderson theory, bullous pemphigus, nursing care, Dermatology, Sudan.

Introduction

Nursing theory is an organized systematic articulation of a set of statements related to questions in the discipline of nursing. It is a set of concepts, definitions, relationships and assumptions or

propositions derived from nursing model or from other discipline and project purposive ,systematic view of phenomena by designing specific inter-relationships among concepts for describing , explaining , predicting and prescribing ^{[1],[2]}.

Recently the relationship between theory and research has received more attention. It seems that in the past 10 to 15 years more research studies have been published that are more or less conceptualized studies within nursing theories [3]. However, it is not always clear how the theory has been used. To this end, papers published in six nursing journals between 1986 and 1990 has been studied [1],[3]. The use of nursing theories in nursing research studies increased from 13% to 21%, but the use of nursing theories has not become more frequent [4]. The application of nursing theories into clinical practice varies from context to context. But addressing the need of patient is crucial in providing quality care, across the globe. There is hardly any local literature regarding theory application into practice in our setting [1].

Pemphigus encompasses a group of life-threatening autoimmune bullous diseases characterized by flaccid blisters and erosions of the mucous membranes and skin. The severity of the disease is based on its progressive course which is accompanied by an increased body catabolism with loss of body fluids and proteins and secondary bacterial and viral infections which may lead to sepsis and cardiac failure. Before the advent of systemic corticosteroids, the prognosis of pemphigus was almost fatal within two years after making the diagnosis [5].

Previous study of bullous pemphigus has reported incidences between 0.2 and 3 per 100 000 people per year, these ratios are higher in older age groups and some studies report association with sex. In the United Kingdom, a regional study estimated an incidence of 1.4 per 100 000 person years [6]. Wide variation in mortality is reported, with one year mortality varying between 6% in the United State and 41% in France [6].

Previous reports from Khartoum Dermatology hospital in Sudan reflect that the incidence of pemphigus patient's admission in 2013 equal 36.2%

and the mortality rate equal 5%, in 2014 the admission rate was 31% and mortality rate 3% (hospital records).

The experience of caring for people affected by bullous pemphigus diseases over twelve years has revealed the importance of skilled nursing care for the prevention of aggravations promoting the welfare/comfort and lifetime maintenance of those affected. The complexity of the picture presented by the patients hospitalized with the pathology cited is due to the pain involved, the severe prognosis, the disfiguring character of the extensive injuries, and their impact on the social and emotional spheres [5],[7].

Therefore, the Need and Independence theory adopted by Virginia Henderson utilization to care for people affected by bullous pemphigus diseases help nurse during her job to assist those patients to be able to care for themselves when they leave the healthcare facility. This will help ensure that the patient has fewer setbacks during transition into self-care be smoother since a nurse will be help and supervise patients until the go home ,Henderson theory is one that can be easily used every day ,and it will be the patients who benefit from it [8].

Material and Methods

Study design and participants

The study design was Quantitative Quasi experimental pretest –posttest design to assess the effect of application of Henderson theory on nursing care for bullous pemphigus patients. A total coverage (n=31) of nurses working in Khartoum Dermatology and venereology hospital was included in this study.

Tools of the study

Tow tools were utilized to gather data for the study these tools are, *A-Structured questionnaire*; through close ended questioner covered nurse's knowledge regarding care for patients with bullous

pemphigus diseases-based on utilizations of the concept of physiological, psychological, sociological, and spiritual components of Henderson theory (17 Questions). The questionnaire was checked with model answer and given one point if the answer is correct and zero point if the answer is incorrect. These points were summated up for knowledge score, from 80%-100% indicate high knowledge, 60%-79% medium knowledge, 50%-59% indicate very low knowledge, and < 50 indicate poor knowledge. *Observational check list*; cover nurses practices regarding physiological, psychological, sociological, and spiritual caring for the patient with Vesicle Bullous pemphigus diseases. It consists of (23 items) regarding fourteen (Breathing normally, Eat and drink adequately, Elimination of body wastes, Movement and Posturing, Sleep and Rest, select suitable clothes dress and Un dress, Maintain body temperature,

The check list was divided into three categories that the nurse achieved in nursing care for pemphigus diseased patients; those categories were checked to assess their effect on nurses performances regarding application of Henderson theory concepts. If the concept was always done the score was 1 if concept was sometimes done gave score 2 and score 3 if not done.

