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Effect of Incentive Spirometry on Recovery of Post-Operative Patients: Pre Experimental Study

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Abstract

Objective: Post-operative care is management of patients after any surgery. The main goal of post-operative care is to prevent complications i.e. atelectasis and infection. The other objective is early healing of the surgical incision and return of patient to a state of health. About 17% to 88% of people in postoperative duration will have decreased lung volumes. This decreased lung volume problem can be solved with use of incentive spirometry in postoperative period on Day 1. Incentive spirometer is perioperative respiratory therapy given to postoperative patients to improve lung volume of patients and hasten recovery of patients also. The main aim of study were to identify effect of Incentive spirometry on postoperative patient's recovery.

Method: It was pre-experimental study with pretest- posttest design only, which was done on post-operative patients at All India Institute of Medical Sciences (AIIMS), Rishikesh.

Results: Majority (52%) of participants were 41 to 50 years age group. Male and female ratio for participants were 46:54. Paired 't' test p value i.e. 0.00* with CI [0.72, 1.03] showed that on Pretest and Day 3 Performance level on incentive spirometry of participants showed a significant value, which indicate that spirometer enhance recovery of post-operative patients by increasing their lung volumes.

Conclusions: This study revealed that incentive spirometry is effective in improving of pulmonary function among post-operative patients, which further improves blood circulation and hasten early recovery of surgical wound. This spirometry should be integral part of Post-operative care. All nurses who are involved in Postoperative units should encourage patients to do it on regular basis and document it as a vital sign. Good compliance to incentive spirometry can improve better outcome of patient's.

Keywords: *Effectiveness, Incentive spirometry, Postoperative Patients, Postoperative Recovery.*

Introduction

Postoperative recovery is main process of being in a state of complete wellness. Postoperative recovery can be achieved by returning of normal health of patient's at a level of independence i.e. activities of daily living patients can do in postoperative patient's as early as possible. It can also be achieved by optimizing psychological well-being of patient's as well.(1)

Postoperative care of patients not only includes early mobilization in which deep breathing and coughing exercises should be included to prevent any pulmonary complications. It also include ensuring patient's for adequate nutrition, preventing pressure sores development, frequent turning of patient and adequate pain control in post-operative period. In America about 95% of hospitals provide incentive spirometer to postoperative patient's prophylactically for treatment of atelectasis and other respiratory problems. Incentive spirometer is a reproducible sustained maximal

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inspiration, which mainly records frequency and rate of respiration at acceptable rate. Incentive spirometry is also widely used routine clinically procedure for prophylactic and treatment regimen as a perioperative respiratory therapy.(2)

Incentive spirometry is also called as sustained maximal inspiration (SMI) and is considered bronchial hygiene therapy. It mainly designed to function as a natural yawning including long, slow, deep breaths. Incentive spirometry is done by using a device which provides patient's visual and positive feedback when they inhale at a predetermined set volume and inflation should sustain for minimum of 3 seconds. (3)

A systematically review was done to identify effect of incentive spirometry (IS) for prevention of postoperative pulmonary complications (PPCs). A through searching of MEDLINE, CINAHL, Health STAR, and Current Contents databases for review. After critical appraisal of information, they searched 85 research articles. In 35 of these studies they were unable to accept the stated conclusions. Critical appraisal of remaining 11 remaining studies indicated in 10 studies, there was no positive short-term effect of incentive spirometry in cardiac or abdominal surgery. The only supportive study reported that incentive spirometry, deep breathing and intermittent positive-pressure breathing were equally more effective than no treatment in preventing postoperative pulmonary complications following abdominal surgery. So Incentive spirometry showed significantly effective in preventing postoperative pulmonary complications in abdominal surgery patients. (4)

Research studies on incidence of postoperative complications occurrence showed 61% patients develop complication after discharge from hospital. The four main problem faced by patients at home were surgical site infection (SSI), urinary infections, functional gastrointestinal problems, and pain management problems after discharge. The main problem in postoperative periods in hospital were cardiac, respiratory, and neurologic complications. So incentive spirometry can be very useful to prevent respiratory complications in postoperative periods.(5)

Anaesthesia has a major effect on pulmonary functions which may continue on post-operative period. General Anaesthesia mainly exhibits its effects by changes in respiratory mechanic. Pulmonary functions are equally affected by anaesthetic agent used for anaesthesia, thus long term effects are changes in lung volumes, airway resistance and respiratory compliances, which alter V/Q ratio. Pulmonary functions can be properly address to prevent potential complications during anaesthesia, after anaesthesia and in post-operative period. As incentive spirometry is helpful to improve pulmonary function of patients. So incentive spirometry can help in over these side effect in postoperative period. (6)

As incentive spirometry is helpful to prevent postoperative pulmonary complications but there was lack of evidence about its effectiveness in postoperative recovery among surgical patients.

The main aim of this study were to check effect of incentive spirometry on postoperative recovery and asses and compare effect of incentive spirometry on postoperative performance level among post-operative patients.

Material and Method

Study Design used for research was pre-experimental study with pretest- posttest design. Sampling technique were non-probability purposive sampling. Study setting used in study were surgical IPD's of AIIMS, Rishikesh. Study participants were post-operative patients of general surgery IPD who are advised for incentive spirometry.

Formula used for sample size calculation were:

$$n = \frac{(1 - \frac{n}{N}) \times t^2(p \times q)}{d^2}$$

n = Sample size, N= Size of the eligible population.

t^2 = Square value of the standard deviation score that refer to the area under a normal distribution of values.

p= Percentage category for which we are computing the sample size, q= (1-p)

d^2 = Square value of one half to the precision internal around the sample estimate.

Sample size were 50 patients who undergone for any surgery.

Description of Data collection tools: Data collection tools consist of two parts. Part I consist of socio-demographic variable including age, gender, diagnosis. Part II consist of Observation checklist in which patients were observed when they were doing incentive spirometry **(Take 15 breaths with spirometer in every**

2 hours) [7]on Day 1, 2 and 3 and check their performance level i.e. Score=0, Not able to perform, Score=1 means Inadequate, Score=2 means Moderately Adequate and Score=3 meaning Adequate performance.

Procedure of Incentive Spirometry used in study were: 1. Sit in bed and hold the device. 2. Place mouthpiece of spirometer in mouth. 3. Always make sure that you are making a good seal on mouthpiece with lips. 4. Breath out (exhale) normally. 5. Then Breath in (inhale) slowly. The ball in the incentive spirometer will rise as you breathe in. 6. Try to get this ball to rise as high as you can. 7**. Take 15 breaths with spirometer in every 2 hours.**[7] 8. Repeats this procedure in every 2 hourly and document it. Schedule for incentive spirometry were 6 am, 8 am, 10 am, 12 noon, 2 pm, 4 pm, 6 pm with 15 breaths in every 2 hours. The Pretest observation were recorded before starting of incentive spirometry and then for three consecutive days data recording were collected in above following the schedule.

Data analysis were done by using descriptive statistics and inferential statistics. For socio-demographic data frequency and percentage were calculated. Chi square test was used to find relationship of socio-demographic variables with pre-test and post-test results. T test was applied to identify difference between pre-test and post test results.

Findings: In this study, Data was collected from 50 participants, which were from various surgery IPD departments.

Finding related to Socio-demographic Variables: Majority (52%) of participants were 41 to 50 years age group. Male and female ratio for participants were 46:54. Majority of participants i.e. 68% who were observed were having below umbilicus surgery (Table 1).

Table 1. Frequency and percentage of Socio-demographic Variables N=50

Sr. No.	Variable	Options	Frequency	Percentage
1.	Age	18-30 years	2	4
		31-40 years	16	32
		41- 50 years	26	52
		51- 60 years	6	12
2.	Sex	Male	23	46
		Female	27	54
3.	Diagnosis	Above Umbilicus Surgery	15	30
		Below Umbilicus Surgery	34	68
		Extremities Surgery	1	2

Finding related to association by using Chi square test: Chi square value (0.003*) showed significant association of diagnosis with performance level on Incentive spirometry on Pre-test. So there is a strong association between diagnosis for surgery with performance level on Incentive spirometry on Pre-test i.e. about 21 participants who were having below umbilicus surgery showed moderately adequate performance level on Incentive spirometry on Pre-test. Chi square value (0.039*) also showed significant association of sex with performance level on Incentive spirometry on Day 3 after surgery. So there is a strong association between sex of participants with performance level on Incentive spirometry on Day 3 after surgery i.e. about 21 participants who were female showed adequate performance level on Incentive spirometry on Day 3 after surgery. (Table 2).

Table 2. Chi square value for Diagnosis and Performance level on Incentive spirometry of patients on Pretestand Sex and Performance level on Incentive spirometry of patients on Day 3 after surgery. N=50

Diagnosis	Performance level on Incentive spirometry on Pretest				
	Adequate	Moderately Adequate	Inadequate	Pearson Chi-square	Asymp. Sig. (2-sided)
Above Umbilicus Surgery	0	6	9	16.223a df=4	0.003*
Below Umbilicus Surgery	3	21	10		
Extremities Surgery	1	0	0		
	Performance level on incentive spirometry on Day 3				
Sex	Adequate	Moderately Adequate	Inadequate	Pearson Chi-square	Asymp. Sig. (2-sided)
Male	10	12	1	6.507a df=2	0.039*
Female	21	5	1		

Finding related to test of Difference by using paired 't' test: Paired 't' test p value i.e. 0.00* with CI [0.72, 1.03] showed that on Pre-test and Day 3 performance level on incentive spirometry of participants showed a significant difference, which means spirometer enhance post-operative performance level on incentive spirometry of patients. (Table 3) Paired 't' test p value i.e. 0.00* with CI [0.32, 0.63] also showed a difference in Pre-test and Day 2 performance level on incentive spirometry of participants. So spirometer enhance post-operative performance level on incentive spirometry of patients. (Table 4)

Table 3. Paired ' t' test p value with Performance level on Incentive spirometry of patients on Pre-test and Day 3 after surgery. N=50

Days	Mean	Mean difference	SD D	SE Mean	95% Confidence Interval (CI)	t value	p value
Pretest	2.30	0.88	0.558	0.078	[0.72, 1.03]	11.143	0.00*
Day 3	1.42						

Table 4. Paired ' t' test p value with Performance level on Incentive spirometry of patients on Pre-test and Day 3 after surgery. N=50

Days	Mean	Mean difference	SD D	SE Mean	95% Confidence Interval (CI)	t value	p value
Pre-test	2.30	0.48	0.543	0.076	[0.32, 0.63]	6.244	0.00*
Day 2	1.82						

Conclusion

Majority (52%) of participants belongs to middle age group. Majority of participants i.e. 68% recruited were have below umbilicus surgery. Patients having below umbilicus surgery showed moderately adequate performance level on Incentive spirometry on Day 1 after surgery i.e faster recovery in below umbilicus surgery patients. Female patients showed adequate performance level on Incentive spirometry on Day 3 after surgery. Spirometer enhance performance of postoperative patients on incentive spirometry on Pre-test and Day 3 and Pre-test and Day 2 also.

This study revealed that incentive spirometry is effective in improving of pulmonary function among the post-operative patients, which further improves blood circulation and hasten early recovery of surgical wound. This spirometry should be integral part of Post-operative care. All nurses who are involved in Postoperative units should encourage patients to do it on regular basis and document it as a vital sign. Good compliance to incentive spirometry can improve better outcome of patient's.

Conflict of Interest Disclosure: Nil

Source of Funding: No Funding was taken from any agency for this research project.

Ethical Considerations: Ethical approval were taken Institutional Ethical Committee. (114/IEC/SRS/2017). During recruitment, from each participant written informed consent were taken for study.

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A Study to Assess the Point Prevalence of Selected Health Problems among Schooler Children in Tribal Region of Akole Taluka Maharashtra

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Abstract

Introduction: School age children are the common vulnerable group with highest prevalence of infection and health problems. Healthy children are the base for a healthy nation. Children are quite vulnerable at this growing age and hence are prone to fall victim to many diseases, thus affecting their normal growth and development. The aim of the present study was to assess the point prevalence of selected health problems among schooler children and Correlate the point prevalence of selected health problems among schooler children with selected demographic variable.

Methodology: A descriptive study with cross sectional survey approach used in present study. The sample consisted of 100 tribal schooler children's. Sampling technique used for study is simple random sampling technique. A proforma was prepared by expert validation to collect the data. Descriptive statistics were used to analyzed the data according to objective.

Results: Half of children i.e. 51% were between 10.1-12 years of age. Majority of samples were male 57%. Majority of 58% children had good nourishment, 60% good body built, 52% average activity, 41% good personal hygiene, 56% had good attention span and all 100% children's mental status was good. Highest percentage of children 42% had grade-I stunting and 53% had normal nutrition, 33% dandruff, 09% Anemia, 19% Impacted vax, 10% Discharge from nose, 27% Offensive smell, 05% had short neck, 09% cough and wheezing, only 02% have Abnormal chest expansion, 08% abdominal pain, 11% anemia, Iron deficiency and muscle pain, 12% fatigue.

Discussion: The conclusion from this is that the health status of the tribal schooler children was found in good health status except half of children had found in stunting and wasting. It emphasis that, the more concentration should be on Malnutrition prevention.

Conclusion: The burden of health problems like malnourishment, dental caries and dandruff, Anemia, Ear and nose problems are high in school children.

Keywords: *Assess, Prevalence, Health problem, Schooler child, Tribal region.*

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Introduction

The tribal population in India, though a numerically small minority, represents an enormous diversity of groups. They vary among themselves in respect of language and linguistic traits, ecological settings in which they live, physical features, size of the population, the extent of acculturation, dominant modes of making a

livelihood, level of development and social stratification. They are also spread over the length and breadth of the country though their geographical distribution is far from uniform. A majority of the Scheduled Tribe population is concentrated in the eastern, central and western belt covering the nine States of Odisha, Madhya Pradesh, Chhattisgarh, Jharkhand, Maharashtra, Gujarat, Rajasthan, Andhra Pradesh and West Bengal. About 12% inhabit the North-eastern region, about 5% in the Southern region and about 3% in the Northern States.[1]

The Akole taluka situated in Ahmednagar district has more population of Tribes. The population of Akole taluka is 2, 91,950. Out of these 47.86% i.e. 1, 39,730 population of Akole Taluka is Tribal which is distributed in western part of tehsil.[2]

Material and Method

Research Design: Descriptive cross sectional

Variables:

Research Variable: Prevalence of health problems of tribal schooler children

Confounding Variable: socio demographic characteristics child such as age, gender, class, type of diet of and socio demographic characteristics child's parents such as age, type of family, religion, socio economic status, education and occupation, Income.

Setting of Study: In selected tribal area of Akole taluka (Mutkhel and Shendi village). Approximately 100Km from PIMS Loni.

Population: Selected triable areas, schooler children were the population.

Sample: Selected tribal area schooler children's

Sample size: 100

Sampling Technique: Simple Random sampling.

Method of data collection: A performa was used to collect the data

Construction of tool: A physical examination Proforma for assessing the health status of 6-12 years group for schooler children was used. It with Section A & B

- **Section A:** Socio demographic characteristics of tribal schooler children like age, gender, class, type of diet and socio demographic characteristics of tribal schooler children's like age, type of family, religion, socio economic status, education and occupation of parents
- **Section B:** It consisted items on general appearance and physical examination of child. It includes anthropometric measurement, nutritional assessment, sign and symptoms, physical examination, etc.

Validity: Validity was established by consulting experts from various disciplines

Data Collection Procedure:

Ethical Consideration: The approval was obtained from the institute of ethics committee (PIMS/CON/R/IEC/PG/003/2018) at Pravara Institute of Medical Sciences (DU) The legal permission was sought from Principal, CON, Loni, Principal of selected schools of tribal region Akole Taluka.

Planned for data analysis: Data was analyzed using descriptive statistics. The analyzed data was presented in the form of table, and figures.

1. Socio demographic data: this was analyzed in terms of frequency and percentage, was presented in diagrams.
2. The point prevalence of selected health problems of tribal schooler children: This was analyzed in terms of frequency and percentage, was presented in tables.
3. Comparison of socio demographic variables with selected health problems: this is analyzed in terms of frequency and percentage, was presented in tables and their comparison

Findings:

Findings related to sociodemographic characteristics of tribal schooler children:

- Half of children i.e. 51(51%) were between 10.1- 12 years
- Majority of samples were male i.e. 57 (57%)
- Most i.e.83 (83%) were Hindu
- Half of children i.e.52 (52%) were from the V and above class
- Majority (73%) of children were from the Joint family

- Majority of children were consumed mixed diet i.e. 78 (78%)
- Higher percentage of father were above 35 age group i.e. 46%,
- One third (34%) of mothers were 31 – 35 age group
- One third 34% of fathers had Secondary education
- Higher percentage (49%) of mothers had primary education
- Majority of fathers (88%) had Agriculture occupation
- Most of mothers (94%) had Agriculture occupation
- Majority (57%) had monthly income 6001-9000 Rs

Findings related to s General appearance of tribal schooler children

- Majority of (58%) children had good nourishment
- Majority of (60%) children had good body built
- Majority of (52%) children had average activity followed by (45%) had good activity
- Significant percentage of (41%) children had good personal hygiene
- Majority of (56%) children had good attention span
- All (100%) of children's mental status was good.

Findings related to physical examination of tribal schooler children

- Highest percentage of children (42%) had Grade – I stunting and (53%) had normal nutrition
- One third 32% of samples had Dandruff
- Mere percentage 09% of samples had Anemia
- Higher percentage 19% of samples had impacted vax
- Higher percentage 10% of samples had Discharge from nose and sign of allergies respectively
- Higher percentage 27% of samples had offensive smell
- Mere percentage 05% of samples had Short neck
- Mere percentage 09% of samples had Cough and Wheezing respectively
- Mere percentage 02% of samples had abnormal chest expansion
- Higher percentage 08% of samples had abdominal pain
- Significant percentage 11% of samples had Anemia, Iron deficiency and muscle pain respectively and (12%) of samples had Fatigue

Findings related to association between Prevalence of health problems with selected demographic variables

- Prevalence of heath problem with Age is in 06-08 age group (F =34) the total number of health problems are 145, in 8.1 – 10 year (F=15) health problems are 56, in 10.1-12 years of age group (F =51) 203 total health problems.
- Prevalence of heath problem with Gender is in male (F=57) 218 and in female (F=43) 186.
- Prevalence of heath problem with Age of fathers is < 21 (F=01) health problem is 01, 21-25 age group (F=03) health problems are 03, 26-30 age group (F=29) health problems are 125, 31-35 age group (F=21) health problems are 101, above 35 years of age (F=46) health problems are 174.
- Prevalence of heath problem with Age of mothers is < 21 (F=02) health problem is 09, in 21-25 age group (F=31) health problems are 137, in 26-30 age group (F=25) health problems are 125, in 31-35 age group (F=34) health problems are 101, in above 35 years of age (F=08) health problems are 29.
- Prevalence of heath problem with occupation of fathers is in Agriculture is (F=88) health problem is 367, In Private job (F=06) health problems are 17, in Government job (F=01) health problems are 00, in Business (F=04) health problems are 17, in other (F=01) health problems are 03
- Prevalence of heath problem with occupation of mothers is in Agriculture is (F=94) health problems is 387, In Private job (F=03) health problems are 04, in Government job (F=02) health problems are 10, in Business (F=01) health problems are 03.
- Prevalence of heath problem with Income of Family is in < 3000 is (F=00) health problems is 00, in 3000-6000 (F=00) health problems are 00, in 6001-9000 Rs (F=57) health problems are 252, in >9000 Rs (F=43) health problems are 152.

Discussion

Section A: Description of socio-demographic

characteristics of Schooler children: Half of children i.e. 51(51%) were between 10.1- 12 years. It was consistent with the study conducted by Ransingh R P who noted that majority (46%) of the health problems are 8 to 12 years of age group.[3]

Majority of samples were male i.e. 57 (57%). Similarly Haritha SK also found male predominance of 54.5% among the children. [4]

Highest frequency and percentage i.e.83 (83%) were Hindu.It was contradictory with the study carried out by Ransingh R P who also noted that 42% of children belongs to were Hindu.[3]

Half of children i.e.52 (52%) were studying V standard and above class.It was concurrent with the studies carried out by Ransingh R P who noted that 96% of the children under studying II year of class.[3]

Majority of children were from the Joint family i.e.73 (73%). Similarly Singh AK et al also found that joint family predominance of 59.1% among children.[5]

Majority of children were consumes mixed diet i.e. 78 (78%). It was concurrent with the studies carried out by Javare AI who noted that 63% of children under study were having mixed diet.[6]

Highest percentage of fathers were above 35 age group i.e. 46%. It was concurrent with the studies carried out by Esimai OA who noted that 42% of fathers were from age group 35 to 40 years.[7]

Highest percentage (34%) of mothers were 31 – 35 age group, Similarly Bokmal KR also found that 46% of mothers were highest age group.[8]

Highest percentage 34% of fathers had Secondary education. It was consisted with the study conducted by Das S et al who noted that majority 30% of fathers were educated.[9]

Highest percentage (49%) of mothers had primary education, followed by significant 44% mothers don't had formal education. Similarly Singh AK also found that 43.4% of mothers are literate. [5]

Most of fathers (88%) under study had Agriculture as occupation. It was concurrent with the study carried out by Ransingh RP who noted that 40% of parents were farmers.[3]

Most of mothers (94%) under study had Agriculture as occupation. It was in line with the study carried out by Ransingh RP who noted that 40% of parents were farmers.[3]

Majority (57%) had monthly income 6001-9000 Rs. It was concurrence with the study carried out by Ransingh RP who noted that 48% of parents were getting income in between 5001 to 10000.[3]

Section B: Description of General appearance of schooler children: Majority of (58%) children had good nourishment. It was concurrent with the study carried out by Ransingh RP who noted that 68% of children were having good nourishment.[3]

Majority of (60%) children had thin body built. Similarly Ransingh RP also found that 62% predominance of thin body built.[3]

More than half (52%) children had average activity. Similarly Ransingh RP also found that 54% predominance of average activity.[3]

Significant percentage of (41%) children had good personal hygiene. It was concurrent with the study carried out by Ransingh RP who noted that 88% of children were having good personal hygiene.[3]

Majority of (56%) children had good attention span followed by (26%) had excellent attention span, and (16%) had average attention span.