Data Analysis

Data were analyzed using SPSS software version 20.0. Descriptive statistics in the form of frequencies and percentages are used for qualitative variables and McNamar test was used to test the difference in proportion of correct responses before and after the program. P-values <0.05 was considered statistically significant.

Results

The present study aimed to assess the possibility to application of Autonomy and Independence nursing theory on patients with Vesicle bullous pemphigus diseases in Khartoum dermatology and venereology hospital, total of 31nurses were included in the study.

Table 1 illustrates that 71% of study participants were female. Most of study participants age more than 45 years 71%. Majority of study participants qualifications were diploma 71%. Majority of study participants experience was more than 5 years 84%.

Figure 1 represented nurses knowledge regarding application of nursing processes, 45.2% of nurses answers based on primary assessment pre intervention and 90.3% post intervention. Regarding concept of nursing theory most of nurses moderate knowledge 51.6% pre intervention and 64.5% post intervention. Majority of nurses had good knowledge about assessment of patient condition pre intervention 74.2% and 90.3% post intervention.

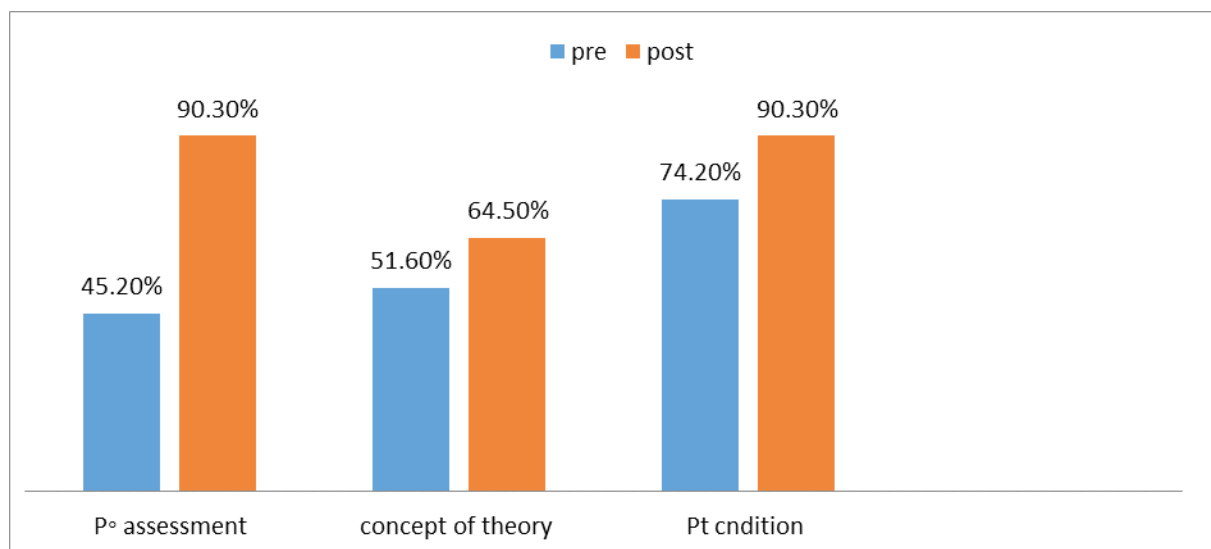


Figure 1: Nurses knowledge regarding application of nursing processes

Regarding nurses practice in application of autonomy and independence theory concepts for vesicle bullous pemphigus diseased patients pre and post interventions all items (23) significantly changed post intervention except advice patient to keep his/her body clean as shown in table 2.