All (100%) of children's mental health status was good.

Section: C- Description of physical examination of schooler children: Highest percentage of children (42%) had Grade – I stunting. It was consistent with the study carried out by Singh AK who noted 57% of children were undernourished.[5]

Highest percentage of children were (53%) normal. It was consistent with the study carried out by Singh AK who noted 57% of children were undernourished.[5]

One third 32% of samples had Dandruff. It was concurrent with the study carried out by Reza Ul et al who noted that 44% of samples were dandruff.[10]

Significant percentage 09% of samples had Anemia. It was consistent with the study conducted by Robel T who noted that majority 17% of children were anemic.[11]

Significant percentage 19% of samples had impacted

wax. It was contradictory with the study carried out by Dr M Ulaganathan who noted that the prevalence of wax impaction was 45% among the children.[12]

10% of samples had Discharge from nose and sign of allergies respectively. It was consisted with the study conducted by Aitken M et al who noted 09% of prevalence of sinusitis in his study.[13]

Significant 27% of samples had offensive smell from mouth along with dental caries in 13%. Similar study conducted by the Mohammad M who noted 78% of children having offensive smell from mouth.[14]

Highest 05% of samples had Short neck, lowest percentage of samples had 03%.

Mere percentage 09% of samples had cough and wheezing respectively. It was consisted with the study conducted by Maja Jurca et al who noted 10% of prevalence of cough in his study.[15]

Only 02% of samples had abnormal chest expansion and Ankles pitting edema, 01% had Tachypnoea and Dextrocardia respectively.

Mere percentage 08% of samples had abdominal pain .Similar study conducted by Judith JK who noted prevalence for functional abdominal pain disorders was 13.5% in his study.[16]

11% of samples had Anemia, Iron deficiency, Muscle pain. It was consisted with the study conducted by Robel T who noted that majority 17% of children were anemic.[11]

12% of samples had Fatigue. It was consistent with the study conducted by Petersen S who noted 16% of prevalence of fatigue in children in his study.[17]

Conclusion

Tribals remain marginalized even in the modernization era owing to challenges of inaccessible health services. This study contributes valuable primary information on point prevalence of health problems among Akole tribal region schoolers. Contrary to the common reports of poor and unhealthy pictures of tribal children, this study observed that tribal schoolers mostly in good health. Using standard performance protocols further assessment confirmed presence of grade I stunting, wasting, dandruff, impacted wax in ear, anemia, iron deficiency, fatigue, offensive smell from mouth, dental caries, discharge from nose, cough, wheezing and abdominal pain apart from other minor health issues in varying proportions. Further Government programmes, screening and health education activities need to consider the prevailing health spectrum of problems in this region to minimize and prevent morbidity complications.

Conflict of Interest: Yes

Source of Funding: Self

Ethical Clearance: Nil

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A Systematic Review of Patient and Family Violent Behaviour in Saudi Arabian Emergency Units

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Abstract

Background: Nurses working in emergency departments in Saudi Arabian hospitals have been affected by violence at workplace instigated by patient or family. This gradually had significant impact on nurses' job satisfaction and security at work or affected their performance. Often this behaviour has been found to be precipitated by certain factors.

Aim: Aim of this review is to assess the different factors causing violent behaviours among patients and their families towards nurses in Emergency units and to suggest possible management strategies in reducing such behaviours as well as assess its implications for Saudi Arabian nurses.

Methodology: This review considers selected studies related to violent behaviour of patients and their family's in emergency units of Saudi Arabia. It examines evidence of such factors identified by different studies including overcrowding, waiting times, communication, and inability to meet patient's needs and staff shortages among others.

Findings: Findings from review indicate that strong policies are required to ensure patient overcrowding in Saudi Arabian emergency units. Most patients consider ED as their first point of call whether it is an emergency or not, thereby causing overcrowding and posing threat of staff shortage in such areas compared to primary healthcare centres and hospitals.

Conclusions: Further studies recommend understanding reporting system for patients' violent behaviour in Saudi Arabia, and effectiveness of policies and actions taken to address such behaviours, which could protect nurses at their workplace. The study is limited to studies of nurse's perception of violent behaviour, without considering patient's data and their perception on such behaviour.

Keywords: *Communication, Violent behaviour, Overcrowding, Waiting time, Staff shortage.*

Introduction

Considering increasing risk to healthcare professionals, such as nurses and doctors among others, there seems to be increasing concern about violent behaviour of patients and their families in emergency units of hospitals[1,2].

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Patient and family related violence in hospitals is regarded as a serious problem affecting nurses' well-being and job satisfaction[3,4,5]. It is becoming an interesting research subject in Saudi Arabia where the cultural and ethical values may significantly differ from other locations[6]. There is an increasing effort by the Saudi Arabian government to provide a conducive working environment for healthcare professionals[7], and continue motivation for Saudi nationals to join the nursing practice by introducing "Saudization". The threat of such violent behaviour could risk diminishing the morale of the practising nurses, as well as subjecting potential nurses to fear of such threat. Patient's violent

behaviour is not only a threat in Saudi Arabia, but has been reported in other Gulf countries including Kuwait[3,6,4] and Jordan[4].

The current review attempts to generate adequate evidence by investigating causes and suitable approaches to violent behaviour of patients in emergency units, and different approaches tackling such incidences. The review questions are carefully selected, to acquire necessary evidence of patient and family violent behaviour using framework of SPICE (Setting, Perspective, Intervention/ Interest, Comparison, Evaluation) as stated by O'Brien et al. (2014), in order to identify the causes and solutions to patient and family violent behaviour in Saudi Arabian hospitals[8].

Objectives:

The following objectives were set to achieve:

- To establish relevant research evidence related to such violent behaviour by patients and family members in emergency departments in USA, UK, Australia, and Gulf countries.
- To evaluate benefits of managing patients and family violent behaviour in emergency units of Saudi Arabian hospitals.
- To extend application of management procedures for such violent behaviours into Saudi Arabian hospitals.

Methodology

Systematic review was conducted using systematic search in databases including COCHRANE, OVID, and CINAHL. The search using COCHRANE found 323 articles forviolent behaviour, 242 for aggressive behaviour and 1,599 for emergency units. Using CINHAL,violent behaviour search provided 849 articles, while combining violent behaviour and patient's family gave rise to 12 articles.

Criteria for Inclusion and Exclusion[8]

Inclusion Criteria:

Articles published between 2001 and 2016:

- Causes of patient violent behaviour, people involved, gender and type of incidence of patient's violent behaviour, impact of patient behaviour and remedies to patients violent behaviour
- Peer Reviewed, Pilot studies
- Descriptive, statistical research
- Nurses working conditions and practice protocols
- Guide to prevention of violent behaviour highlighted
- Articles written and published in English language only.

Exclusion Criteria:

Articles published prior to 2001

- Causes and concern on violence
- Insignificant incidence studies
- Outcomes of patient violent behaviour not reported
- Individual impact/biased observations
- Other languages

Patient and Family Violent Behaviour in Emergency Units of Hospitals Systematic Review Matrix

Pich et al., Violent behaviour from young adults and parents of paediatric patients in emergency department[2].

To describe experience of Australian ED Nurses who witnessed patient-related violence from young adults and their parents. Descriptive study using semi-structured interviews, Two main behaviours identified: "Performing" and attention seeking violent behaviours: verbal abuse and physical violence, Patient behaviour Family behaviour, Out of the 1150 distributed sample, 11 Registered Nurses volunteered, 44 years average and minimum of 15 years' experience.

Patients violence is associated with their family behaviour[2].

El-Gilany, et al. Violence against primary health care workers in Al-Hassa, Saudi Arabia[9]. To highlight the extent and circumstances of workplace violence in PHC, Saudi Arabia, Descriptive quantitative study using questionnaire Causes of violent behaviour including overcrowding and reaction to injury have been reported. Extent and margin 1228 participants are staff of hospital with at least 1 year work experience[9].

Pich, J et al. Patient-related violence at triage: A qualitative descriptive study[10]. To describe the related experience of triage nurses on violence related cases, using semi-structured interviews. Violence related cases were precipitated by either long waiting time, alcohol misuse, or substance misuse. Effective policies for managing violence related behaviours are not properly

enforced. 6 registered nurses were recruited in the study,2 males and four females, with 4-21 years' experience.[10]

Esmaeilpor et. al,Workplace violence against Iranian nurses working in emergency departments[4]. To determine nature and frequency of verbal and physical violence in Iran. Using descriptive methodology questionnaire. Reported Verbal violence is more than physical violence. 186 Nurses with Bachelor's degree and 1 years' experience were sampled[4].

Morken, et. al, Emergency primary care personnel's perception of professional-patient interaction in aggressive incidents[11]. To explore nurses professional interaction with patients during violent sessions. Using descriptive methodology,patients aggressive behaviour occurs where patient has been pushed to make such behaviour. Participants aged 25-69 years[11].

Dilek, et. al, Development and psychometric evaluation of workplace psychologically violent behaviours instrument[12]. To develop instrument for measuring nurses' perception of violent behaviour, Descriptive methodology using questionnaire involving 476 hospital nurses [12].

Pinar, et. al, Verbal and physical violence in emergency departments in Turkey[5]. To determine perceived causes of physical and verbal violence in emergency units. Quantitative survey reporting 91.4% cases of verbal violence while 74.9% cases of physical violence. 65% of nurses felt unsafe, involving 255 nurses[5].

Adib, et al., Violence against nurses in healthcare facilities in Kuwait[2]. To determine prevalence and causes of violent behaviour against nurses in Kuwait. Quantitative study reported 48% verbal violence and 7% physical violence among 5,876 nurses, 85% females[2].

Albashtawy, et. Al,Workplace violence against nurses in emergency departments in Jordan[13]. Frequency and nature of WPV against nurses in emergency units. Quantitative study, 19.7% of nurses faced physical violence, 91.6% experienced verbal violence. 196 nurses working in 11 Emergency Departments were sampled .89.1% female, with 63.2% having 1-5 years working experience were used[13].

Algwaiz, et. al, Violence exposure among health care professionals in Saudi public hospitals[6]. To identify causes, prevalence, types and sources of workplace violence in Saudi Arabian hospitals. Quantitative study reported 67.4% victims of violence within 12 months, staff shortage and inability to meet patients' demands were commonest causes. 898 nurses were involved in study[6].

Mohamed, A. G, Work-related assaults on nursing staff in Riyadh, Saudi Arabia[7]. To identify extent of violence against nurses in Saudi Arabia. Quantitative study reported93.2% of 434 participants experienced harsh Language[7].

Krakowski, et. al, Gender differences in violent behaviours[14]. Violent behaviour of women psychiatric patients was more common than male, quantitative study reported gender differences play role in nature and causes of violence[14].

Lau, et. Al,Violence in emergency department[15]. To identify cultural aspect of violence in emergency units. Mixed method study suggested effective communication is vital for avoiding violent behaviour[15].

Kim et. al, Usefulness of Aggressive Behaviour Risk Assessment Tool for prospectively identifying violent patients in medical and surgical units[16]. To evaluate relevance of violent behaviour risk assessment tool,mixed method design found useful risk assessment approach for identifying and managing violent behaviours[16].

Ferns, T, Violence in accident and emergency department[17]. Violence related studies in emergency units,weapons used are reported as tool for violence in North America compared to United Kingdom[17].

Hodge, et. al, Violence and aggression in emergency department[1]. To identify precipitating factors of containing violence, review studies related to violence management. Environmental management, de-escalation of violence, pharmacological and physical restraints have been suggested[1].

Jones, et. al, Violence: Part of Job for Australian Nurses?[18]. To understand whether violence is regarded as part of nursing practice using related studies about violence to emergency unit nurses. Understanding concept of violence is not well thought out in emergency units and nurses need to identify different types and incidences of violence[18].

Discussion

Considering study performed in Saudi Arabian hospitals by AlGwaiz and AlGhanim[6], in which 383 nurses in hospitals in Saudi Arabia responded, has indicated that two major factors causing violent patient and family behaviour are "Excessive waiting times"(more than 51.6%) and "Staff shortage" (39.1%). Similar outcomes of long and excessive waiting times have been reported in other studies such as in Iranian EDs[4]. Other studies with similar outcomes include studies in primary healthcare centres (PHC) in Saudi Arabia[9], United Kingdom[5] and Australia[1,18,2,10].

Analysis of typical waiting times in EDs in Saudi Arabia conducted by Bukhari, et. al[19] indicated an average 3.02 hours waiting times among[6], 604 patients surveyed, although this number varies depending on reason for hospital ED visit so time could be higher or lower. These results also indicated that 23% of patients in emergency departments wait for more than four hours for different reasons, including laboratory analysis and prolonged consultations. Prescribed waiting times in EDs in UKhas been set to maximum of four hours[10] from arrival to admission, discharge or transfer[19]. In order to reduce threat of violent patient behaviour in Saudi Arabian emergency units (EUs), a realistic time scale should therefore be set as a target to ensure all patients arriving at such departments are handled and discharged or transferred for further analysis.

Emerging evidence of waiting times in Saudi Arabian EUs has been linked to overcrowding[20]. In an attempt to match the growing population which has almost doubled from 16.05 million in 1990 to 28.5 million in 2010[21], several healthcare projects have increased facilities at all three levels-primary, secondary and tertiary. Majority of patients consider avoiding PHC centres and report directly to ED believing that high level of care and attention is usually given to emergency cases.

Violence has been precipitated by many factors, including insufficient staff to provide the required care to patients[6,7,4,1,10,5].

This factor is often closely related to unmet needs factor as well, which is shown in previous studies[6,9,11] where patients become violent due to perception that his/her demands were not met due to lack of adequate nurses available to cater for their needs,third factor of violence has been considered communication pattern between nurses and patients or family members[3,13,12,9,1,18].

This particular trend of communication difficulties occurs in Saudi Arabia due to annual Muslims' pilgrimage, largest religious congregation in world[22,23]. Incidences during such period enable majority of non-Arabic speakers to attend hospitals with different level of injuries.

The manner in which patients are acknowledged and interacted with, often determines level of violence or satisfaction[15,11]. Reducing violence is also linked to thanking of patients each time they provide any information or response to nurse[15].

One of the widely reported implications of overcrowding, which has been linked to violent behaviour among patients in EDs in Saudi Arabia, is job dissatisfaction of nurses[3,9,4,5].

Trend of violent behaviour in Saudi Arabian EUs has been linked to feelings of insecurity at work for many nurses[5, 6.] In order to increase security of nurses in their workplace, improvements to existing reporting process and various penalties for such violent attacks are required in Saudi Arabia.

This review study is limited to certain restrictions as follows:

- Only studies used provided evidence based on nurses as participants, and did not include patients' related studies in understanding the causes and nature of violent behaviours.
- The review is restricted to nurses onlyimplications to nurses were considered as part of this review.

Conclusions

Violent behaviours in Saudi Arabia, can be managed by:

- Reducing waiting times to a maximum of three hours in all cases.
- Developing an effective communication between nurses and patients.
- Responding to patient's demand and taking appropriate actions.
- Ensuring adequate staff is available to handle patient population.

Ethical Clearance: Not Required

Source of Funding: Self

Conflict of Interest: Nil

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Effectiveness of a Participatory–Learning Program of Pre-retirement on Personal Satisfaction with Older Adults: Urban and Rural Area, Thailand

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Abstract

This study is a quasi-intervention investigation to examine the result of the participatory learning program of pre-retirement on personal satisfaction with older adults'. The participants were 120 older adults living in cities and rural areas selected by purposive sampling technique. The sample group is divided into 2 groups: urban and rural groups, intervention and control group of thirty each group. The intervention was conducted for 12th weeks to improve readiness aging and personal satisfaction as measured by demography questionnaire, pre-retirement survey form, and personal satisfaction form assessment parameter. Data on pre-retirement and personal satisfaction were collected before and after a 12th-week participatory learning program of pre-retirement. Participants in the control group received the convention care. There were significant differences between the two groups on autonomous regulation. There was no significant difference found in the pretest mean value base on pre-retirement in both groups. The posttest mean values of the pre-retirement and personal satisfaction were significantly higher than those of the control group. There was a significant difference between groups ($p<.001$).

The results of the study have shown that a participatory-learning program is effective in pre-retirement and personal satisfaction. It would improve the successful aging and quality of life in a long later life.

Keywords: *Adult; aging; participatory program; personal satisfaction; quality of life; retirement.*

Introduction

Readiness pre-retirement is a managerial plan or an action plan taken for life survival after retirement. Therefore, it is actually important for everyone who is going to be at this stage. Those who have already well prepared before reaching the retirement point will have a good quality of life[1]. Nowadays, aging societies has become a global phenomenon. The proportion of aging people will double from 11% in 2006 to 22% in 2050[2]. Thailand's aging population represents the second-fastest-growing group of people over 60 years in Southeast Asia[3]. Thailand's population is aging very rapidly; its percentage of senior citizens increased from 5% in 1970 to 10% in 2006[4]. Thailand currently faces an aging society problem as the number and proportion of the aging population rapidly expand to 10% of the total population[5]. Estimation by the World Health Organization suggests that by 2025 there will be over 800 million people aging over 65 and two-third of such numbers shall be in developing countries[6].

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Therefore, pre-retirement is considered a life planning activity. A good pre-retirement can prevent potential problems; improve adaptability and post-retirement personal satisfaction, and happiness as a retiree[7]. Moreover, Thailand must prepare defined as passive and active health care service especially for those who informal workers are known that faced with an unsuitable work environment and exposed to numerous hazards. As a result, Accessibility to appropriated health services is difficult. It is also found that 88% of the older adults have not prepared for aging or post-retirement life, and more urbanites are prepared compared to rural counterparts[8]. Accordingly, this study aims to investigate a participatory learning program of pre-retirement influences their personal satisfaction. The results were assessed to determine improvements in preparation and personal satisfaction. Our findings can be after the participatory learning program average readiness pre-retirement and personal satisfaction in the urban and rural groups have higher than previously.

Method

Study Design: A quasi-intervention study using a pretest and posttest design with 12th weeks follow-up was employed.

Sample and Setting: Study participants were selected by a convenient sampling method based on the participants' living area in four communities in Bangkok and its vicinity, two rural and two urban areas from January to May 2018. The inclusion criteria were as follows: 1) aged between 50 and 59 years; 2) having good consciousness; 3) being able to communicate in Thai; 4) willing to participate in the program. The sample size calculation by Polit & Beck[9] using power analysis was employed to reduce the risk of type II error. The minimum level of significance (α) to estimate the number of sample size was .05 with the power of .80 (1-ß), a medium effect size, which would yield a total sample size of n= 50 (n=25 per condition, for a total of two conditions)[10]. Anticipating potential bias due to dropouts and the desire to prevent possible low power to detect small differences, the principal investigator (PI) recruited 25% additional participants which added seven more participants in each group for a total sample size of n=60 (n=30 per condition), in total 120 participants' data were analyzed.

Ethical Considerations: Ethical approval was obtained from the institutional review board of the author's institution (Approval no. COA.1-003/2018). After eligible clients were informed about the study by researcher, verbal consent was obtained from those who agreed to participate. Participants could withdraw from the study at any time without penalty.

Measurements:

General Information Form: The collected data on age, gender, marital status, educational level, number of children, income, supplementary work, family type, chronic disease, hobby and eligible welfare.

Pre-retirement Questionnaire: The patient information was obtained regarding (a) Physical (b) Environmental (c) Mental (d) Esteem and (e) self-actualization. The questionnaire contains 20 items with 5 point Likert scales. The score range from 1 (never) to 5 (almost always) in each subscale. Higher scores represent excellent preparation. In this study, the Cronbach's alpha was 0.87

Personal Satisfaction Questionnaire: Neugarten's personal satisfaction questionnaire[11] revised and translated in Thai by Kaeokangwan[12]. The questionnaire measures personal satisfaction using 18 items: (a) Liveliness and life appreciation (b) feeling of accomplishment and (c) mood. The questionnaire contains with Likert scale. The score range from 1 (never) to 5 (almost always) in each subscale. Higher scores represent the most personal satisfaction. In this study, Cronbach's alpha was 0.85.

Instruments for an intervention program: This intervention developed by a literature review[13] from the participatory learning concept framework. The content validity of the program was reviewed by 3 experts (two public health nurse instructors, one educational nurse instructor), using the content validity index (CVI) between 0.8 and 0.9. The internal consistency reliability was tested with 30 participants, who met the same inclusion criteria as the study participants and revised according to their recommendation. It was pilot tested for understanding and program practicality with thirty participants who met the inclusion criteria but did not participate in the main study. This program has five phases, it was composed of two sessions over the 12th week program period leading by the participants and consisted of various strategies such as group discussion, home visits, and telephone visits.

Data Collection: The data collection of this

study was carried out from January 1, 2018 to May 31, 2018. After the participants were provided with explanation regarding goals and procedure of the study, the participants were asked to sign the consent form. Thereafter, the participants were asked to complete the demographic data form and personal satisfaction form. The pre-retirement was measured at baseline in the beginning, weeks 12th after completing the program by research assistance.

The first session began with 30 minutes of problem about readiness pre-retirement and motivation to change by encouraging the participants to express their own problem and share experience about readiness pre-retirement in the past including helping them to set a goal of change

The second session was a small group education focused on the participatory learning for 90 minutes. Activities comprised providing target of pre-retirement and action plan. Additionally, the participants learned how to readiness pre-retirement.

The third session began after completing education session for a week. This session was a 60 minutes for small group discussion. The activities composed sharing and discussion on preparation for aging experience including 5 items; (a) physical (b) environment (c) mental health (d) self-esteem and (e) self-actualization.

The fourth session was telephone visit used to monitor readiness pre-retirement of the participants for about 15-30 minutes at 3nd, 6th and 10th week. This session focused on preparation for aging at home including consultation, helping the participants to reduce barriers, and encouraging them perform readiness pre-retirement.

The fifth session was home visit which was strategy to monitor and discussed about readiness pre-retirement of the participants about 15-30 minutes at 4th, 8th week. This session focused on support to perform following the program.

Control Group: The participants in control group received the convention care: advice for lifestyle modification including nutrition, exercise, and emotional management. The participants were measured outcomes variables at first week as baseline and at 12th week as the end of the study.

Data Analysis: All data were analyzed using a SPSS 24.0 program was used to calculate all statistical analyses. The general characteristics and disease-related characteristics of the intervention group and the control group were analyzed for differences in frequency, percentage, mean, and standard deviation between the two groups. Analysis of these characteristics and study result homogeneity was performed by using the following method: Chi-square test, t test, and paired t-test.

Results

Demographic Characteristics: There were no significant differences between the intervention and control groups in any of the general characteristics, age, marital status, education level, occupation, and income indication that two groups of urban and rural were homogeneous. The demographic characteristics of the sample group in both group (a) rural and (b) urban indicated that 50% of the intervention group were 50 to 59 years. They were married (60%), it was determined that 50% of men and had a monthly income between 6,001 to 10,000 baht (50%). Approximately 30% of the subjects were high school graduates, and 45% were employed. The homogeneity test of the participants' that there were no significant differences between the two groups as well, suggesting that the two groups of the urban and rural areas were homogeneous.

Effectiveness of a participatory – learning program of pre-retirement and personal satisfaction in older adults: Urban and Rural Area.

The effectiveness of a participatory – learning program of pre-retirement and personal satisfaction in older adults of two groups (a) urban and (b) rural was shown the intragroup and intergroup comparison of the pretest and posttest total mean values of intervention group obtained from readiness pre-retirement. There was no significant difference between the two groups for the pretest total mean readiness pre-retirement in intragroup comparisons. The readiness pre-retirement posttest means of the intervention group applying a participatory–learning program to older adults' in a rural area (4.04±7.64) was statistically higher than the means value of the control groups were (2.4±0.72) and the difference between the group was found to be statistically ($t=-1.42$, $p<.001$). Furthermore, the intervention group applying a participatory – learning program to older adults' in an urban area (3.90±0.8) was statistically higher than the means value of the control groups were (2.27±0.58) and the difference between the group was found to be statistically ($t=0.40$, $p<.001$) (Table 1).

Our founding that the average delta between pretest and posttest after intervention 12th week total mean value for the level of personal satisfaction with applying a participatory – learning program from intervention group of who live in a rural area was (4.5±5.7) higher than that of the pretest (2.9±0.71). On the other hand, the level of personal satisfaction with applying a participatory – learning program from intervention group of who live in urban area was (4.23±0.86) higher than that of the control group (3.0±0.64) and the difference between the group was found to be statistically (t=-14.54, p<.001) (Table 2).

Table 1: Comparison of pretest and posttest of pre-retirement between Intervention and Control Groups of the rural and urban.

Variables	Group	Pretest	Posttest	t	p
		Mean±SD	Mean±SD		
Pre-retirement					
Rural	Intervention (n=30)	2.3±0.53	4.04±7.64	-1.42	<.001
	Control (n=30)	2.1±0.53	2.4±0.72		0.16
	Difference	-0.23±0	-1.74±6.92		
Urban	Intervention (n=30)	2.27±0.58	3.9±0.8	.40	<.001
	Control (n=30)	2.4±0.67	2.34±0.6		0.68
	Difference	0.07±0.09	-1.64±0.2		

Table 2: Comparison of pre-test and post-test a personal satisfaction level between rural and urban areas in Intervention group

Variables	Pretest	Posttest	df	t	p
Personal Satisfaction					
Rural	2.9±0.71	4.5±5.7	29	-5.95	<.001
Urban	3.0±0.64	4.23±0.86	29	-14.54	

Discussion

This study attempted to identify effective strategies to improve success aging and quality of life in later life. The purpose of the present study was to determine the effectiveness of a participatory – learning program of pre-retirement on personal satisfaction in older adults. Results indicate that improvements a personal satisfaction in participants who received a participatory-learning program[14]. It was shown that the intervention of a participatory-learning program base on the personal satisfaction enhanced both groups of rural and urban areas and their personal satisfaction[15]. Our findings could explain that readiness pre-retirement of the participatory-learning program greatly helped with older adults. It is a great deal of learning goes on in groups of people sharing some common interest. Furthermore, the intervention groups were discussed, express their positive and negative feeling, exchanged their experiences and interact with each other[16].

Activities for pre-retirement start from the decision to participate upon invitation by the researcher, where the main operation group must collect community context information, summarize, synthesize and verify the information. Then the information is presented to the community to formulate the participatory process where the community is able to comment and select pre-retirement activities[18]. Moreover, the main intervention groups participate in result assessment and follow-up and thus perform the main duty along with the researcher. Missions are distributed based on expertise and willingness, and the group developed skills collectively in each step, it was shown that participatory development. Participation came in many forms such as participation as collaboration in development activities,

which in this case mean the main operational group consisting of an older adult and their families, community and local organizations[16]. There is also the participation as specific targeting of project benefits which in this case means retiring older adults participating in activities hosted by the researcher and main operational group[17]. Furthermore, retiring adults and the community commented on the activities, reflecting a personal satisfaction and desire to regularize the activities which mentioned participation as empowerment as a type of development[19].

Our study has some limitations that there were small sample sizes and not randomized the intervention and control groups. In addition, assessing only the short-term and finding be unclear, long-term follow-up should be considered. However, the finding of our study can be used as a base to help improve readiness pre-retirement, personal satisfaction, and quality of life in later life.

Conclusions

The result of the study revealed that pre-retirement to age with knowledge and healthy routines requires an early start -before retirement. Readiness pre-retirement is highly important and has a deciding effect on whether or not a person would have physical, mental, social and emotional readiness upon transition to old age. A group-based participatory learning program allowed the exchange of experience on self-care, eating, exercise and saving and revealed that the participants were highly eager in mutual conversation and motivation in order to improve their own health. Therefore, it is important for health teams to be aware of education through group-based participatory programs for those approaching retirement in order to have them move through their elder years with knowledge and improve quality of life.

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A Review Article on Corona Virus 2019-nCoV (COVID-19)

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Abstract

Coronaviruses are a group of viruses that cause diseases in mammals and birds. In humans, the viruses cause respiratory infections which are typically mild, including the common cold; however, rarer forms such as SARS, MERS and the novel coronavirus causing the current outbreak can be lethal. Coronaviruses were discovered in the 1960s. On 31 December 2019, the outbreak was traced to a novel strain of coronavirus, which was labelled as 2019-nCoV by the World Health Organization (WHO). Human to human transmission of coronaviruses is primarily thought to occur among close contacts via respiratory droplets generated by sneezing and coughing. Clinical laboratories performing routine haematology, urinalysis, and clinical chemistry studies, and microbiology laboratories performing diagnostic tests on serum, blood, or urine. There is currently no vaccine to prevent 2019-nCoV infection. The best way to prevent infection is to avoid being exposed to this virus.

Keywords: *SARS, MERS, 2019-nCoV, Orthocoronavirinae, Coronaviridae & Nidovirales.*

Introduction

The name "coronavirus" is derived from the Latin corona, meaning crown or halo, which refers to the characteristic appearance of the virus particles (virions)[1]. Coronaviruses are a group of viruses that cause diseases in mammals and birds. In humans, the viruses cause respiratory infections which are typically mild, including the common cold; however, rarer forms such as SARS, MERS and the novel coronavirus causing the current outbreak can be lethal. In cows and pigs they may cause diarrhoea, while in chickens they can cause an upper respiratory disease. Coronaviruses are viruses in the subfamily Orthocoronavirinae in the family Coronaviridae, in the order Nidovirales these are enveloped viruses with a positive-sense single-stranded RNA genome and with a nucleocapsid of helical symmetry. The genomic size of coronaviruses ranges from approximately 26 to 32 kilobases, the largest for an virus. They have a fringe reminiscent of a royal crown or of the solar corona.[2]

Incidence: Coronaviruses were discovered in the 1960s.[3] In September 2012, a new type of coronavirus was identified, initially called Novel Coronavirus 2012, and now officially named Middle East Respiratory syndrome coronavirus (MERS-CoV).[4&5] Four members of a Chinese family have been diagnosed with coronavirus in the United Arab Emirates.

The earliest ones discovered were infectious bronchitis virus in chickens and two viruses from the nasal cavities of human patients with the common cold that were subsequently named human coronavirus 229E and human coronavirus OC43[6.] In December 2019, a pneumonia outbreak was reported in Wuhan, China. On 31 December 2019, the outbreak was traced to a novel strain of coronavirus, which was labelled as 2019-nCoV by the World Health Organization (WHO).[6,8 & 9]

As of 1st April 2020 (05:09 GMT), there have been 42,334 confirmed deaths and more than 8,59,338 confirmed cases in the coronavirus pneumonia outbreak.[10]

Signs and Symptoms: Coronaviruses are believed to cause a significant percentage of all common colds

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in human adults and children. Coronaviruses cause colds with major symptoms, e.g. fever, throat swollen adenoids, in humans primarily in the winter and early spring seasons.[11] Coronaviruses can cause pneumonia, either direct viral pneumonia or a secondary bacterial pneumonia and they can also cause bronchitis, either direct viral bronchitis or a secondary bacterial bronchitis. The much publicized human coronavirus discovered in 2003, SARS-CoV which causes Severe Acute Respiratory Syndrome (SARS), has a unique pathogenesis because it causes both upper and lower respiratory tract infections.[12]

Mode of Transmission: The WHO and the US Centers for Disease Control and Prevention (CDC) say it is primarily spread during close contact and by small droplets produced when people cough, sneeze or talk with close contact being within 1–3 m (3 ft 3 in–9 ft 10 in).[14]

Respiratory droplets may also be produced while breathing out, including when talking. Though the virus is not generally airborne.

Laboratory Diagnosis: The test is typically done on respiratory samples obtained by a nasopharyngeal swab; however, a nasal swab or sputum sample may also be used.[16]

Microscopy: Light and electron microscopy can rapidly provide the first information on the potential causative agent in clinical materials. However subsequent testing is needed to identify the pathogen.

Culture: Viral culture is often considered the "gold standard" for laboratory diagnosis of viral respiratory infections. Laboratories with the appropriate experience and containment facilities, may attempt to isolate the virus. These recommendations do not cover virus isolation procedures. Culture of virus has important biosafety implications, depending on the type of virus, its pathogenicity and mechanism of spread.

Molecular identification and characterization of a novel pathogen: A number of method and systems for rapid and sensitive identification of the genetic sequence of novel pathogens have been developed and refined. Sharing such gene sequence information among collaborators is essential to rapidly identify the pathogen and to develop pathogen specific diagnostics.

Prevention: Preventive measures to reduce the chances of infection include staying at home, avoiding crowded places, washing hands with soap and water often and for at least 20 seconds, practising good respiratory hygiene and avoiding touching the eyes, nose or mouth with unwashed hands. Wash hands often with soap and water for at least 20 seconds. Use an alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available.

The CDC recommends covering the mouth and nose with a tissue when coughing or sneezing and recommends using the inside of the elbow if no tissue is available. They also recommend proper hand hygiene after any cough or sneeze.

The CDC also recommends that individuals wash hands often with soap and water for at least 20 seconds, especially after going to the toilet or when hands are visibly dirty, before eating and after blowing one's nose, coughing or sneezing. It further recommends using an alcohol-based hand sanitiser with at least 60% alcohol, but only when soap and water are not readily available.[16]

Ethical Clearance: This article is a purely a narrative review article hence it's not required an ethical clearance.

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Effectiveness of Mirror Therapy on Motor Function among Patients with Cerebro Vascular Accident

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Abstract

The study was conducted to evaluate the effectiveness of mirror therapy on motor function among patients with cerebro vascular accident . Quasi experimental non- randomized control group design was adopted for the study. The sample were selected out of 60 samples, 30 were in study group and 30 in control group. Mirror therapy was given for 30 minutes to the study group for 10 days and with holded for control group. Post test was done for both study group and control group after 14 days. The findings revealed that, in study group, the mean score on level of motor function among patients with Cerebro Vascular Accident in study group was 1.46 in pre test and 2.46 in post test. The estimated paired 't' value was 8.41 which was significant at $p \leq 0.05$. Hence the research hypothesis (H_1) was accepted. The mean score on level of motor function among patients with Cerebro Vascular Accident in study group was 2.46 and in control group was 0.71. The estimated unpaired 't' value was 6.25 which is significant at $p \leq 0.05$. Hence the research hypothesis (H_2) was accepted. The study concluded that the Mirror therapy is effective to improve the level of motor function among patients with Cerebro Vascular Accident.

Keywords: *Effectiveness, Mirror therapy, Motor function, Cerebro Vascular Disease*

Introduction

A Cerebro Vascular Accident is also named as stroke or brain attack and is caused by a disruption of the blood supply to a part of the brain by a blood clot or ruptured artery, where the brain does not get the essential nutrients and oxygen needed. There are two major types of stroke: Ischemic and Hemorrhagic stroke. Approximately 88% of stroke are ischemic strokes an ischemic stroke happens when the blood flows through the artery that supplies oxygen gets blocked. Hemorrhagic stroke of approximately 12% of hemorrhagic stroke occurs when a cerebral artery in the brain leaks blood and spills it over the brain tissue[9]. The principle of Mirror therapy is used to create a reflective illusion of an affected limb in order to trick the brain into thinking,that the movement has occurred without pain. Mirror therapy was introduced by Ramachandran and Roger Ramachandran to treat phantom limb pain. The preliminary findings suggest that mirror therapy can be a useful interventionin rehabilitation of Cerebro Vascular Accident patients. It provides simple and cost effective therapy for wrist and hand motor recovery in acute and sub acute stroke patients .Mirror therapy has shown positive effects on its feasibility, treatment of stroke rehabilitation and management of patients regional pain syndrome. The mirror therapy is effective in stroke complex regional pain syndrome, cerebral palsy and fracture rehabilitation [10].

Statement of the Problem: A Quasi-experimental Study to Evaluate the Effectiveness of Mirror Therapy on Motor Function Among Patients With Cerebro Vascular Accident in theSelected Hospitals at Kanyakumari District.

Objectives:

- To assess the pretest and posttest level of motor function among patients with Cerebro Vascular Accident in study group and control group.
- To evaluate the effectiveness of Mirror Therapy on motor function among patients with Cerebro Vascular Accident in study group and control group.

To find out the association between pretest level of motor function among patients with Cerebro Vascular Accident with their selected demographic and clinical variables in study group and control group.

Hypotheses:

H_1: There is a significant difference between pretest and post test level of motor function among patients with Cerebro Vascular Accident in study group and control group.

H_2: There is a significant difference between post test level of motor function among patients with cerebro vascular accident in study group and control group.

H_3: There is a significant association between pre test level of motor function among patients with Cerebro Vascular Accident with their selected demographic and clinical variables in study group and control group.

Research Methodology

Research Approach: The researcher utilized Quantitative research approach.

Research design: Quasi Experimental Non Randomized control group design was utilized to perform the study

Research setting: The study was conducted at two hospitals, kanyakumari district.

Population: Patients with Cerebro Vascular Accident

Sample: Patients with Cerebro Vascular Accident at the age group 30-70 years with unilateral stroke

Sample size: 60 samples were selected for this study with unilateral stroke who fulfilled the inclusion criteria 30 samples were in study group and 30 samples were in control group.

Sampling technique: Purposive sampling technique

Description of Tool: The tool used in the study consists of 2 parts

Part-1: Demographic data (Annexure VI): In this part demographic variables such as Age, Sex, Education, Occupation, Marital status, Types of food, Types of family and clinical variables like Types of lesions, Side affected in stroke, Co-morbidities history, Duration of illness, Habits of alcoholism, Habits of smoking.

Part -2: Modified Ashworth Scale: This part of the tool consist of Modified Ashworth Scale to assess the motor function of cerebro vascular accident. Scoring interpretation is No disability, No Significant disability, Slight disability, Moderate disability, Moderately Severe disability, Severe disability

Method of Data Collection:

Phase I Selection of Cerebro Vascular Accident patient: After obtaining permission from the Principal of St Xavier's Catholic College of Nursing Chunkankadai the participants were selected based on the inclusion and exclusion criteria and oral consent from each sample and proceeded with data collection.

Phase II Pre test: Investigator the Modified Ashworth Scale was used to assess the level of motor function in group and control group

Phase III Intervention: Study group received Mirror therapy and control group received hospital routine care.

Phase IV Post test: The post test was conducted after 14 days with Modified Ashworth Scale.

Results

Table I: Comparison of mean standard deviation and paired 't' value on pre test and post test level of motor function among patients with Cerebro Vascular Accident in study group and control group (N=60)

Variables	Group	Mean	SD	Df	Paired 't' test
Level of motor function	Study GroupPre test	1.46	0.61	29	8.41*
	Post test	1.6	0.728		
	Control GroupPre test	2.46	0.61	29	3.98*
	Post test	2.43	0.71		

*Significant at $p < 0.05$

Table II: Comparison of mean, standard deviation and unpaired 't' test on post test level of motor function among patients with Cerebro Vascular Accident in study group and control group. (N=60)

Variables	Group	Mean	SD	Un paired 't' test
Level of motor function	Study Group (n=30)	1.46	0.61	6.25*
	Control Group (n=30)	2.43	0.71	

*Significant at $p<0.05$

Discussion

The aim of the study was done to evaluate the effectiveness of Mirror Therapy on motor function among Cerebro Vascular Accident patient. Mirror therapy was an effective, inexpensive and non pharmacological measure for improving upper extremity motor function. The finding reveals that, the mean score on level of motor function among patients with Cerebro Vascular Accident in study group was 1.46 and the control group was 0.61. The estimated unpaired 't' value was 6.25 which was significant at $p\leq0.05$. It shows that mirror therapy was effective and reduced the level of motor function. Hence the research hypotheses H_1 was accepted. In study group and control group the calculated value of demographic variables were lesser than table values which indicate that, there is no significant association between mirror therapy and demographic variables. Hence the hypotheses (H_2) was not accepted .As per the study that the Mirror therapy was effective to improving the level of motor function among patients with Cerebro Vascular Accident.

Based on the data collected the mean score on the level of motor function in study group was 3 in pre test and 1.6 in post test the paired 't' test value is 8.41 which is significant at $p<0.05$. It shows that the mirror therapy is effective in reducing the level of motor function among patients with Cerebro Vascular Accident. From the result the researcher concluded that mirror therapy was effective in improving the level of motor function among patients with Cerebro Vascular Accident.

Conclusion

The study concluded that providing mirror therapy was effective to improving the level of motor function among patients with Cerebro Vascular Accident.

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Conflict of Interest: There was no conflict of interest

Source of Fund: Self funded

Ethical Clearance: The proposed study was conducted after the approval of the dissertation committee of St. Xavier's Catholic College of Nursing Permission was obtained from Directors of PS Medical Trust and Kevin Neuro Centre. Oral consent was obtained from each participants before starting the data collection. Assurance was given to the study participants regarding the confidentiality of the data collection.

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Rational Model-Based Training Retain the Health Cadres' Knowledge, Attitudes, and Practices on Stroke Issue

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Abstract

Stroke is a medical emergency that the patients of it ideally should have received stroke management ≤3 hours since the attack. Emergency situations can occur at anytime, thus the health cadres participation in minimizing pre-hospital delay through FAST method is needed. In order to make the cadres have knowledge, positive attitudes, and good practices about FAST, the rational model-based training was conducted. The aim of this study was to analyze the effectiveness of rational model-based training on the health cadres' changes on knowledge, attitudes, and practices in the stroke symptoms detection using FAST. This study used quasi-experimental research design through pretest-posttest control group design. 50 respondents were divided into intervention and control groups. Data analysis used independent sample t-test and mann whitney test. The results show that there were differences in attitude and practices changes between the intervention and the control groups after training, with p values 0.009 and 0.000. There was no any difference in the retention of knowledge, attitudes, and practices in both groups, the p value was 0.849; 0.626;0.456.