Gender distribution among participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	9	29.0	29.0	29.0
	Female	22	71.0	71.0	100.0
	Total	31	100.0	100.0	
Age distribution among participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
	35- 44	9	29.0	29.0	29.0
	> 44	22	71.0	71.0	100.0
	Total	31	100.0	100.0	
Level of education among participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Diploma	22	71.0	71.0	71.0
	Bachelor	7	22.6	22.6	93.5
	Master	1	3.2	3.2	96.8
	Doctorate	1	3.2	3.2	100.0
	Total	31	100.0	100.0	
Level of experiences among participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
	< 1 Year	1	3.2	3.2	3.2
	1 - 5 Years	4	12.9	12.9	16.1
	More than 5 Years	26	83.9	83.9	100.0
	Total	31	100.0	100.0	

Table (2): Nurses practice regarding application of Autonomy and Independence theory concepts for vesicle bullous pemphigus diseased patients pre and post interventions (n= 31)

N	Items	Always done		Sometimes done		Not done		P value
		Pre	Post	Pre	Post	Pre	Post	
1	Explain procedure	31 (100)	31(100%)	non	non	non	non	.000* *
2	Assess respiratory rate	11(35.5)	23(74.2)	20(64.5)	8(25.8)	non	non	.000* *
3	Assess breathing pattern	18(58.1)	25(80.6)	13(41.9)	6(19.4)	non	non	.006* *
4	Assist patient if he/she had respiratory problem	23(74.2)	28(90.3)	8(25.8)	3(9.7)	non	non	.001* *
5	Assess temperature	16(51.6)	19(61.3)	15(48.4)	12(38.7)	non	non	.083*
6	Assess bowel elimination pattern	10(32.3)	19(61.3)	15(48.4)	12(38.7)	6(19.4)	non	.000* *
7	Assist patient if he/she had elimination problem	11(35.5)	22(71.0)	12(38.7)	6(19.4)	8(25.8)	3(9.7)	.000* *
8	Assess fluid intake and out put	13(41.9)	23(74.2)	10(32.3)	5(16.1)	8(25.8)	3(9.7)	.014* *
9	Assess nutritional status	11(35.5)	24(77.4)	15(48.4)	6(19.4)	5(16.1)	1(3.2)	.001* *
10	Assess patient to select suitable clothing	15(48.4)	25(80.6)	12(38.7)	5(16.1)	4(12.9)	1(3.2)	.000* *
11	Advice patient to keep his/her body clean	24(77.4)	26(83.9)	4(12.9)	5(16.1)	3(9.7)	Non	.540
12	Advice patient to avoid dangers	20(64.5)	26(83.9)	6(19.4)	5(16.1)	5(16.1)	Non	.014* *
13	Assist patient to communicate with others	7(22.6)	21(67.7)	16(51.6)	10(32.3)	8(25.8)	Non	.000* *
14	Assess spiritual status feeling	8(25.8)	17(54.8)	5(16.1)	6(19.4)	18(58.1)	8(25.8)	.001* *
15	Assist patient to change negative feeling to positive feeling	12(38.7)	23(74.2)	9(29.0)	8(19.4)	10(32.3)	2(6.5)	.000* *
16	Assist patient to cope with his condition	8(25.8)	23(74.2)	4(12.9)	6(19.4)	19(61.3)	7(22.6)	.000* *
17	Assist patient to work in such away	1(3.2)	18(58.1)	10(32.3)	6(19.4)	20(64.5)	7(22.6)	.000* *
18	Use teaching strategy	7(22.6)	21(67.7)	7(22.6)	5(16.1)	17(54.8)	5(16.1)	.000* *
19	Rehears patient response to number of interactions	5(16.1)	24(77.4)	26(83.9)	7(22.6)	Non	Non	.000* *
20	Assist patient to interact and adaptation	5(16.1)	21(67.7)	12(38.7)	7(22.6)	14(45.2)	3(9.7)	.000* *
21	Empower patient knowledge regarding health status	6(19.4)	21(64.5)	4(12.9)	5(16.1)	21(67.7)	5(16.1)	.000* *
22	Assess patient to improve intersection	5(16.1)	24(77.4)	26(83.9)	7(22.6)	Non	1(3.2)	.000*
23	Assist patient to provide volume clarification	2(6.5)	20(64.5)	5(16.1)	10(32.3)	24(77.4)	1(3.2)	.000*

Discussion

Bollus pemphigus diseases are autoimmune diseases associated with chronic relapsing course which requires close monitoring of clinical symptoms of potential side effect of immunosuppressive treatments thus Autonomy and Independence theory adopted by Virginia Henderson to care for people affected by pemphigus diseases help nurses during their job to assist those patients to be able to care for themselves when they leave the healthcare facilities.

The purpose of the study was to assess the effectiveness of application of Autonomy and Independence on nursing care for bullous pemphigus diseases.