Keywords: *Training, Rational Model, FAST, Stroke, Health cadres.*

Introduction

Stroke is the second leading cause of death and the third cause of disability in the world. The stroke prevalence in low and middle income countries generally reaches 70%[1]. The stroke prevalence in Indonesia at the age of ≤ 15 years was 7% in 2013, rising to 10.9% in 2018. The stroke patients prevalence in the age range of 15-54 years reached 80.7%[2]. This fact shows that many stroke cases strike any of the productive age group. Dissability that occurs due to stroke at the productive age destroy one's career and future.

Research conducted in 28 Indonesian hospitals showed that most of stroke patients arrived at hospital >6 hours since the attack amounting to 67.3%[3]. Another study indicates that the higher institution staff had a low level of stroke symptoms recognation with the percentage of 63.4%[4].

Based on the previous study results in 2018, in Mojolangu Public Health Center in Malang City found stroke cases of 1.39%. Furthermore, another previous study which was conducted at one hospital in Mojolangu region shows that it was only 10% of stroke patients who came in emergency department within ± 3 hours from the attack. Furthermore, it was known that before coming to the hospital, the patients came to an independent physiciansince they felt that their body was limp and suddenly weak. This fact indicates that the stroke symptoms are not recognized as an emergency case which requires prompt treatment.

Stroke patients ideally should have received stroke management ≤3 hours since the attack[5]. About 95% of initial stroke symptoms are started from the outside of hospital. Thus, it is important to recognize the initial symptoms and emergency treatment of stroke, this

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recognition can be done through education[6,5]. FAST is an early detection method of stroke symptoms which combines three general warning signs of stroke and an action plan that should be done when those three warning signs appear[7].

The Department of Health has the concept of empowering the particular ordinary people who have a great chance of being exposed to emergency cases, through knowledge and skills they will be able to provide first aid and increase the awareness of response time so that disability or death due to medical emergencies can be minimized. In this case,those particular ordinary people include the health cadres[8].

The rational model can be used as a planning strategy to achieve the targeted results from training, thus, it is easier for the educators to plan, implement and evaluate interventions. Rational models are formed based on the premise that the increasing knowledge change attitudes, thus it also drives changes in practice[9].

In order to improve knowledge, attitudes, and practices better, the researcher provided motivation and simulation. The purpose of this study was to analyze the effectiveness of rational model-based health education on changes in the knowledge, attitudes and practices of health cadres in the early detection of early stroke symptoms using FAST.

Method and Materials

The research design used was a quasi-experimental through the pretest-posttest control group design. Respondents were 50 health cadres, divided into intervention and control groups. The trainings were held in each village in the working area of PUSKESMAS Mojolangu-Malang,

Intervention group training was carried out by providing education using flip chart media and pictorial modules with interludes of motivation and simulations conducted in 2 sessions. Session 1 contained material explanations interspersed with any motivation regarding the importance of the cadres' role in detecting the early symptoms of FAST stroke. Session 2 was continued in the following day, in this session the facilitator conducted a FAST simulation and briefing using a simulation patient. The provision of education in the control group was done without providing motivation and simulations, it only contained the material explanations using flip chart media and pictorial modules which were carried out in one session.

The inclusion criteria were cadres who had never received any of health education about early detection of the stroke symptoms related to the FAST method. Measurement of knowledge, attitudes, and practices refers to the process of change in the cognitive, affective, and psychomotor domains of Bloom's theory tested for validity and reliability by the researcher. Bivariate analysis using independent sample t-test and Mann-Whitney test.

Findings:

Table 1. Distribution of Respondent Characteristics in Intervention and Control groups Based on Age, Length Time as Cadre and Total Training

Variable	N	Control		Intervention	
		Mean ± SD	95% CI	Mean ± SD	95% CI
Age	25	46.6 ± 8.362	43.15-50.05	50.92 ± 10.04	46.77-55.07
length of time as the cadre	25	7.76 ± 5.585	5.45-10.07	10.28 ± 7.266	7.28-13.28
Total training	25	3.6 ± 4.637	1.69-5.51	3.76 ± 3.205	2.44-5.08

Table 1 shows the average respondent in the intervention group was 50 years old and the control group was 46 years old. The average respondent in the intervention group had been as a cadre for 10 years, while in the control group for 7 years. On average, the respondents in the intervention and control groups had attended the trainings for 3 times.

Table 2. Distribution of Respondent Characteristics by Gender and Education in Intervention and Control groups

Variable	Category	Control		Intervention	
		Frequency	%	Frequency	%
Gender	Male	-	0	1	4
	Female	25	100	24	96
Education	Elementary	1	4	6	24
	Middle	7	28	9	36
	High	13	52	9	36
	University	4	16	1	4

Table 2 shows the gender in the intervention and control groups were dominated by female, that were 24 respondents (96%) and 25 respondents (100%). The education of the respondents in intervention group dominantly were Middle and High schools graduate which were 9 people (36%) and the control group was dominated by high school graduate (13 people) (52%).

Table 3. Differences in Changes of Knowledge, Attitudes and Practices Related to FAST Stroke in Intervention and Control Groups after Training

Variable	N	Mean Delta ± SD		P value
		Control	Intervention	
Knowledge	25	1.72±2.052	2.32±1.406	0.234
Attitude	25	0.56±3.367	3±3.663	0.009
Practice	25	2.68±2.293	0.56±3.367	0.000

Table 3 the statistical test results on knowledge variable obtained p value 0.234 ($p > 0.05$), meaning there were no any significant differences in knowledge changes between the two groups after the training. P-value 0.009 ($p < 0.05$) on the attitude variable and 0.000 ($p < 0.05$) on the practice variable, meaning that there were significant differences in attitude and practice changes between the two groups after training.

Table 4 Differences of Knowledge, Attitude and Practice Retention Related to FAST Stroke in Intervention and Control Groups

Variable	N	Control			Intervention			P value
		Median Delta	Delta Min	Delta Max	Median Delta	Delta Min	Delta Max	
Knowledge	25	0	-2	2	0	-2	2	0.849
Attitude	25	0	-4	6	0	-4	5	0.626
Practice	25	0	-4	0	0	-5	0	0.456

Table 4 shows the retention tests results on the knowledge, attitudes and practices variables,with p value 0.849; 0.626; 0.456 (p> 0.05) there was no statistically significant difference in knowledge, attitudes and practices retention between the two groups.

Discussion

The differences in knowledge, attitudes and practices related to FAST strokes in intervention and control groups: The intervention and the control groups' knowledge after the training had both increased by an average of 2 points, both groups experienced similar changes in knowledge from the less to sufficient category. The respondents' knowledge changes in the intervention group was not higher than control group. Although the training provided was different, this could be influenced by the cadres' low educational level in intervention group, 60% of them were elementary to middle school graduates.

The level of education affectone's ability to receive information, the ease of receiving information has an important meaning for the entry of new knowledge[10]. This study indicates that the health cadres' ability in receiving information was influenced by their level of education. The higher level of cadre education, the easier it would be to receive information, thus the more knowledge and insight would be obtained[13].

The respondents' attitude in intervention group after training increased 3 points, while the control group <1 point. Both groups initially had moderate attitude, after training the intervention group's attitude changed well, while the control group remained moderate. The difference in change could be influenced by the provision of education which was interspersed with motivation about the importance of cadres' role in early stroke symptoms detection using FAST.

Attitude is an assessment process carried out by individuals towards an object; things, people or information. The process of evaluating a person against an object can be in the form of positive and negative assessments[14].

The individual attitudes formation is obtained from the process of seeing, hearing, and feeling. The formation of attitudes is influenced by external factors (such as experiences, situations, obstacles, norms) and internal factors (such as psychological and encouragement in individuals). Providing education and motivation is an external factor that can change attitudes through a process of understanding and instilling awareness, thus making someone more aware of the importance of information[15].

The previous studies results showed that education by providing motivation could bring a positive influence on attitudes[15].

The respondents' practice in the intervention group after training increased 10 points, while the respondents' practice in the control group increased 3 points. Both groups initially had poor practice abilities, the intervention group's practice ability changed wellafter training, while the control group's practice was in the poor category. This can be influenced by simulations.

Knowledge is obtained from the results of knowing the object through sensing. Training with simulation provides an opportunity to involve the senses of a person through sight, hearing and touch, thus, it forms a more perfect knowledge and understanding. Then, it helps someone respond positively to an object that is realized in practice[16]. The results of this study are in line with the previous study results by providing interventions in the form of simulation to improve practice, thus simulation method is effective in improving practice[17].

Differences in knowledge, attitude and practice retention related to FAST stroke in intervention and control groups: Statistical test results showed that the retention of intervention and control groups' knowledge was no different, after one week of training the change of knowledge in the two groups belong to sufficient category. Training is an act of delivering information through education. The process of storing information took place gradually, starting from the processing of information entering through sensing which is then recorded by sensory memory. The information that is not heeded will be immediately forgotten, yet the heed information was received. Each information received will leave traces that settle in the memory which will be temporarily stored in short-term memory to be stored for 30 seconds, which may be remembered or forgotten[18,19].

Information stored in short-term memory is transferred to long-term memory through a repetition and selection process, yet not all information stored in long-term memory is stored properly. Traces of long-term memory can also be lost since it is replaced by the new information, thus the forgetfulness occurs. In this case, a post-test which was done a week after the

training stimulated the process of searching and finding back the information stored in memory, therefore the results of this second post-test were the description of memory retention[18,19].

Statistical test results showed that the retention attitude of intervention and control groups was no different. After one week training, respondents' attitude in the two groups that had changed remained the same, the intervention group's attitude remained good and the control group's attitude remained moderate. The study results mentioned that motivation had an influence on interest. Motivation is a process of encouraging a person to carry out something that leads to certain goal achievement[20,21].

There are two types of motivation, intrinsic motivation and extrinsic motivation. Intrinsic motivation is the driving force that causes a person participate based on an inner urge. Extrinsic motivation is motivation that causes a person participate maximally due to external stimuli [22].

Statistical test results show that the retention of the intervention and control group practices in this study was no different. After one week of training, the intervention group's practices remained in good category and the control group's practices remained in bad category. The simulation method purpose was to form skills to be applied in real life, thus the simulation method couldbring the effect on practice[14,21].

Cognitive, affective, and psychomotor of human activities involve memory. The occurrence of memory retention is influenced by the level of individuals in paying attention to information, motivation in learning, rationality and usefulness of the information presented, as well as the role of sources in making some interesting media by modifying new ideas and refinement of what is already known. Although short training could improve and retain knowledge, attitudes, and practices, as the time goes by, a lot of information is stored and competing with other information, thus there is a need for repetition with different method for the same topic which is done periodically and not continuously[22,24].

Conclusion

It can be concluded that there was no any difference in the knowledge of the two groups after health education was given. However, there were differences in attitudes and practice changes between the two groups. The attitudes improvement changes and better practices in the intervention group were caused by the motivation and simulations provision. There was no any difference in the retention of knowledge, attitudes and practices between the two groups.

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Effectiveness of Facilitated Tucking on Physiological and Behavioral Responses among Neonates Receiving Hepatitis B Vaccination

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Abstract

The study was conducted to evaluate the effectiveness of Facilitated tucking on Physiological and Behavioral responses among neonates receiving Hepatitis B vaccination. Quasi experimental non-randomized control group design was adopted for the study. The structured questionnaire was developed to collect the data. The sample were selected by purposive sampling technique and data collection was carried out among 60 neonates in a selected hospital. Pretest and posttest conducted before and after facilitated tucking. The finding reveals that the physiological responses of 't' value in heart rate was 3.01 respiration 1.52 and oxygen saturation 3.59 and behavioural responses of 't' value was 5.6 which significant at $p<0.05$. It shows that Facilitated tucking was effective inenhancing physiological and behavioral responses among neonates. There was a significant association between the age, gender, weight of neonates with physiological and behavioural responses. The study concluded that providing facilitated tucking was very effective in enhancing physiological and behavioral responses among neonates.

Keywords: *Effectiveness Facilitated Tucking, Physiological Response, Behavioral Response, among Neonates, Hepatitis B Vaccination.*

Introduction

Newborn is the most crucial period in a child life. Every child is a gift from the God. The birth of the baby is a complex process. It is the wonderful and finest gift of nature. At the time of birth a newborn is still attached to the mother. The most profound physiological change required of the neonate is transition from fetal or placental circulation to independent respiration. The immediate adjustments include respiratory system, circulatory system and all the systems are trying to adjust to extra uterine life[10]. Normal newborn behaviour may develop at different rates but they still exhibit many of the same behaviour like sleep, cry, reflex, vision, hearing and breathing. Facilitated tucking is one of the simplest non-pharmacological and cost effective techniques replicate the condition of being in uterus[3]. This makes the newborn comfortable, more secure with direct response[9]. It facilitates self-regulation by decreasing the physiologic response like prolonged heart rate elevation that leads to the disequilibrium associated with pain and stress. Facilitated tucking improves the emotional security and reduces the pain perception[3].

Statement of the Problem: A study to evaluate the effectiveness of facilitated tucking on physiological and behavioral responses among neonates receiving Hepatitis B vaccination in a selected hospital at Kanyakumari District.

Objectives:

- To assess the pre test and post test level of physiological responses among neonates receiving Hepatitis B vaccination in study group and control group.
- To assess the post test level of behavioral responses among neonates receiving Hepatitis B vaccination in study group and control group.
- To evaluate the effectiveness of facilitated tucking on physiological and behavioral responses among neonates receiving Hepatitis B vaccination in study

group and control group.

- To associate the post test level of physiological and behavioral responses with the selected demographic variables in study group and control group.

Hypotheses

H_1: There is a significant difference between pre test and post test level of physiological responses among neonates in study group and control group.

H_2: There is a significant difference between post test level of behavioral responses among neonates in study group and control group.

H_3: There is a significant association between posttest level of physiological and behavioral responses among neonates with the selected demographic variables in study group and control group.

Research Methodology

Research Approach: The researcher utilized Quantitative research approach.

Research Design: Quasi experimental non-randomised control group design was used in the study.

Research Setting: The study was conducted at Health Centre,Kanyakumari District.

Population: Neonates receiving Hepatitis B vaccination.

Sample: Neonates between the age group of 0 to 28 days receiving Hepatitis B vaccination.

Sample Size: 60 Neonates who are receiving Hepatitis B vaccination.

Sample Technique: Purposive sampling technique.

Description of Tool: The tool used in this study consisted of three parts.

Part 1: In this part, structured questionnaire was used to collect the demographic variables such as age, gender, weight, mode of delivery, gestational age and position during sleep of neonates.

Part 2: This part of the tool consists of physiological parameters such as heart rate, respiratory rate and oxygen saturation was checked with the help of pulseoximeter. Scoring interpretation of physiological parameter is low, normal, high.

Part 3: This part of the tool consists of Modified Neonatal Infant Pain Scale to assess the behavioral responses of neonates. Modified Neonatal Infant Pain Scale. Scoring interpretation of behavioral parameter is state I, state II, state III.

Method of Data Collection

Phase 1 Selection of Neonates: After obtaining initial permission from the Principal of St. Xavier's Catholic College of Nursing and Administrator of Health centre, participants were selected based on inclusion and exclusion criteria. The investigator obtained oral consent from the each mother of neonates and proceeded with the data collection.

Phase 2 Pre test of Neonates: Investigator gathered the demographic data from the mothers of neonates in both study and control group and the pulse oximeter was used to assess the physiological responses.

Phase 3 Intervention: Study group received Facilitated tucking and control group received hospital routine care. The intervention was given before Hepatitis B vaccination.

Phase 4 Post test: The post test was conducted after vaccination with pulse oximeter and Modified Neonatal Infant Pain Scale.

Results

Table 1: Comparison of mean, standard deviation and unpaired 't' test value of posttest level of physiological responses among neonates in study group and control group. N=60

S.No.	Variables	Group	Mean	SD	Unpaired 't' Test	Table Value
1	Heart Rate	Study Group	148.75	2.30	3.01*	0.360
		Control Group	143.95	3.80		

S.No.	Variables	Group	Mean	SD	Unpaired 't' Test	Table Value
2	Respiration	Study Group	49.32	2.18	1.52*	0.46
		Control Group	45.44	2.83		
3	Oxygen Saturation	Study Group	95.12	3.74	3.59*	0.68
		Control Group	92.9	3.82		

*Significant at p≤ 0.05

Table 2: Comparison of mean, standard deviation and unpaired 't' test value of posttest level of behavioral responses among neonates in study group and control group. N=60

S.No.	Variables	Group	Mean	SD	Unpaired 't' test	Table value
1	Behavioral Response	Study Group	2	1.06	5.6*	1.671
		Control Group	3.4	1.05		

*Significant at p≤ 0.05

Discussion

The study was done to determine the effectiveness of facilitated tucking on physiological and behavioral responses among neonates in a selected hospital. Based on data collected the mean score on the level of physiological responses in the study group heart rate was 148.75 and the unpaired 't' value was 3.01, which is significant at the level of p≤0.05, respiration 49.32 and the unpaired 't' value was 1.52, which is significant at level of p≤ 0.05, saturation (SPO2) 95.12 and the unpaired 't' value was 3.59, which is significant at level of p≤ 0.05 and level of behavioral response 2 and the unpaired 't' value was 5.6, which is significant at the level of p≤0.05. Physiological responses in control group heart rate was 143.95 and the unpaired 't' value was 3.01, which is significant at the level of p≤0.05, respiration 45.44 and the unpaired 't' value was 1.52, which is significant at level of p≤ 0.05, saturation (SPO2) 92.9 and the unpaired 't' value was 3.59, which is significant at level of p≤ 0.05 and level of behavioral response 2 and the unpaired 't' value was 5.6, which is significant at the level of p≤0.05. The association between the level of physiological and begavioral responses among neonates with selected demographic variables such as mode of delivery, gestational age and position during sleeping of the neonates indicated no association. The age, gender, weight of neonates showed a significant association.

Conclusion

The study concluded that providing facilitated tucking was very effective in enhancing physiological and behavioral responses among neonates. Therefore the investigator feels that Facilitated tucking was effective in enhancing physiological and behavioral responses.

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Conflict Interest: There was no conflict of interest.

Source of Fund: Self

Ethical Clearance: The proposed study was conducted after the approval of the dissertation committee of St. Xavier's Catholic College of Nursing. Prior permission was obtained from Administrator of Health Centre,Oral consent was obtained from mothers of neonates before starting data collection. Assurance was given to the mothers of neonates regarding the confidentiality of the data collected.

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Effectiveness of Guided Imagery on Level of Stress among Old Age People

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Abstract

A experimental study was conducted to evaluate the effectiveness of level of stress among nursing students at Kanyakumari district. While assessing the pre test level of stress among old age people, none of them were low stress, 23(46%) of them were moderate stress and 27(54%) were with high stress. While assessing the post test score of stress among old age people, 29(58%) of them were low stress, 21(42%) of them were moderate stress and none of them were with high stress. While revealing effectiveness, at a significant level of $p<0.05$, the mean pretest value was 21.78 with the standard deviation 4.19. The mean post test value was 10.48 with the standard deviation 2.41 and the calculated 't' value was 29.62*. The calculated' value was greater than the table value, so there was a significant difference between pretest and post test score. There was a significant association between the pretest level of stress among old age people with demographic variables such as age, sex, religion, education, previous occupation, previous income, present income. Hence the research hypothesis (H_2) is accepted. As per the study the investigator concluded that the level of stress among nursing students.

Keywords: *Effectiveness, Guded Imagery, Level of stress.*

Introduction

[1]Stress is the body's way of responding to any kind of demand or threat. When sense danger whether it's real or imagined, the body's defences kick into high gear in a rapid, automatic process known as "fight-or-flight" reaction or the "stress response". The stress response is the body's way of protecting the persons. When working properly, it helps to stay focused, energetic, and alert. In emergency situations, stress can save life giving extra strength to defend. Worldwide the life expectancy is increasing.[2] Currently about 10% of population is made up of older adults (aged 60 years and above). Unfortunately old age has now become a prevalent social problem in our society. In modern society, where money is the scale of everything, old age people are measured as an economic liability and a social load. In addition the old age is unavoidable, problem-ridden stage of life that one individual compelled to live, marking time until our final exit from life itself**.** Guided imagery has a direct relationship with well being of an individual. That is both physical and physiological wellbeing.[10] Guided imagery helps to improve health, to increase wellbeing and to promote peace in the world through personal transformation. It is non-religious, non-sectarian and non-political.

Statement of Problem: A Pre Experimental Study to Evaluate the Effectiveness of Guided Imagery on Level of Stress among Old age people in a selected old age home at Kanyakumari district.

Objectives:

- To assess the pretest and posttest level of stress among old age people.
- To evaluate the effectiveness of guided imagery on level of stress among old age people.
- To find out the association between pre test level of stress among the old age people with their selected demographic variables.

Hypotheses:

H_1: There is a significant difference between pretest and posttestlevel of stress among the old age people.

H_2: There is a significant association between the pretest level of stress among the old age people with their selected demographic variables.

Research Methodology

Research approach: Quantitative research approach was used for the study.

Research design: Pre experimental one group pre-testpost test research design was used in this study.

Research setting: The study was conducted at Rojavanam old age home in South Thamaraikulam at Kanyakumari district.

Population: All the old age people with stress

Sample: Patient with stress at the age group of above 66 years.

Sample size: Sample size consisted of 50 old age people.

Sample technique: Purposive sampling technique

Description of Tool: The tool used in this study consisted of two parts

Part-1: A Structured interview schedule to collect the demographic variables like age, sex, marital status, previous occupation, educational status, source of income, previous type of family, number of children, duration of stay at old age home, reason for joining in old age home and medical illness.

Part-2: Sheldon Cohen's Perceived Stress Scale (1983) was used as the data collection tool. It is a 5 point rating scale with 10 items.

Scoring interpretation of Perceived Stress Scale:

Score	Level of Stress
0-13	Low
14-26	Moderate
27-40	High

Method of data collection:

Phase 1 Pre test: After obtaining formal permission from the Principal of St.Xavier's Catholic College of nursing and Mr. Gopi, director of Rojavanam old age home. The investigator obtained oral consent from each sample and proceeded with data collection. The data was collected from the selected participants and the Sheldon Cohen's perceived stress scale was used to assess the level of stress.

Phase 2 Intervention: Guided imagery was provided for the old age people with low and moderate and severe stress for 20 minutes once a day for 25days.

Phase 3 Post test: The post test was conducted on 25th day with Sheldon Cohen's perceived stress scale.

Results

Table I: Frequency and Percentage distribution of level of stress among old age people

S.No.	Level of stress	Pre test		Post test	
		f	%	f	%
1.	Low stress	0	0	29	58
2.	Moderate stress	23	46.00	21	42
3.	High stress	27	54.00	0	0

Table II: Comparison of mean, standard deviation, and paired 't' test value of pre-test and post-test level of stress among old age people. n=50

S.No.	Variables	Mean	SD	Paired 't' test	Table value
1.	Pretest	21.78	4.19	29.62*	1.68
2.	Posttest	10.48	2.41		

*significant at $p<0.05$

Discussion

The aim of the study was to assess the effectiveness of guided imagery on level of stress among old age people. A review of related literature enabled the researcher to develop the conceptual framework and methodology for the study. The conceptual framework adopted by King's goal attainment theory. Quantitative research approach was used; pre experimental one group pre-test post-test design was adopted to evaluate the effectiveness of guided imagery on level of stress among old age people. The study was conducted in rojavanam old age home. Purposive sampling technique was used to select 50 old age people. Data collection was done by using demographic data perceived stress scale. Guided imagery was given to old age people who were low stress, moderate and high stress. Post-test was done. The data gathered were analysed by descriptive and inferential statistics method and interpretation were done on the basis of the objectives of the study. The level of significance was assessed at $p<0.05$ to test the hypothesis. The pre test mean score among old age people was 21.78 with standard deviation 4.19 and in the post test mean score was 10.48 with standard deviation 2.41. The paired 't' value was 29.62* which is significant at $p\leq0.05$. It shows that Guided Imagery was effective in reducing the level of stress. Hence the research hypotheses (H_1) is accepted. The calculated value of selected demographic variables such as age, sex, religion, education, previous income, present income, previous type of family, marital status, numbers of children, duration of stay at old age home, and reason for joining old age home is greater than the table value. Hence, the research hypothesis (H2) is accepted.

Conclusion

The study concluded that guided imagery therapy was very effective in reducing the level of stress among elderly peoples.

Acknowledgment: I thank god almighty for all wisdom, strength and guidance throughout the study. My respectable gratitude to Dr. A. Reena Evency, Principal, Dr. G. Feby, vice principal. Prof. Mrs. P.S. Medonashajini HOD, Mental Health Nursing Department in St.xavier's catholic college of nursing, Chunkankadai. My heartful thanks to my beloved parents, and my wife for their constant encouragement and support for this study.

Conflict of Interest: There was no conflict of interest.

Source of Fund: Self funded

Ethical Clearance: The proposed study was conducted after the approval of the dissertation committee of st. Xavier's catholic college of nursing. Permission was obtained from Administrator of both hospitals. Oral consent was obtained from each participants before starting the data collection. Assurance was given to the study participants regarding the confidentiality of the data collection.

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Effectiveness of Leg Ergometric Exercise on Level of Fatigue among Patients with Chronic Kidney Disease Undergoing Haemodialysis

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Abstract

The study was to evaluate the effectiveness of leg ergometric exercise on level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis. Quasi experimental non randomized control group design was utilized to perform the study. The samples were selected by purposive sampling technique. Data were collected from the patients with Chronic Kidney Disease undergoing Haemodialysis who fulfilled the inclusion criteria. The tool used in this study consists of demographic data and modified FACIT (Functional Assessment of Chronic Illness Therapy) scale. The findings revealed that unpaired "t" test value was 5.60, which was significant at $p<0.05$. It shows that leg ergometric exercise is effective in reducing the level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis. There was a significant association between age and duration of illness with level of fatigue. The study concluded that providing leg ergometric exercise was very effective in reducing the level of fatigue among patients with chronic kidney disease undergoing haemodialysis.

Keywords: *Effectiveness, Leg Ergometric Exercise, Level of Fatigue, Chronic Kidney Disease, Haemodialysis.*

Introduction

Kidney is one among the vital organs and its main function is removing the waste products and excess water from the blood. The kidney purifies about 200 litres of blood and also has the substantial function of producing two litres of urine everyday[1]. Many adults have unhealthy diet pattern, lack of physical activity, substance abuse, unprotected sexual activity and unsafe driving. The current generation of adults are obese and more vulnerable to many illness. Chronic kidney disease involves progressive, irreversible loss of kidney function. It is defined as either the presence of kidney damage or GFR <60ml/min for 3 months or larger. (Normal GFR is about 125ml/min and is reflected by urine creatinine clearance measurements)[2]. Dialysis is a technique in which the metabolic waste move from the blood into a dialysis solution (dialysis) through a semipermeable membrane, an artificial membrane, usually made of cellulose – based or synthetic materials, which stays in contact with the patients blood in haemodialysis and helps to correct the imbalances between fluid and electrolytes and removes the waste products from the blood[7]. Fatigue is one of the most common and frequent complaint of haemodialysis patients, where documentation of fatigue is looked upon as anegative symptom, on patients diagnosed with End Stage Renal Disease[6]. Ergometric exercise is considered as an simple physical exercise, safe and effective in clinical practice modality among patients undergoing haemodialysis. Ergometric exercise helps to decrease the level of fatigue and increase the activities of daily living[10].

Statement of the Problem: A quasi experimental study to evaluate the effectiveness of leg ergometric exercise on level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in selected hospitals at Kanyakumari district.

Objectives:

- To assess the pre test and the post test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in study group and control group.
- To evaluate the effectiveness of leg ergometric exercise on level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in study group and control group.
- To associate the pre test level of fatigue on leg ergometric exercise among patients with Chronic Kidney Disease undergoing Haemodialysis with their selected demographic and clinical variables in study group and control group.

Hypotheses

H_1 - There is a significant difference between the pre test and post test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in study group and control group.

H_2 - There is a significant difference between the post test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in study group and control group.

H_3- There is a significant association between pre-test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis with their selected demographic and clinical variables in study group and control group.

Research Methodology

Research approach: The researcher utilized Quantitative research approach.

Research design: Quasi experimental non randomized control group design was utilized to perform the study

Research setting: The study was conducted at 2 hospitals, Kanyakumari District.

Population: Patients with Chronic Kidney Disease undergoing Haemodialysis.

Sample: Patients with Chronic Kidney Disease undergoing Haemodialysis at the age group of 18-60years.

Sample size: 60 samples were selected for this study. 30 samples were in study group and 30 samples were in control group.

Sample technique: Purposive sampling technique.

Description of Tool: The tool used in this study consists of two parts.

Part-I: In this part, structured questionnaire was used to collect the demographic and clinical variables. The demographic variables consist of age, gender, religion, marital status, occupation, hours of working, residence, educational status, family income, type of diet and clinical variables consist of number of haemodialysis per week, duration of illness and associated illness.

Part-II: This part of the tool consists of Modified FACIT (Functional Assessment Of Chronic Illness Therapy)scale to assess the level of fatigue.

Table 1: The scoring was categorized as follows,

S.No.	Score	Level of Fatigue
1.	>30	Severe fatigue
2.	≤30	Better quality of life

Method of data collection:

Phase 1 Selection of patients with Chronic Kidney Disease undergoing Haemodialysis: After obtaining formal permission from the Principal of St.Xavier's Catholic College of Nursing, Chunkankadai and Administrator of both hospitals, participants were selected based on the needed criteria. The researcher obtained the oral consent from each patient with Chronic Kidney Disease undergoing Haemodialysis and proceeded with the data collection.

Phase 2 Pre test: The demographic data was collected from the selected participants and modified FACIT scale was used to assess the level of fatigue.

Phase 3 Intervention: The researcher explained the importance of leg ergometric exercise and demonstrated to the study group.

All patients were verbally encouraged and motivated at the onset of dialysis session regarding the exercise program, consisting of warm up (flexion, extension of the knee, and ankle), biking on the leg ergometer and cooling down (stretching).

The total length of exercise program was performed for 40 minutes divided as five minutes before the session of haemodialysis and thirty five minutes during the haemodialysis session.

Phase IV Post test: The post test was conducted on the following 4th week with modified FACIT scale.

Results

Table II: Comparison of mean, standard deviation and unpaired "t" test on post test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis in study group and control group. N=60

Variables	Group	Mean	SD	Unpaired "t" test
Level of fatigue	Study group n=30	21.83	6.06	5.60*
	Control group n=30	29.56	5.21	

*Significant at p≤0.05

Table III: Comparison of mean, standard deviation and unpaired "t" test on post test level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis once, twice and thrice a week in study group and control group. N=60

S.No.	Number of Haemodialysis/week	Study Group		Control Group		df	Unpaired "t" test value
		Mean	SD	Mean	SD		
1.	Once	15.33	2.30	29.33	4.72	4	4.66*
2.	Twice	22.76	6.44	29.42	4.99	40	3.85*
3.	Thrice	21.83	4.01	30.16	6.96	10	4.60*

*Significant at p≤0.05

Discussion

The aim of the study was done to evaluate the effectiveness of Leg Ergometric Exercise on level of fatigue among patients with Chronic Kidney Disease undergoing Haemodialysis. Table II shows, In study group the mean score was 21.83 with the standard deviation 6.06. In control group the mean score was 29.56 and the standard deviation was 5.21. The estimated unpaired "t" test value was 5.60, which was significant at p≤0.05. It shows that leg ergometric exercise was effective in reducing the level of fatigue in study group patients with Chronic Kidney Disease undergoing Haemodialysis. Table III shows, In study group the mean score was 15.33 with the standard deviation 2.30 and in control group the mean score was 29.33 with the standard deviation 4.72 for patients undergoing haemodialysis once a week. The estimated unpaired"t" test value for once in a week was 4.66, which was significant at p≤0.05. The mean score of study group was 22.76 with the standard deviation 6.44 and in control group, the mean score was 29.42 with the standard deviation 4.99 for the patients undergoing haemodialysis twice in a week. The estimated unpaired"t" test value for twice in a week was 3.85, which was significant at p≤0.05. The mean score of study group was 21.83 with the standard deviation 4.01 and in control group the mean score was 6.96 with the standard deviation 10 for the patient undergoing haemodialysis thrice in a week. The estimated unpaired"t" test value for thrice in a week was 4.60, which was significant at p≤0.05. The association between the level of fatigue among patients with chronic kidney disease undergoing haemodialysis with selected demographic and clinical variables such as gender, religion, marital status, occupation, hours of working, residence, educational status, family income, type of diet, number of haemodialysis/week and associated illness indicated no significant association. Age and

duration of illness showed a significant association with level of fatigue.

Conclusion

The study concluded that leg ergometric exercise was very effective in reducing the level of fatigue among patients with chronic kidney disease undergoing haemodialysis.

Acknowledgement: I thank God almighty for all wisdom, strength and guidance throughout the study. My respectable gratitude to Dr.A. Reena Evency., Principal, Dr. G.Feby., Vice Principal, Prof. Mrs. C. Margret Nisha., HOD, Medical Surgical Nursing Department in St.Xavier's catholic college of nursing, Chunkankadai. My heartful thanks to my beloved parents, sister and my lovable husband for their constant encouragement and support for this study.

Conflict of Interest: There was no conflict of interest.

Source of Fund: Self funded

Ethical Clearance: The proposed study was conducted after the approval of the dissertation committee of St.Xavier's Catholic College of Nursing. Permission was obtained from Administrator of both hospitals. Oral consent was obtained from each participants before starting the data collection. Assurance was given to the study participants regarding the confidentiality of the data collected.

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Knowledge and Frequency of Experience of Workplace Incivility among the Staff Nurses

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Abstract

Now a day's health care setting shows increase in incidences of workplace incivility. Workplace incivility has a greater impact on quality of nursing care by causing stress and dissatisfaction of job among the staff nurses. The present study was conducted to assess the knowledge and frequency of experience of workplace incivility among the staff nurses. Quantitative cross-sectional descriptive survey approach was used to conduct the present study. A total of 34 staff nurses were selected by convenient sampling technique from the wards and ICU of selected Multi-speciality hospital. Structured self- administered knowledge questionnaire was used to collect the data regarding knowledge and frequency of experience of workplace incivility. Findings of the study showed that mean age of the participants was 32 years. Majority (91%) were females and they studied General Nursing and Midwifery. Majority (76%) of the participants had up to 15 years of working experience and 44% of them were temporary employees. Almost 56% of them were working 8 hours per day. Assessment of knowledge regarding workplace incivility revealed that the majority (82%) of the staff nurses had inadequate knowledge regarding workplace incivility and majority (77%) experienced incivility in their workplace.

Keywords: *Workplace incivility, staff nurse, knowledge, experience.*

Introduction

Nurses are the primary member of the health care team in a hospital setting. Nurses work round the clock to ensure the quality of care and safety of the patients. This may be possible if they live in a healthy and conducive working environment. Advancement in science and technology created a competitive and stressful clinical environment which has also encourages the growth of abusive behaviour among the staff nurses. Workplace incivility is a milder, more nascent form of workplace aggression.[1] Anderson and Pearson defined the workplace incivility as "low-intensity deviant behaviour with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviours are characteristically rude and discourteous, displaying lack of regard for others."[2] Workplace incivility is becoming a formidable force that is threatening the both physical and mental well-being of staff nurses.

At individual levels, a strong link has appeared between healthcare professionals' behaviour, job performance, and patient safety.[3] A study on impact of workplace incivility (WPI) on staff nurses related to cost and productivity was conducted among 659 staff nurses using Nursing Incivility Scale and Work Limitation Questionnaire. Results of the study showed that 85% experienced workplace incivility in the past one year. It also revealed that nurses working in healthy work environment report lower workplace incivility scores compared with nurses working in the standard work environment (P G .001), and scores varied between

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types of unit they were working. Nurses' perception of their manager's ability to handle WPI was negatively associated with WPI scores (P G .001).[4]

Background of the Study: Review of literature shows that the incidence of workplace incivility, to be ranging between 11 to 99%.[5-8] The incidence of workplace incivility may be evident as a tip of iceberg but its impact on mental health of the nurses is huge. "Many people experience incivility, but they choose not to speak, because they need the job or worry about retribution," stated Dr. Wang. Uncivil acts of workplace incivility, also termed as micro aggressions, have been cited as a major cause of employee turnover, poor workplace climate and job dissatisfaction.[1] Johnson and colleagues stated that experiencing such rude behaviour reduces employees' self-control and leads them to act in a similar uncivil manner.[5] Consequences of repeated exposure to workplace incivility was well expressed in incivility spiral as started from thoughtless act and it may lead to physical threat.[2]

The sequence of workplace violence can be viewed from low-level nonphysical workplace violence to physical violence.[9] Workplace is flourished with workplace violence; however the more insidious forms of workplace violence, such as workplace incivility (WPI), can have long-lasting effects in an organization.[2] It is very difficult for some of the employee to identify an acceptable behaviour from the unacceptable behaviour of workplace incivility because of lack of knowledge and very limited study available regarding knowledge of staff nurses regarding workplace incivility. Hence the researcher is interested to assess the knowledge and of frequency of workplace incivility among the staff nurses.

Objectives of the Study: To assess the knowledge regarding workplace incivility among the staff nurses.

To findoutthe frequency of experience of workplace incivility among the staff nurses.

Methodology

Formal permission was obtained from the ethical committee and selected setting.

Research Design: Cross- sectional quantitative descriptive research design was adopted to conduct the present study.

Study Population: Using non-probability purposive sampling technique 34 registered nurses, having minimum one year of experience and working in the staff nurse's cadre at selected setting were included in the study.

Research Tool: Validated structured self-administered knowledge questionnaire was used to collect the data. The developed tool consisted of two sections, socio demographic variables and structured knowledge questionnaire. Socio demographic variables included age, education, experience, hours of work per day,type of employment and category of employment. Test retest method was used to test the reliability of the structured knowledge questionnaire. It was r = 0.9. Validity index of the knowledge questionnaire was 0.9. Structured knowledge questionnaire consisted of 20 multiple choice questions which include meaning, causes, effect, prevention and management of workplace incivility.

It also assessed one item regarding frequency of experience of workplace incivility, gender and types of the perpetrator, and how much nurses worried about the prevalence of workplace incivility.

Method of data Collection: Formal permission was obtained from the selected setting and ethical committee. Explanation regarding the purpose of the study and questionnaire was given to the subjects. Once obtaining the written consent the questionnaire was distributed and they were given 45 minutes to fill the questionnaire. Confidentiality and anonymity were maintained throughout the study.

Score Key: Correct response was given score of one and incorrect answers was awarded zero. The maximum score for the knowledge questionnaire was 20 with the minimum possible score being zero.

Data management and analysis: The collected data was analysed using SPSS for Windows 23 and presented below.

Results

The survey was completed by 34 staff nurses. Their characteristics were shown in table 1.

Table 1: Characteristics of staff nurses (n = 34)

Sl.No.	Socio demographic variables		Frequency (f)	Percentage (%)
1	Age in years	20-35	24	70
		36- 50	7	21
		>50	3	9
2	Gender	Male	3	9
		Female	31	91
3	Educational level	GNM	31	91
		B.Sc	2	6
		PcB.Sc	1	3
4	Work experience	1- 15 years	26	76
		16- 30 years	5	15
		>30 Years	3	9
5	Type of employment	Permanent	12	35
		Temporary	15	44
		Contract	7	21
6	Working Hours / Day	6	12	35
		7	3	9
		8	19	56

Table 1 depicts the frequency and percentage distribution of socio demographic characteristics of the staff nurses. Majority (70%) of the staff nurses were aged between 20 – 35 years, 21% of them belonged to 36 – 50 years of age group and only 9% were aged above 50 years. The mean age group of the staff nurses was 32 years. Majority (91%) of them were females. Majority (91%) of the staff nurses undergone General Nursing and Midwifery (GNM) course and 9% of the staff nurses were graduates. Experiences of the staff nurses shows that majority (76%) of them had upto 15 years of experience, 15% of the participants had 16 – 30 years of experience and 9% of the staff nurses had more than 30 years of experience. Regarding the type of employment, majority (44%) were working as temporary staffs, 35% were permanent staffs and remaining 21% of the staff nurses were employed on contract basis. Majority (56%) of the staff nurses were working for eight hours per day.