The outcomes of the study revealed that females are more than males. The greater sample size is 71% females and only 29% were male. However, there was no significant difference between female and male in quality of knowledge. This result mean female has more attitude for nursing occupation than male. Contrary to what was found in a study of Fottler et.al which find that sex male and female viewed as irrelevant consideration in term of nursing care [9].

Most of nurses, subject of study, have diploma degree 71%, about 26% have bachelor's degree (upgrading BSc) and 3% are holders of master's degree. The experiences of study groups were more than 5 years (84%) this results indicate that there is no nursing rotation program between dermatology hospital and other specialty departments in other hospitals.

This result indicates that the diploma is the dominant degree in this sample, which may reduce the opportunity to measure the efficiency of other academic degrees. Diploma isn't fulfilling the clinical demands of a large number of nurses [10].

In current study nurses had poor knowledge about skin layer pre intervention and there significantly improve in nurses knowledge after intervention because there is no teaching program for those nurses to improve their knowledge on dermatology section. This result is consistent with the study of Fadlalmola et al [11].

Bollus Pemphigus diseases are uncommon, severe, and potentially fatal autoimmune blistering disorders affecting the skin and mucous membranes. Nurses play important role in treatment intervention for affected patients by proper administration of instructed medications, proper dressing, and psychological reassurance. Hence nurses knowledge about bollous pemphigus diseases pre intervention were good knowledge regarding pemphigus valgauries pre and post intervention 93.5%- 96.8% because pemphigus valguries had high incidence and majority of patients affected by it [12],[13].

Henderson viewed the nursing process as an application of the logical approach to the solution of the problem. The nursing theory process comprises of six elements; Assessment, Nursing Diagnose, Outcome, Planning, Implementation and Evaluation [14].

A nurse uses a systematic and dynamic way to collect and analyze data about a client; the first step in delivering nursing care. Assessment includes not only physiological data, but also psychological, socio cultural, spiritual, economic, and life-style factors as well. Nurses knowledge regarding physiological assessments for ability of patient to do daily living activity pre and post intervention were excellence due to prolong experience period. Theirs significant change in nurses knowledge regarding primary assessment post interventions. This result is consistent with the study of Sager et al [15].

Regarding concept of nursing theory most of nurses moderate knowledge 51.6% pre intervention and increase post intervention 90.3% P value = .012 this result revealed that nurses practice was improve after use of theory concepts in nursing care [14].

Nurses knowledge about their role towards pemphigus' patients and their families coping based on psychological concept of Autonomy theory were 71.0% pre intervention and there is significant change post intervention 96.8 P value = .023. Nurses who lack particular information outside of his/her field of specialty, putting them in ethical and moral binds as they tries to meet the demands set [7].

One of the most contentious and enduring problems in nursing is the poor clinical observation and least integration of theoretical concepts into clinical practice. Nurses knowledge about regular training for the application of nursing theory. Nurses opinions regarding care quality were 80.6% pre intervention and 93.5% post intervention P value = .023 this result revealed that nurses understand the important of nursing theory application in quality care [16].

Regarding physiological concepts nurses practice were moderate pre interventions 54.6% and increase post interventions 78.2%. Regarding emotional and psychological concepts nurses practice were poor pre intervention (23.04%) and increase post interventions 69.1%. Regarding spiritual and moral concepts nurses performance were (16.1%) pre intervention and satisfactory post interventions (65.6% this result reflected that nurses performance were increase after application of autonomy nursing theory [17],[18].

Conclusion

Utilization of nursing theory into clinical practice by making use of nursing theory process in a broader aspect. The need theory is relevant to clinical setting

and can serve as framework to recognize caring needs, deliver, and evaluate holistic nursing care. In addition, it was relevant to our settings as well and can help experienced nurses to collect reliable and valid data about the health status of clients, which sequentially enhance the quality of nursing care provided to the patients.

Conflict of Interest: The authors declare that there is no conflict of interest.

Source of Funding: The authors received no financial support for the research, authorship, and/or publication of this article.

Ethical Clearance: The researcher obtained approval to conduct the research from ministry of health and post graduate board of Khartoum University. All information that was supplied was treated in confidence. All confidential records were kept in locked filling cabinet, any information's stored in computer files is protected by code to keep more security.

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