Table 2: Staff nurses' knowledge regarding workplace incivility (n = 34)

Sl.No.	Knowledge Scores	Frequency (f)	Percentage (%)
1	Inadequate knowledge (<= 9)	28	82
2	Moderately Adequate knowledge (10 – 15)	6	18
3	Adequate knowledge (> 15)	-	-

Maximum score = 20 Minimum score = 0

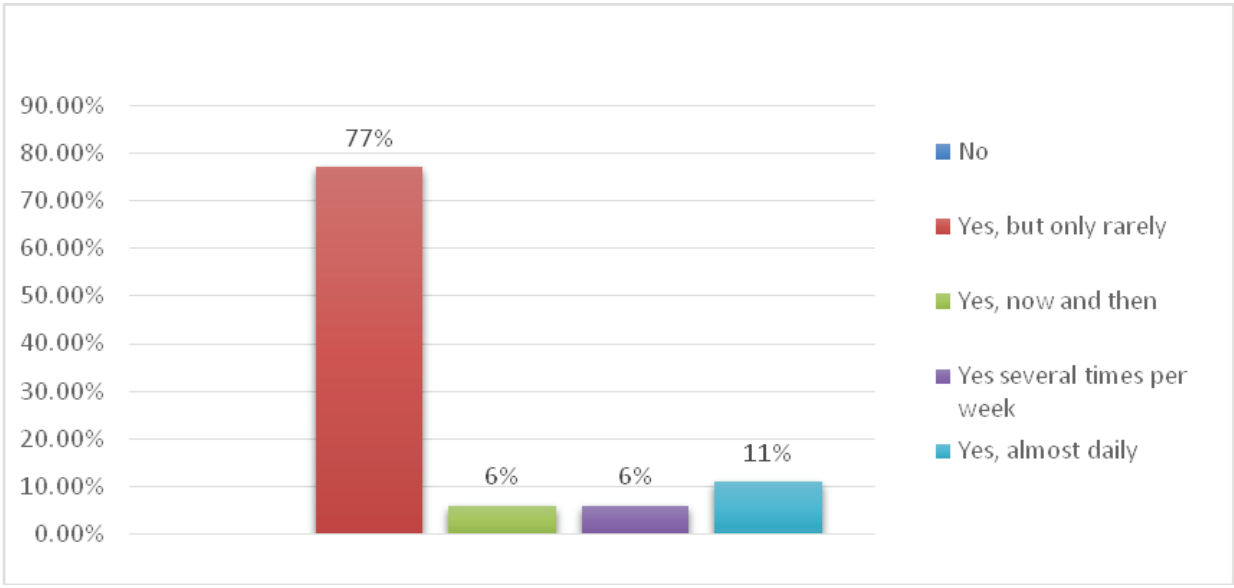

Fig. 1: Frequency of experience of workplace incivility by staff nurses

Response to the knowledge questions by the staff nurses were depicted in table 2. It shows that majority (82%) of the subjects had inadequate knowledge and 16% of the staff nurses had moderately adequate knowledge regarding workplace incivility. It also shows that none of the staff nurses had adequate knowledge regarding the workplace incivility. The mean knowledge score obtained was 7.

Figure 1 represents that 77% of the staff nurses experienced workplace incivility rarely and 6% of them experienced several times per week,now and then. There were 11% of them experience incivility almost daily at their workplace.

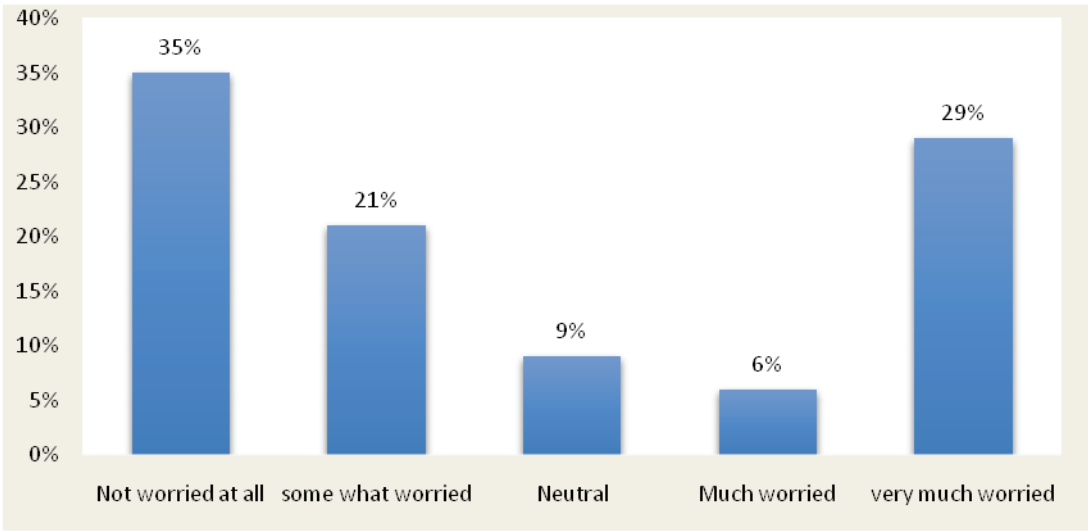

Fig. 2: Staff nurses' worries about experience of workplace incivility

Figure 2 represent that there were 35% of the staff nurses not worried about the prevalence of incivility and 29% of the staff nurses very much worried about the prevalence of incivility in their workplace.

Discussion

The present study identified the knowledge, frequency of experience and worries of the staff nurses regarding workplace incivility. The result of the study showed that majority (82%) of the staff nurses lack knowledge about workplace incivility. Regarding the different aspects of workplace incivility, 38% of the staff nurses knew the meaning of workplace incivility and only 26% of them had knowledge regarding the causes of workplace incivility. Among 34 respondents, 39% of the staff nurses understand the impact of workplace incivility and 40% of the staff nurses know the strategies to overcome the workplace incivility. Only 42% of the staff nurses learned prevention of incivility in their workplace. The response to workplace incivility differs from one staff nurse to another, depends upon how much they aware and perceive the act of incivility. Abdollahzadeh F and his colleague stated that good knowledge regarding workplace incivility is necessary for the staff nurses to prevent incivility at workplace.[10]

The present study also found that 77% of the staff nurses experienced workplace incivility out of which 11% experienced it almost daily. This shows the higher prevalence of workplace incivility in the selected health care settings. A study conducted on incidence and impact incivility in the workplace by Cortina et al reported that majority (71%) of the employees' experience workplace incivility.[11] An another study conducted by Heydari A, Mojtaba R, Mostafa R showed that 24.6% of nurses had been victims of incivility by their matrons for one or two instances. whereas, 7.8% of nurses reported one or two instances of incivility per month. More than 66.5% of nurses had not seen any incivility from their matrons. Although the frequency is reported to be one or two times, nonetheless, such behaviours do exist between nurses and matrons.[13] Astudy conducted in India with an objective of creating awareness on workplace incivility among restaurant employee's shows that, 32.86 percent reported that their employers and co-workers directed rude and derogatory remarks to them at least once a week.[14]

In the present study 65% of the staff nurses worried about the prevalence and frequency of experiencing workplace incivility in the working environment. Many of their productive time were spent to find the way to escape from the workplace incivility. This notion was supported by Andersson, L. M., & Pearson, C. M. in his study that the destructive spiral of workplace incivility may be a building block in a negative work environment.[15] Many studies demonstrated that prevalence of workplace incivility is associated with job dissatisfaction and high level of turn over intention.[16-17]

The present study also identified that majority of the perpetrators and victims of workplace incivility were females. Majority of the staff nurses experience incivility from the supervisor, co-nurses and patients. Study by Keashley et al, identified that the supervisor were the perpetrators.[12]

Implication to Nursing:

Nursing Practice: The present study shows the prevalence of workplace incivility irrespective of their area (unit) of work. Nursing administrators has the responsibility to create awareness regarding workplace incivility, understand the consequences and take measures to prevent workplace incivility.

Nursing Education: The present study demonstrated that nurses had poor knowledge regarding workplace incivility. Hence it is the responsibility of nurse educator to organizing workshop, conferences and CNE programme regarding workplace incivility.

Nursing Administration: Nurse administrator has the responsibility to create safe, healthy working environment for the staff nurses so that it will improve the quality of nursing care. It is also her responsibility to develop the systematic reporting system in case of workplace incivility.

Nursing Research: Finding of the study shows that there were limited research studies in India regarding the workplace incivility. Further research is needed to assess the prevalence and severity of workplace incivility in India.

Conclusion

Understanding the construct of workplace incivility and its underlying determinants are necessary for developing effective interventions to stop workplace incivility among the staff nurses. Nurses must be aware about the workplace incivility and the resulting negative consequences in order to change the inappropriate behaviour. Nurse administrator has the responsibility to create awareness and sustain a healthy working environment for the staff nurses in order to keep the staff morale high.

Limitations: The study was carried out in one setting with limited number of staff nurses selected purposefully. Hence the generalizability of the study findings is limited.

Conflict of Interest: None

Financial support and Sponsorship: Self

Ethical Clearance: Study was approved by Ethical committee and written informed consent was obtained from the study participants.

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Investigating Health Information Literacy Assessments and Efforts for Students taking Health Care, Nursing and Medical Courses: An Abbreviated Review of the Extant Literature

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Abstract

Health information literacy is a skill set that is being formally evaluated and included in the curriculum of health care, nursing and medical students. While health information literacy is referenced in many different types of articles, the assessments and interventions related to it vary greatly when considering the academic or public landscape. The aim of this paper is to review and summarize the existing literature related to health information literacy measurement tools and efforts to valuate and or improve the skill sets of students in the institutional environment. The review will also consider how health information literacy is defined and evaluated in the academic environment in comparison to how it is defined and measured when considering the general public.

Keywords: *Information Literacy, Health Information Literacy, Health Care Training, Nursing Training, Medical Training.*

Introduction

Health information literacy is described by the Medical Library Association as: "the set of abilities needed to: recognize a health information need; identify likely information sources and use them to retrieve relevant information; assess the quality of the information and its applicability to a specific situation; analyze, understand and use the information to make good health decisions"[1]. Health information literacy is an important concept with ramifications for health providers, health educators and the general public, which should have certain skill sets that make them health information literate, particularly since many individuals (over 55%) use internet searching as their main source for health information[2]. Internet search results can lead to sources that are lacking in credibility which could put the information seeker at risk[2]. Health information literacy is at times used interchangeably with "health literacy". When considering the benefits of health information literacy the aims are not always entirely the same:

"[i]n concrete terms, health literacy [for the public] maybe involve, e.g., understanding reasons for medical examinations or surgery or grasping the meaning of information about consent, prevention, diagnosis and treatment. It also includes reading and understanding the text on medicine labels, appointment slips, medical instructions, insurance forms and other kinds of health related information"[3].

Whereas assessment tools in the institutional landscape generally evaluate the following: "t]hese competencies include evaluation of the quality of health information resources, obtaining health information

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documents on narrow topics by conducting advanced searches, judging the trustworthiness of health information sources, and understanding the advantages and disadvantages of different media"[2]. In the literature, the primary group, "the public", has a greater focus on literacy and computer skills, practical applications and internet searches, while the secondary group, "students", seems to have a greater emphasis on advanced literature searches using databases. It is worth mentioning that students may at times be part of the "general public" population as it is considered; however, we refer to these groups separately here. This article will primarily consider health information literacy as it relates to the student population, though, it will reference the general public, since the goal for students extends further than their educational success and also relates to their ability to help the public as practitioners.

Methodology

The literature review section of this paper started with a Google Scholar search for the key word terms:"health information literacy" which returned 2,270 results, and a keyword search for "health information literacy" using the University of Wisconsin-Milwaukee (UWM) Library database which returned 673 results; these databases were chosen due to accessibility. The first search returned a large amount of materials and after briefly scanning, it was clear that not all of the materials related directly to the subject matter. A new search was completed in Google Scholar using: allintitle: "*health information literacy*", to attempt to locate materials that were substantively related the subject matter; this returned 248 results. In the UWM library catalog, the advanced search feature was used to limit the results to: title>contains words> "health information literacy"; this returned 61 results. The author reviewed each article from the second-string attempts to determine if they met the inclusion criteria, in this case, if they were related to health information literacy assessments and modules in the institutional environment; for the Google Scholar articles n=44 met the inclusion criteria, and for the UWM libraries n=15, met the inclusion criteria, however, n=11 were duplications from Google Scholar. Also, articles that were not available in English n=2 were not be included in the review. Ultimately n=46 records were used for the analysis process. The author also read and included data from studies related to health information literacy assessment of the general public, though, not systematically, for the purpose of comparison and evaluating what future health care providers should be expected to understand to help patients. Additional materials might have been discovered and reviewed with greater access to different databases or might have been discovered using different search terms and inclusion/ exclusion criteria.

Results

In the literature, the majority of the articles included a statement that emphasized the importance of information literacy skills in today's information environment, noting a deluge of information, a diversity of formats, and different skill sets needed to navigate the information landscape[4]. The majority of the studies also defined "information literacy", "health information literacy", and or "health literacy". Many studies insisted that health information literacy skills were needed by health care professionals due to a phrase such as the following: "[h]ealth care professionals today must incorporate scientific evidence into clinical decision making and for good quality of care. Strong information literacy skills are essential to attain this best practice"[5]. Another article indicated that health care and medical professionals are encouraged to use research evidence, or evidence-based practice, when making clinical decisions and helping patients and their families, a skill set largely associated as an aim of health information literacy training[6]. Health care professionals help by providing information and materials that may lead to decision making regarding care and therapies by patients[6]. This support at times requires bridging the gap between medical materials not written for the general public, and also helping patients navigate the information environment to find reliable materials[6]. While there is a growing amount of health information literacy related literature and assessments demonstrating that these skill sets are being measured and integrated into the curriculum at many educational sites, many studies still report low levels of health information literacy among students[7,8,2]. These studies also indicate that students have inflated views of their knowledge and skill sets related to health information literacy[7,8,2]. Also, discussed is that the self-report data from students is not very useful, since students largely report their skills as very good, or excellent, which in several studies has not translated to their actual health information literacy assessment data[9,2,10,11]. An article that described a tool for assessing health information literacy also noted that: "[g]enerally, subjective or "perception-based" assessments of abilities often do not corre-late with "objective" or "performance-based" indicators of the respective abilities, i.e. with the results

of achievement or knowledge tests"[12]. Studies indicate that given the limited nature of the skill sets of many students, and the simultaneous importance of students understanding how to use reliable health information materials for coursework and in practice, the skillsets of the students should be characterized, and interventions made based on that data in an effort to improve the relevance of the health information literacy instruction[13]. An investigation using an assessment tool to measure scores among several groups of students showed student limitations in the ability to discriminate between reliable and unreliable materials, limitations in the areas of understanding if websites were reputable, in narrowing searches by using multiple search categories,and lack of skill in knowing how to use Boolean operators[2]. While many studies included health information literacy assessments, few included a summative testing instrument, helping demonstrate the knowledge gained after health information literacy instruction and modules[5]. Ultimately, the literature suggests that the importance of health information literacy training has been demonstrated by multiple investigations, however, there is still a gap in the research related to what type of instruction is best for assessing and addressing health information literacy limitations[40]. Health information literacy is further considered an important area of investigation because health literacy is a factor impacting the general public's well-being[15], and since low health information literacy levels are associated with both poor health and increasing health care expenditures[16]. The literature suggested that health information literacy training should be integrated throughout the curriculum and called upon all stakeholders contributing to health-related information, to work together to make sure all (including students and future health care professionals and the public) have the ability to access and understand health related materials[17,18]. The literature showed a marked difference between the health information literacy assessments used among the "student" population and the general public. This work suggests that an area of additional investigation may be, how, and if, the institutional information literacy modules and training prepare students to work with the general public, or if they are more related to the academic landscape, while the general health information literacy assessments and potential support needed by persons with low health information literacy in particular, are more related to areas such as basic reading, literacy skills, and numeracy[19,12]. In short, more research is required to understand the big picture results that seem to be hinted at throughout the literature, which is qualified here as whether the health information literacy training of future health professionals translates into improving the health care results for patients, and also whether the skillsets are relevant to clinical practice[20]. This gap between health information literacy in the institutional environment, and among the public, is thus a crucial point to investigate because besides student achievement in courses, the general aim of these efforts is directly related to real world patient-care.

Discussion

While health information literacyis described in different ways in the general scientific literature, there are definite areas of intersectionality and similarity[3]. However, there are very striking differences in the types of measurements used to evaluate health information literacy as a skillset amongst different populations, such as the "general public" and the "student". Having the skills needed for the identification, understanding and utilization of information to make health care decisions is a common part of the definition seen in the general literature related to health information literacy among different target audiences. However, going further when referring to the public: "[t]he skills mentioned provide the basis for identifying persons' health literacy, and persons and population groups with low health literacy are identified by assessing the computation and reading comprehension needed to understand health concepts or terms as they appear in patient information, medicine labels, and prescriptions, informed consent forms et cetera"[3]. In addition to this, studies focusing on functional skills, like reading, writing and numerical knowledge found that: "[o]n the grounds of this polarized approach and this form of assessment, it is claimed that immigrants, older people, prisoners or persons with few years of school are more likely to have low health literacy"[3]. Whereas in health information literacy assessments in the institutional environment: "[s]tudents demonstrate their navigation skills by setting up basic and advanced searches,"[2] and "[i]n addition, students evaluate the quality of research publications, make judgements about website trustworthiness, and detect plagiarism"[2]. The literature summary suggests that a gap exists between the two landscapes, as patients may require help that is not necessarily related to the advanced searching techniques, use of peer-reviewed materials for assignments and other coursework, largely emphasized and required in the institutional environmentas described and documented in the research. The nexus between

these two spheres may need to be further considered in relationship to training that will give students in these fields the proficiencies needed to deal with materials from the perspective of the health care professional using evidence-based care and the patient.

Conclusion

Health information literacy can at times be a relative term in the scientific literature, with assessments evaluating slightly or largely different competencies depending on the target population. While health care, nursing and medical students may be required to have greater knowledge of how to query databases for assignments, and demonstrate information literacy with regard to source materials, it seems largely assumed that basic literacy (reading and comprehension) skills and basic computer skills are already mastered. It also seems largely assumed that students taking these assessments will have the ability to guide the general public in the areas relevant to them: including information, prescriptions, diagnosis, and care related to medical visits and conditions.It is important that distinctions are made regarding the types of assessments used to evaluate the skill sets, and to note that in many cases the measured skills are somewhat different depending on the target audience. Further investigations are encouraged to determine whether the information literacy skills of the institutional environment correlate to the skills needed in the clinical environment where the types of information provided to patients and the supports needed may shed light on an intermediary space between the two.

Ethical Clearance: Hereby, I, Kimberly N. Howard consciously verify that for this manuscript "Investigating the Health Information Literacy Knowledge of Health Care Students as an Essential Next Step in Medical and Health Professional Training" the following is fulfilled: 1) This material is the authors' own original work; it has not been previously published elsewhere. 2) The paper is not currently being considered for publication elsewhere. 3) The paper reflects the authors' own research and analysis in a truthful and complete manner. 4) The paper properly credits the meaningful contributions of co-authors and co-researchers. 5) The results are appropriately placed in the context of prior and existing research. 6) All sources used are properly disclosed (correct citation). Literally copying of text must be indicated as such by using quotation marks and giving proper reference. 7) All authors have been personally and actively involved in substantial work leading to the paper, and will take public responsibility for its content.

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Mental Health: Breakdowns in Health Care Service throughout the Continuum of Patient Care and Recommendations for the Future

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Abstract

This phenomonelogical work integrates the relevant literature along with a lived experience of mental healthcare. The article considers the role of consumers as participants in healthcare services and as contributors to the knowledge base. The article highlights the potential for phenomonelogical studies to be beneficial to the literature, since they can be analyzed to distinguish what, if any, similar areas exist, and as a result, what areas might be improved.

Keywords: *Mental Health Care, Health Care, Nursing, Nursing Training, Medical Ethics, Evidence-Based Practice.*

Introduction

According to the American Psychiatric Association, mental illnesses can be described in the following way: "Mental illnesses are health conditions involving changes in emotion, thinking or behavior (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities"[1]. In addition to providing a definition of mental illness, qualifying statistics are also shared to characterize and provide further insight regarding the prevalence of mental illness in the US: "Nearly one in five (19 percent) U.S. adults experience some form of mental illness. One in 21 (4.1) percent has a serious mental illness. One in 12 percent (8.5) percent has a diagnosable substance use disorder"[1]. Still, mental illness is described as treatable, and the majority of people impacted by it, as able to function in daily activities; however, a percentage of people experiencing a mental health crisis may need to be hospitalized[1]. This paper will consider a lived experience of mental health care provided in a public hospital setting to hopefully add to the understanding of mental health care treatment and to progress the quality of care. This result can be qualified through the reading of the comparative literature. This article will take a phenomonelogical approach: "Because phenomonelogical studies are concerned with the life world of actual people who have undergone a specific experience, they are able to illuminate our understanding of that experience as it occurs in the real world"[2]. Lastly, mental health care should definitely be analyzed as mental health can impact more than the person experiencing a mental illness, but the community as whole, including public safety, and also have multifold impact on public funding[3,4]. Ultimately, successful and effective treatment of the mentally ill, is an investment that could be considered beneficial to the entire society, and conversely, the failure or breakdown of such interventions can also be considered a vital matter of collective concern as well[3,4].

The Lived Experience: Before discussing the lived experience it could be helpful to provide additional details regarding how and why such articles are written. While reasoning can be diverse, the following information will provide a rather general context assuming that every reader may not be familiar with this variety of article. In another article, the author asserts that: "[s]ome literature

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about illness, or about practice, while concerned with particular times, places, and circumstances, offers a truth that transcends those particulars and can be read on several levels"[2], and that: "[r]eading such works often requires self-evaluation and reflection on the part of practitioner"[2]. While this article is not directed towards practitioners specifically, it is written with the goal that it might contribute something of use. For example, a comparative review could illuminate a thread that could be predictable, and perhaps preventable[5].It should also be noted that an experience may be more or less a fluke. Also, the literature could contain bias due to submissions or entries that were provoked by incredibly favorable or incredibly unsatisfactory experiences. Still, people who receive treatment should arguably have a chance to evaluate the service that was provided and contribute to knowledge regarding the subject matter. Unfortunately, at times, the particularities of mental illnesses and the discrimination against this population has served as an excuse why people with this ailment should not be heard[2]. It is helpful to understand the merits, and perhaps limitations, of such a methodology as described by another author: "[t]he phenomonelogical approach cannot stand alone, but excellent practice cannot do without it"[2].

According to researchers, mental illness could be described as a relatively short experience or it could refer to a chronic illness that requires specialty services[2]. The author was diagnosed with a disabling brain disorder that is characterized by disordered thinking. Due to this ailment, the author was hospitalized a total of five times in an inpatient facility; four hospitalizations were with a private non-for-profit provider of mental health care services, and one hospitalization was in a public psychiatric hospital. The last two hospitalizations were due to what the author would assert were misunderstandings between herself and her family regarding her wellbeing and psychological state. This is necessary to disclose and explore because although,"[s]evere mental illness creates a situation in which it is difficult to trust oneself, one's perceptions and the assessment of one's abilities"[5], persons with ailments, at times,can comprehend if they are well or unwell, and compliant with medication; in addition, "[t]here is a fine line to be drawn here. While participants can and do look forward to the future, they can never completely forget the experiences they have had while ill. Indeed, they must not; their efforts to maintain their health actually rest on the knowledge of their illness"[2]. While having a family and support system is important and potentially very helpful to a person struggling with an illness, there can also be complexities in these relationships; in another article: "[p]eople also described their difficulties with being in a dependent role and often controlled by others"[5] and elsewhere, "[s]everal people spoke to the loss of this sense of independence when they became ill. One respondent described getting ill as an infantilization"[5]. Ultimately, this article will more specifically explore the last admission into inpatient treatment at the public institution, which presented the most problems, during a time when the author considered herself to have been fully aware due to not experiencing any symptoms at the time.

I was involuntarily admitted to a public psychiatric facility after family member's expressed concern, although I eventually agreed to go, even though I asserted that I was not experiencing symptoms. At intake, I was advised that I needed to take a medication under my tongue, which, I stated I did not want to take because I had already taken my prescribed medication and was not sure how it would interact with that medication. After refusing the medication, I was grappled by their staff members and forced into a holding room. I advised them when they grappled me that I would simply take the additional medication; their response was it was "too late" and in the holding room I was held down by several people and administered injections in to the arm. I was then taken from the holding room to a unit and into a sterile room with another patient that resembled a jail. I did not feel safe because the person appeared entirely unstable. I was advised that my medication was being changed to something different, though I advised the staff that I had taken multiple medications since being diagnosed and had had the best success with my currently prescribed medication, which I requested be administered in a higher dosage if deemed necessary. I was ignored and told the court would not allow me to leave unless I agreed to have my medication changed and administered by injection at a medical site. I felt this was unnecessary, but eventually agreed because I felt it was directly related to my ability to be discharged. When I received the initial injection while still there, I had a highly negative reaction to the medication causing uncontrollable movements, which I reported to the nurse. I was told that I was making up the uncontrollable movements, and could in fact keep still if I wanted. Eventually, I was provided with a medication that was supposed to counteract the uncontrollable movements.

After a week passed, having been administered the shot, and in spite of the reaction, I was administered an additional dose that was suppose to last for a month this time instead of a week. I was not prescribed anything to help control the uncontrollable movements after discharge. I was given a court case during which time the doctor that was prescribing my medications was supposed to give a statement; the hospital had a person I had never seen before report on his work with me which was incredible because the doctor that had been working with me was of an entirely different race. I stayed in this hospital for four weeks, compared to having stayed approximately one week when admitted to the private hospital, during which time my greatest complaints were perhaps not benefitting from the "coloring" therapy, but always feeling much better after a week and able to return to daily activities and employment. I had never been administered shots or held down at the private institution, and certainly not multiple times. I frequently wondered if the revenue was not a reason for the continued hospitalization 4x the length whilst I was sane and aware,though admittedly withering away in depression caused by my presence there. I continued to have uncontrollable movements after leaving the hospital that increased in severity and resulted in me being admitted four times into the emergency room at an area hospital. Although the severity of the movements decreased with the temporary medication I was provided at the emergency room, during which time I had the appearance of a full seizure, I continued to have uncontrollable movements that never went away, and which were a cause for concern by the general psychiatric nurse whose patient I was after discharge.She did not understand why I was having the movements even a year plus later after my hospitalization. I discovered the following side effect listed for the medication I was injected with during research for this paper: "Risperidone may rarely cause a condition known as tardive dyskinesia. In some cases, this condition may be permanent. Tell your doctor right away if you develop any unusual/uncontrolled movements (especially of the face, lips, mouth, tongue, arms or legs)"[6]. My uncontrollable movements are currently few and far between, but still visibly happen at times, which I immediately try to cover-up, at home and a work,due to self-consciousness and concern that I appear as normal as I can, to avoid being placed back under hospitalization. However, my case seems rather mild in comparison to cases that were in the media regarding the same institution. I read additional reports including negligence and death in custody at the same public facility I was admitted to: "[A patient died after] his third day at the institution — from a blood clot that moved to his lungs, triggered by a broken neck, according to a medical examiner's report. The patient's roommate told investigators that [the patient] repeatedly asked for help the night before he died and complained of being unable to move his legs. Staff didn't believe him and thought he was feigning paralysis, according to testimony during a John Doe investigation in 2013. [The patient's] death at the mental health complex was one of six deaths in the institution that year examined by an independent doctor retained by Disability Rights Wisconsin. The doctor concluded that significant failures in medical care contributed to the deaths of [the patient] and three other patients"[7].

This excerpt from another article captures the experience: "[f]rom the psychosocial perspective, people with mental illness are recovering from many traumatic experiences, in addition to the illness itself. The way the individual is treated in the mental health system causes multiple traumas, as he or she faces negative professional attitudes; insufficient help, programs and professionals that disempower and devaluate the individual; and side effects from psychopharmaceutical treatment"[8].

III. Discussion

Mental health care is a very complex field driven by research, scholarship, clinical trials and various types of investigations and clinical practice that elucidate areas for growth and improvement – much like many different fields. It should be noted that: "[t]hroughout the history of psychiatry there have always been consumer-survivors who have spoken out against their experiences, who have advocated for their rights and for humane treatment for those diagnosed with mental illness"[8]. I would contend that this population is at risk for maltreatment due to the very nature of their illness. In the provision of services there can be experiences that are laden with purposeful or accidental mistakes. Investigations could elucidate predictable issues that participants face in receiving services. I would argue that this article alone cannot do that, but when considered along with the comparative literature, it may provide an avenue for such conclusions[5]. I summarize the major points discussed in this article here: a.) lack of information provided about the medication to be administered during intake, b. lack of personal safety in the unit, c. illegitimate reporting via a medical professional the consumer never interacted with, and d.) poor medication assessment and punitive

medication. Another author referencing lived experience mental health care concluded that: "[t]he data of their experiences creates a map of critical issues and tasks for consumers and case managers that can be used in training and to improve case management services"[5]. The body of literature could reveal certain themes, such as: a gap in the literature, a problem with translation from evidence-based to clinical practice, a problem with particular facilities (public vs. private, or certain locations), reflect the need for consideration regarding how long mental health care professionals have been working in certain units, and how that impacts biases and the level of care – all areas I have seen discussed in extant articles, though not an exhaustive list in terms of the types of considerations that might be provoked. Ultimately, in the literature there is currently a word being used that qualifies the types of people contributing such articles, "prosumers"[8]: "[p]rosumers model a vision of participatory treatment and recovery that includes people with mental illness as full partners and collaborators in their individual treatment and rehabilitation and in the design, delivery, and evaluation of mental health services"[8].

Conclusion

This article provided information on a particular lived experience of mental health care seeking to provide data that could be compared to additional literature with the goal of facilitating improvement to mental health care services; additionally,"[i]n provoking thoughtfulness in practitioners, a phenomenological approach also has the potential to have a significant impact on the experience of those who come to us for help"[2]. Ultimately, phenomenological studies alone are not enough to drive research and interventions[2]; however: "[c]ollaborative efforts between consumers and providers are needed to improve services for critical issues such as relapse preventions (Davidson, 1997)"[5]. In a field as sensitive and important as mental health care, both for the individual and the greater community, it would very unfortunate not to request or utilize such feedback. It would also represent a missed opportunity not to carefully review and clarify the commonalities present in these different report mechanisms, particularly if, matters are elucidated that can be avoided. This kind of additional review including available data and materials from the literature, questionnaires, and various related materials, would be nothing less than worthwhile for all stakeholders involved.

Ethical Clearance: Hereby, I, Kimberly N. Howard consciously verify that for this manuscript "Mental Health: Breakdowns in Health Care Service throughout the Continuum of Patient Care and Recommendations for the Future" the following is fulfilled: 1) This material is the authors' own original work; it has not been previously published elsewhere. 2) The paper is not currently being considered for publication elsewhere. 3) The paper reflects the authors' own research and analysis in a truthful and complete manner. 4) The paper properly credits the meaningful contributions of co-authors and co-researchers. 5) The results are appropriately placed in the context of prior and existing research. 6) All sources used are properly disclosed (correct citation). Literally copying of text must be indicated as such by using quotation marks and giving proper reference. 7) All authors have been personally and actively involved in substantial work leading to the paper, and will take public responsibility for its content.

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Conflicts of Interest: Nil.

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A study to Assess the Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Post Operative Care of Cesarean Mothers among Staff Nurses in Selected Government Hospitals of Haryana

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Abstract

Introduction: The post-operative period demands appropriate guidance from nurse, so by preventive and primitive postoperative care the women can be helped to avoid the post-operative problems and complications, which can help in early recovery.

Objectives:

- To evaluate the pre - post test knowledge of staff nurses working in maternity Hospital regarding post-operative care of caesarean mothers.
- To evaluate the effectiveness of self instructional module on post-operative care of caesarean mothers among staff nurses working in selected hospitals of Haryana.
- To find out association between pre - post test knowledge regarding post operativecare of caesarean section with their selected socio-demographic variables.

Methodology: The study was pre- experimental one group pre- test and post-test design. The sampling technique used for the study was Non-probability convenience sampling technique. Sample consists of 60 staff nurses3 Government hospitals (BheemSen Sacchar Hospital of Panipat),(Nagrik Hospital of Jind), (Nagrik Hospital of Sonipat) Haryana.

Result: There was a good effectiveness of Self instructional module on postoperative care after caesarean section. The researcher also found the association between post – test knowledge and age of the samples. Hence self instructional module is very much effective for staff nurses.

Conclusion: The study concluded that there was a good effectiveness of self instructional module on post operative care after cesarean section.

Keywords: *Evaluate, Effectiveness, Self instructional module, Knowledge, Post operative care, Caesarean mothers.*

Introduction

Cesarean section increases the health risk for mothers and babies as well as the costs of healthcare compared with normal deliveries. Some developed countries have approximately controlled the increase in cesarean section, although the rates may still be high. However, in other developed countries cesarean section rates are still

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increasing[1]. A cesarean section is a surgical procedure in which incisions are made through a woman's abdomen and uterus to deliver her baby. Modern medical improvements and practices have led to an increase in the rate of caesarean births over recent years[2]. Post-partum care after cesarean section is similar to post operative care with exception of palpating the fundus for firmness. During recovery, the mother is encouraged to turn, cough, deep breathing exercise to clear the lungs. Walking stimulates the circulation to avoid formulation of clots and promotes bowel movement[3].

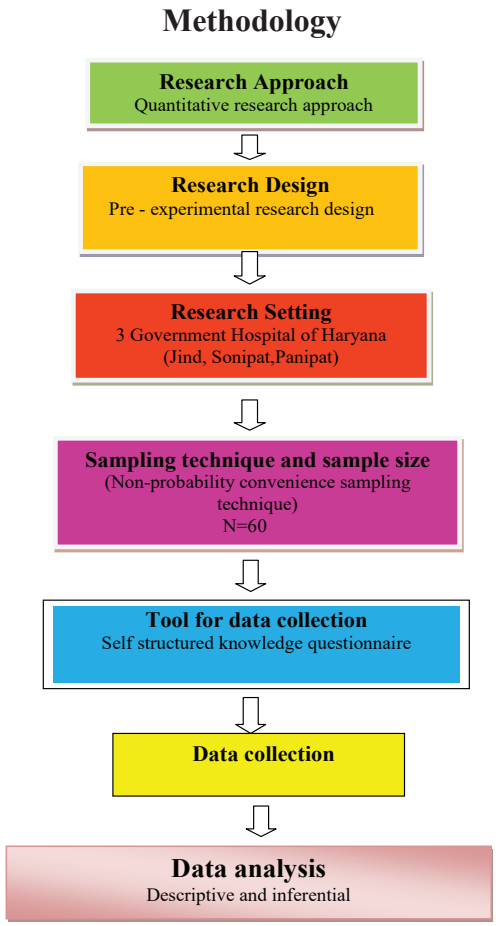
Need for the Study: The maternal mortality rate is highest in the postpartum period, so special consideration needs to be given to the care of the mother. If you are a single or your partner has to return to work shortly after the birth of the child, try to organize a support a support team prior to the birth of your child to help during the postpartum period[4].

A well-organized care system lowers the operative risk of emergency cesarean section even in developing countries. Based on the statistical findings and research reviews the investigator finds the need to educate the staff nurses on post operative care of caesarean mothers and to maintain the health of mother and child to build a healthy society[5].

Problem Statement: A study to assess the effectiveness of self instructional module (SIM) on knowledge regarding post operative care of cesarean mothers among staff Nurses in selected Government Hospitals of Haryana."

Objectives:

1. To evaluate the pre - post test knowledge of staff nurses working in maternity Hospital regarding post operative care of cesarean mothers.
2. To evaluate the effectiveness of self instructional module on post operative care of cesarean mothers among staff nurses working in selected Hospitals of Haryana.
3. To find out association between pre - post test knowledge regarding post operative care of cesarean section with their selected socio-demographic variables.



Schematic Representation of Research Methodology

Data Analysis & Interpretation: The purpose of the analysis is to reduce data into an intelligible and interpretable form so that the relations of research problems can be studied and tested.

Table 1: Showing frequency and percentage distribution of sample characteristics (n=60)

S.No.	Variables	Options	Percentage	Frequency
1.	Age in Years	20-30 years	23	14
		31-40 years	75	45
		41-50 years	2	1

S.No.	Variables	Options	Percentage	Frequency
2.	Marital Status	Married	97	58
		Unmarried	3	2
		Divorce	0	0
		Separated	0	0
		Widow	0	0
3.	Professional Qualification	GNM	60	36
		B.Sc. Nursing	0	0
		Post Basic	25	15
		Msc.Nursing	15	9
4.	Clinical Experiences in years	0-5years	30	18
		6-10years	35	21
		11-15years	35	21
5.	Maternity Ward Experiences in years	0-2years	0	0
		3-5years	82	49
		6-8years	18	11

Table II: Frequency and Percentage Distribution of Samples According to Pre – test knowledge level of staff nurses regarding post operative care of cesarean mothers (n = 60)

S.No.	Pre – Test Level of Knowledge	Frequency	Percentage
1.	Inadequate	0	0
2.	Moderate	29	48.3
3.	Adequate	31	51.7

With regard to pre – test knowledge on post – operative care of cesarean section a little above one half of the samples 31 (51.7%) had adequate knowledge and less than one – half of the samples 29 (48.3%) had moderate knowledge and none of the samples had inadequate knowledge.

Table III: Frequency and Percentage Distribution of Samples According to Post – test knowledge level of staff nurses regarding post operative care of cesarean mothers (n = 60)

S.No.	Post–Test Level of Knowledge	Frequency	Percentage
1.	Inadequate	0	0
2.	Moderate	1	1.7
3.	Adequate	59	98.3

In post – test an overwhelming majority of the samples 59 (98.3%) had adequate knowledge regarding post – operative care of caesarean section. Only one sample had moderate level of knowledge and none of the samples had inadequate knowledge.

Table IV: Effectiveness of Self – Instructional Module on postoperative care of cesarean mothers (n = 60)

Tests	Mean	Mean Difference	Standard Deviation	Paired 't' test value	'p' value
Pre - Test	22.35	4.28	1.74	17.579	0.0000
Post - Test	26.63		2.11		

From the above table it was understood there was a significant different in knowledge between pre – test and post – test. So the null hypothesis was rejected and the alternate hypothesis which states there will be an effectiveness of self-instructional module on post operative care of cesarean mothers among staff nurses was accepted.

The researcher also found the association between post – test knowledge and age of the samples. The chi – square value was 6.0 for the degree of freedom 6 at level of significance 0.000. No other demographic variables were statistically associated with pre – test and post – test knowledge.

Discussion

The current study sought to establish the baseline level of knowledge of staff nurses regarding post-operative care of cesarean section. Nurses in this study had a mean pre – test knowledge score of 22.35 (74.50%), the post – test mean value was 26.63 (88.78%) Previously a study had almost similar results showing that pre – test mean score was 4.57 and SD value 1.66 and the mean and SD values after SIM was 8.90 and 2.16 respectivel[6].

In current study there was a statistically significant association between post – test knowledge level with age [($\chi 2 = 6.000$, dof = 2 and TV = 5.991)]. This finding was supported by the study done by Rina Shrestha (2017) a significant association was found between knowledge of staff nurses with demographic variables such as age, religion, marital status, educational qualification, total years experiences, monthly income, and previous sources of informatio[7].

Limitations:

- The limited sample size limits on the generalization of the study findings.
- Long term follow up could not be carried out due to time constraints.
- It is limited only to the staff nurses.
- Sampling technique used in this study is Non-probability convenience sampling technique

Conclusion

The purpose of the study was to assess the knowledge regarding post operative care after cesarean section at selected government Hospitals of Haryana. Based on the findings of the study, it is concluded that most of the subjects have good knowledge regarding post operative care after cesarean section.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Review: The present study got ethical clearance from the Nursing research ethical committee of Ved Nursing College. Panipat.

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Scoring Trauma with Revised Trauma Score in Scoring Patient Motility with Traumatic Head Injury

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Abstract

Background: Head traumatic is a condition where the head structure getting bump outside and having some potential to get brain function disruption. The patients assessment with head traumatic can use traumatic score, by using traumatic score will give quantitative assessment so it will be shown the traumatic degree and assessing the mortality patient.

Purpose: Revised traumatic score is the assessment physiologist by doing data summarized that include systole blood pressure, respiration, and Glasgow Coma Scale for knowing the patient mortality in head traumatic.

Method: This systematic review is begin by making question, determining the objectives then finding the appropriate key words to identify searching data that is need with the method and the objectives "AND" and "OR". After getting the data searching in 2005 up to 2019 by using database international request, pubmed, science direct and continue with PRISMA *flow* diagram and *JBI* critique tool up to get 6 articles that relevant to be analyzed be systematic review.

Result and Discussion: Traumatic Scoring with revised traumatic score is a physiologist scoring system that is used as medical instrument hospital that can help to determine the traumatic patients whether caring in primer hospital ormain traumatic.

Conclusion: Revised traumatic score is one of the traumatic assessment that able to know the patients mortality with head traumatic by using assessment indicator that is systole blood pressure, respirasi and *Glasgow Coma Scale*.

Keywords: *Scoring Traumatic,Revised Trauma Score, Head Traumatic.*

Introduction

Traumatic is define as physical injury or wound in the alive tissue that is caused by extrinsic agents, where in the Industrial and transportation in develop area donate the highest traumatic number(1). Head traumatic is a process where the traumatic happen directly or decelerations to the head that cause the damage to the skull and brain(2). Head traumatic is a trauma in the head skin, skull and brain that happened directly or indirectly in the head that caused the decrease of awareness even death(3) head traumatic become the biggest three caused of death in the world after cardiovascular and neoplasma.

Head traumatic prevalency is enough high in the world, head traumatic around 5,1 million become 8,4 million and 150- 170 Millian per 100 hthousand per person in a year. It around 50-60 million of new cases of traumatic in whole the world, The death of traumatic is 30-40% and 10% and the mortality has 5 Million in a year that caused million of people is disability because of the traumatic (4).

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Based on the result research in Kesehatan Dasar (Riskesdas), the head traumatic in Indonsia in 2013 is 1,24 incident of death because of traumatic and getting increase every year[5].

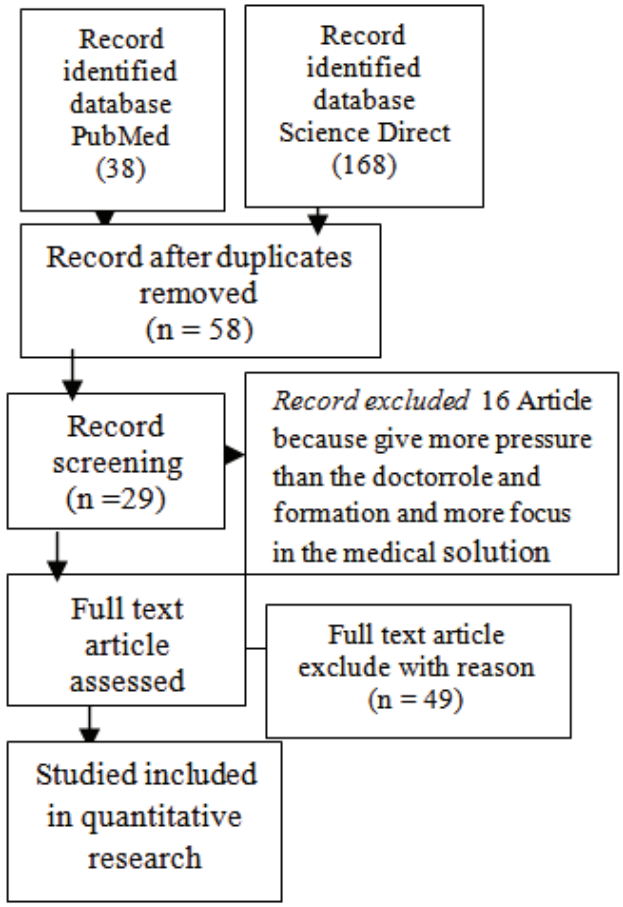
Most of the traumatic centre the fast examination is the must to prevent the disability up to death to the patient it need the client assessment by using traumatic scoring to translate the injury become the number that help to assess quantitatively. The client score with traumatic can be used traumatic score by using traumatic score that will give quantitative assessment so it will appear tha traumatic degree and scoring the possibility to live[6].

In the trauma score there is a trauma assessment that is revised trauma score (RTS). Scoring RTS is a physiological scoring system that is used as a prehospital health workforce instrument to help decide which trauma patients are taken to a primary care facility or to a trauma center. For hospital health workers, RTS helps decide which response rates are activated. RTS ≤11 is associated with 30% mortalityand must be bring to the hospital directly and having some fisiologys data include systole blood pressure, respiration and *Glasgow Coma Scale* (GCS)[1]. In the reliability and prognosis RTS shows the results that as same good as TS score, but RTS has several weaknesses there are counting code impractically. The problem with awareness degree in intubation, the influence of drugs and alcohol. RR change the physiology parameter by resustasion from the chaos of physiology un countable[6]` .

Method

This research consist of several stages there are determining the questions by PICOS method. The next stages is earning thedata to be reviewed this literature by using searching method “AND and OR” for each key, then using diagram that cosisit of identification, scrinning, appropriateness selection, and determining inclusive criteria and eksklusi criteria, In the last stage, The review writing by synthesize literature to get a systematic review[9].

Selection and document choosing by PRISMA diagram, in picture 1.



Picture 1. PRISMA diagram for identifying the literature

Result and Discussion

The definition head traumatic *as we know today is a head* injury that caused structural disruption or functional disruption whether whilst or permanent. *Center for Disease Control and Prevention* (CDC) said that 1,4 million of people in America suffer head traumatic. From that amount it is about 1,1 miliion of people are helped and excuse to going home from the emergency room, 235.000 is hospitalized and 50.000 is death[7].

Several scoring system can be used as the main of neurology status to the head traumatic patient. There are *Glasgow Coma Scale* (GCS), *Trauma Score*, *Trauma Score Revised*, dan *Abbreviated Injury Scale* (AIS)[8].

Head traumatictriggers several selullar and molecular so it appear *histochemical responses*, *molecular responses,* dan *genetic response* that cause secondary insult, in ischemic and weighted the primary brain damage[4].

Revised Trauma Score (*RTS*) physiologically where RTS is counted when the first time patient come. The scored parameter is *GCS* (*Glasgow Coma Scale*), respiration frequency. RTS is more intensive that use as the pre hospital staff to define whether the patient is caring in primary hospital or trauma center. To the hospital staff RTS helps to decide theresponse stage that deactivated RTS ≤11 that correlate mortality 30% that must be bring to the trauma center[6].

According to[9] trauma scoring system has been helped the way of doctor decision and it is possible to get more objective. Trauma scoring system change the worst of injury or prognosis to the next patient, bcome single numeric score and simplify the communication among the doctors. Scoring trauma system is divided become anatomy, physiology or the combination between anatomy and physiology.

Injury Abbreviations Scale (SIA) and Injury Rate Score based on SIA (SIS) is two examples of anatomy assessment that is most use Revised Trauma Score (RTS) and Kampala Trauma Score (KTS)is a physiology score. This research is gained the result in trauma scoring using and get the death number 6% (n = 20). TRISS and KTS has the high are in the bottom of ROC (AUC), 0,90 (95% CI 0,83-0,96), and 0,86 (95% CI 0,79-0,94), each KTS has sensitivity (90%, 95% CI 68-99%)while TEWS and RTS has the highest specify (each 91%, 95% CI 87-94%)[7].

According to kim et., al (2017)in this research explaine that Trauma Score Revise (RTS) is used in whole the world in pre hospital practice and in the Emergenct Department (ED) the setting of patient triase among the patient in derivation group, the mean age is 59 [43-73] years old, and 66,7% is men. Bottom area of characteristic curve operation receiver from RTS (0,948; 95% CI: 0,939-0,955) higher than AUC from TRISS-A (0,960; 95% CI: 0,952-0,967) significantly higher than origin TRISS (0,949; 95% CI: 0,941-0,957).

According to the research of [6] head injury is traumatic disruption from the brain function that caused deformities as shape memory or skull line and without intarsia bleeding in brain sub without the c;ose of brain continuity The Mann-Whitney Test resultresearch show that the correlation or mortality patent is 7 days of caring with GCS score SBP, RR and SpO2 with *p value* from all independent < 0.05. Regresy logistic axamination result shows that the similarity of RTS (GCS, SBP, RR) gas p value *Uji Hosmer and Lamesho* = 0.849, the number of sensitivity 0.93 *specificity* 0.863, *Positive Predictive Value* (PPV) 0.95, Negative *PredictiveValue* (NPV) 0.79, with AUC 0.942 (CI95% 0.88-0.99). So the similarity RTS (GCS, SBP, RR) has discrimination quality, celibacy and the accurate is good, so the similarity of RTS (GCS, SBP, RR) can be use as mortality predictor in head injury patient. The use of RTS (GCS, SBP, RR)is appropriate as the helping tools in triage of head injury patient.

According to [4] research trauma is the biggest cause in teenager and younger. The scoring system that change the quality of trauma in the needed score in her research is *Revised Trauma Score* (RTS), *Injury Severity Score* (ISS), dan *Trauma Related Injury SeverityScore* (TRISS). The research result shows that RTS is the easiest one to be applied when triage and pre hospital, it also recommended to be a part of multi trauma cases handling.

Conclusion

Head trauma is the condition where the head structure get bump from the outside and having a potential to appear the disruption in brain function, The early scoring of the trauma patient is using trauma scoring. Trauma scoring is one of the early step to assess the trauma by the number, One of the trauma scoring can be use is revised Trauma Score. RTS is trauma assessment physiologically by using systole bood pressure, respiration and GCS. revised trauma score is able to assess the patient mortality with head trauma with the enough high of spesifity and efectivity so the effective use in assess patient with head trauma.

Ethical Clearance: This article has been approved by the Medical faculty of Brawijaya University

Source of Funding: Self founding

Conflict of Interest: Nil

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Levels of Depressive Disorder among Displaced Citizens in Displacement Camps in Baghdad City

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Abstract

Introduction: Internally displaced people are those who are compelled to escape but they either cannot or do not desire to cross an international border. In addition, internal displacement can affect persons in particular or an entire groups(1). The most common psychological reactions found in internally displaced people in addition to PTSD are depression, somatization, and existential problems(2). It was found that the prevalence of depression symptoms range among displaced individuals was 38%-41%(3).

Objective: The study aims to find out levels of depressive symptoms among displaced citizen in Baghdad city and to find out whether there is any relationship between those levels and some socio-demographic characteristics of displaced citizens.

Methodology: A descriptive analytic design study was conducted from November 10th, 2017 to the April 10th, 2018 with the purpose of assessing the levels of depressive disorder among displaced citizens who temporarily live in displaced camps in Baghdad city. A non-probability (purposive) sample of 110 of those displaced citizens was recruited to join in present study. To meet the goals of the study a questionnaire was made. The questionnaire has two functions: primarily, four socio-demographic characteristics of displaced people: gender, age, level of education, and marital status; and furthermore, fifteen items represent Geriatric Depression Scale (GDS-15) for Almeida (1999)(4) which expected to determine the levels of depressive disorder among the displaced people. Collected data were examined by means of: a descriptive statistical analysis: frequencies and percentages and tables of distribution; and inferential analysis which was Chi^2.

Results: The results indicate that about three quarters of the participants are male; half of them are of twenties decade of age; about half of those displaced are unmarried; and three quarters of them have primary and secondary levels of education. And the results reveals too that more than half of displaced citizens have moderate level (64.5%); and only 11.8% are within normal level of depressive disorder; and nearly quarter of them have severe level (23.6%).

Recommendations: The study recommends for the necessity to provide mental health services for displaced citizens in displacement camps. And an escalation in the extent of mental health and psychosocial support services for those displaced citizens. The necessity is needed to sufficiently support and offer broad healthcare for them.

Keyword: *Prevalence, levels, depression, displaced, citizens, Baghdad, camps.*

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Introduction

The present fight in Iraq has caused in a great displaced Iraqi people. The United Nations High Commissioner for Refugees (UNHCR) appraisals that more than 4.7 million Iraqis, nearly 20% of the general population, have left their homes as a result of the fight(5). According

to UNHCR (2004)[1], internally displaced persons are those who are forced to run away but they either cannot or do not wish to cross an international border. Internal displacement can affect persons in particular or an entire group. There is a possibility of being expelled by force or frightened to leave by threat, obligation. The most essential feature of internal displacement is that it is involuntary. It consist of movements of people running away from an instant threat and can also take the form of more prepared and organized leavings in expectation of dangers [6]. Despite this large number of displaced people, little is known about their mental health needs or access to mental health services. However, the information obtained from other displaced populations suggests that their needs may be substantial while their access to services is inadequate[7]. It was found that the prevalence of depression symptomatology range was 38% to 41%[3], anxiety symptoms from 27.7% to 54.4%, and PTSD had prevalence ranging between 32% and 52%[8]; and depressive disorder ranged between 3 and 80%)[9]. Mental disorders related to compulsory internal displacement are wide-ranging[10], and furthermost researches have focused on a restricted amounts of disorders, such as PTSD, anxiety and depression[12]. Current epidemiological research focusing on the wider common mental disorders related to forced displacement is limited[11,12]. Within the inadequate existing global evidence, common mental disorders prevalence is seen to fluctuate considerably: 27.2% in Colombia, 27.8% in Ethiopia, 40.3% in Palestine, 57.7% in Cambodia, and 62.3% in Algeria[12,13]. So the current study presents a good opportunity to explore and find out levels of depressive disorder within displaced citizens who are forced to leave their own homes and live in displacement camps in Baghdad city.

Objectives: The study aims to find out levels of depressive symptoms among displaced citizen in Baghdad city and to find out whether there is any relationship between those levels and some socio-demographic characteristics of displaced citizens.

Material and Method

A descriptive study was conducted between the 10th of November 2017 and the 10th of April 2018. A purposive non-probability sample of 110 displaced citizens who live in displacement camps in Baghdad city was recruited to partake in the current study. To measure the levels of depressive disorder among displaced citizens an instrument was prepared. This instrument represents a questionnaire which supposed to assess these levels. The questionnaire consists of two parts: four socio-demographic characteristic such as age, gender, marital status, and level of education, and furthermore, fifteen items represent Geriatric Depression Scale (GDS-15) for Almeida (1999)[4]which expected to assess the levels of depressive disorder among the displaced people. Each item scored from zero as "there is not"; one as "there is". The total score ranged from zero to 15 for the total Geriatric Depression Scale (GDS-15). The total items scores was measured scored and finally rated on 3-level rating scale. Three levels were determined by applying quartile descriptive analysis; as "normal level" of depressive disorder with cut-off point ranged between 0 and four, as "mild level" of depressive disorder with cut-off point ranged between five and nine, and as "more severe" level of depressive disorder with cut-off point ranged between ten and fifteen. Final data of the present study were analysed by different statistical analysis: descriptive analysis such as distribution, cross-tabulation, frequency, percentages, and quartiles; and an inferential data analysis: Chi-square.

Findings:

Table 1. Distribution of the sample according to the Severity of Depression

	Severity of Depression							
	Within Normal		Moderate		Severe		Total	
Displaced Citizens	f	%	f	%	f	%	f	%
	13	11.8%	71	64.5%	26	23.6%	110	100.0%

Regarding levels of depressive disorder table two reveals that more than half of displaced citizens have moderate level (64.5%); and only 11.8% are within normal level of depressive disorder; and nearly quarter of them are severe level (23.6%).

Table 2: Distribution in the severity of Depression according the Gender of displaced citizens

			Severity of Depression			Total
			Within Normal	Moderate	Severe	
Gender	Male	f	12	44	16	72
		%	10.9%	40.0%	14.5%	65.5%
	Female	f	1	27	10	38
		%	0.9%	24.5%	9.1%	34.5%
Total		**f**	**13**	**71**	**26**	**110**
		%	**11.8%**	**64.5%**	**23.6%**	**100.0%**

Table three presents the percentages of severity of depression among gender of displaced citizens: more than half of male have moderate and severe levels (54.5%) and quarter of the female have moderate level of depression (24.5%).

Table 3: Distribution in the severity of Depression according the Age of displaced citizens

			Severity of Depression			Total
			Within Normal	Moderate	Severe	
Age	≤19	f	1	13	8	22
		%	0.9%	11.8%	7.3%	20.0%
	20-29	f	6	38	8	52
		%	5.5%	34.5%	7.3%	47.3%
	30-39	f	1	9	3	13
		%	0.9%	8.2%	2.7%	11.8%
	40-49	f	0	7	4	11
		%	0.0%	6.4%	3.6%	10.0%
	≥50	f	5	4	3	12
		%	4.5%	3.6%	2.7%	10.9%
Total		**f**	**13**	**71**	**26**	**110**
		%	**11.8%**	**64.5%**	**23.6%**	**100.0%**

Table four indicates that the twenties decade of age have the highest frequency (34.5%) but the thirties decade have the lowest percentage (0.9%).

Table 4: Distribution in the severity of Depression according the Levels of Education of displaced citizens

			Severity of Depression			Total
			Within Normal	Moderate	Severe	
Level of Education	Illiterate	f	1	2	4	7
		%	0.9%	1.8%	3.6%	6.4%
	Read and primary	f	5	22	10	37
		%	4.5%	20.0%	9.1%	33.6%
	Secondary	f	5	24	7	36
		%	4.5%	21.8%	6.4%	32.7%
	Institute and more	f	2	23	5	30
		%	1.8%	20.9%	4.5%	27.3%
Total		**f**	**13**	**71**	**26**	**110**
		%	**11.8%**	**64.5%**	**23.6%**	**100.0%**

In regard of levels of education table five shows that 42.7% of displaced citizens having secondary and institute and more have moderate level of depression and only 0.9% of illiterate are within normal level of depression.

Table 5. Distribution in the levels of Depression recording to Marital Status of displaced Citizens

			Severity of Depression			Total
			Within Normal	Moderate	Severe	
Marital Status	Unmarried	f	3	40	11	54
		%	2.7%	36.4%	10.0%	49.1%
	Married	f	10	27	13	50
		%	9.1%	24.5%	11.8%	45.5%
	Divorced	f	0	2	0	2
		%	0.0%	1.8%	0.0%	1.8%
	Widowed	f	0	2	2	4
		%	0.0%	1.8%	1.8%	3.6%
Total		**f**	**13**	**71**	**26**	**110**
		%	**11.8%**	**64.5%**	**23.6%**	**100.0%**

Table six indicates that most of unmarried have moderate and severe levels of depression (46.4%) and only 2.7% of unmarried are within normal level of depression.

Table 6. Association between Demographic characteristics of the displaced people and levels of depressive disorder

Demographic Characteristics	X^2	df	p-value	No.
Gender	5.795	1	0.054	110
Age	17.837	4	0.022	
Marital status	9.486	3	0.148	
Level of Education	7.579	3	0.271	

Table seven reveals that there is a significant relationship between gender and age and levels of depression (χ^2= 5.795, p-value= 0.054) (χ^2= 17.837, p-value= 0.022) respectively.

Discussion

The high percentage of the male displaced citizens participated in present study (65.5%) does not represent a real indicator to the normal percentages of gender differences within the Iraqi general population. This result is not supported by other different studies such as Sheikh and his colleagues (2015) who indicate that 51.9% of the displaced are female[14], Tekin (2016) 55.9%[15] and Feyera (2015)[16] 53.9% are female . This wide difference might be that many female refuse to participate. About half of displaced citizens are within the age of twenties and with mean= 28.3 years, this result is different from other studies [14,16]. About half of the sample of the displaced is unmarried, many studies do not agree with this result such as the study of Sheikh (2015) 13.6%are male[14]; and 15.9% in study of Feyera (2015)[16]. 33.6% have primary school level of education; this percentage is not supported by various studies; 18.4% study of Bader (2009)[17]; 26.5% study of Sheikh (2015)[14]; and 28.3% study of Alpak (2015) [18]. The study indicates that the displaced citizens are inflicted with different levels of depressive disorder; 64.5% inflicted with moderate level and 23.6% inflicted with severe level of depressive disorder. Given that the prevalence of depressive disorders among general population is approximately 7%[19], Regarding the gender differences the study reveals that from total of

displaced citizens inflicted with depressive disorder 61.8% are male and 38.2% are female. Females experience 1.5- to 3-fold higher rates than males beginning in early adolescence[19]. Differences by age group the study shows that 18- to 29-year-old displaced citizens represents 46.3% of the total displaced inflicted with depressive disorders. This percentage represents about tenfold higher than the prevalence in individuals age 60 years or older. Given that the normal prevalence of age is threefold of the 18- to 29-year-old of the age 60 years and older[19]. The prevalence of depressive disorders in regard to the marital status the results indicate that about 92.3% of the unmarried displaced citizens have moderate and severe levels of depressive disorders; 72.0% and 20.2% respectively. This high prevalence of depressive disorders might be due to big number of unmarried displaced citizens participated in the present study.

Recommendations: The study recommends for the necessity to provide mental health services for displaced citizens in displacement camps. And an escalation in the extent of mental health and psychosocial support services for those displaced citizens. The necessity is needed to sufficiently support and offer broad healthcare for them. Development of mental health and psychosocial programmes and interventions aiming the most vulnerable groups should be prioritised.

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

Source of Funding: The researchers declare that this study did not receive any funding from any agency.

Ethical Clearance: The researchers obtained the oral informed consent from the study participants.

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Ethical Work Climate, Moral Courage, Moral Distress and Organizational Citizen Ship Behavior among Nurses

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Abstract

Background: Ethical work climate and moral courage are important elements affecting nurses' organizational citizenship behaviour.

Aim: Explore the relationships among ethical work climate, moral courage, moral distress and organizational citizenship behaviour among nurses at Zagazig University Hospitals.

Method: Used the descriptive design, and the stratified random sample to choose 384 nurses. Four tools were handled for data collection: Ethical climate questionnaire, professional moral courage scale, moral distress scale and organizational citizenship behaviour scale.

Results: Illustrates that 89.1% of nurses had positive perceptions of ethical work climate. Likewise, 85.4% and 83.1% of nurses had high levels of moral courage and moral distress, respectively, and 47.7% of them had a moderate level of organizational citizenship behaviour.

Conclusion: Ethical work climate was significantly and positively correlated to moral courage and organizational citizenship behaviors and negatively with moral distress.

Recommendations: Managers should maintain an ethical relationship with nurses that help them improve their performance.

Keywords: *Ethical work climate, Moral courage, Moral distress, Organizational citizenship behavior.*

Introduction

Nowadays, the amount of unethical activity has increased and it has caused a major loss of organizational integrity and competitive advantage. These cases emphasize the value of an ethical climate at workplace in describing how and why unethical attitude occurs[(1)]. In fact, the structure of organizational climate plays an essential role in the organizational perceptions and behaviors, such as ethical climate[(2)].

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Ethical climate represents nurses' perception regarding regulations, practices and procedures which an organization awards and expects in relation to ethics[(2)].

The presence of ethical climate influences the organizations and nurses; it improves the productivity and efficiency of the organization's performance, increases nurses satisfaction and commitment, improves job performance and encourages ethical decision making[(3)].

Climate of the work in unit is associated with moral courage,that it is an important factor affecting nurses' behavior and practice[(3)]. Moral courage is known as continuous truth, defense of rights and commitment to moral principles in defending patients' rights, even in potential danger to their job position[(4)].

Nurses who have moral courage; prefer commitment to organization, care for patients with diverse cases and find their own interests to help others; follow the consequences of correct moral performance to achieve desirable results. While those have low level of moral courage; lose their motivation for moral work and their willingness to serve patients[3].

The effect of moral courage occurs through formal culture, which includes leadership, structure, policy, reward system, socializing mechanism and decision-making process. When behaving ethically and morally; high-quality care delivered, modern healthcare systems, struggling with issues of nurses' turnover and decrease their moral distress toward organization [4].

Moral distress defined as an emotion that is explicated when the ethical complexity of a situation is not driving to solution[5]. Increased levels of moral distress can cause medical faults, exhaustion, burnout, and patient avoidance. In contrast to decreased levels which lead to increase nurses' satisfaction, commitment and their citizenship behavior toward the organization[1].

Organizational citizenship behavior is a conscious and discretional individual behavior. It influences nurses' attitudes and behaviors and guides their activities towards the hospital objectives' accomplishment and it can affect quality of the care delivered to the patients[6].

Significance: Ethical climate in hospitals is very important key to create a suitable environment for the nursing care which can be affected by various working issues and conditions such as management policy, relation with (manager, physician, peers and patients). The efforts made by nurses to make changes in the organization, depend upon presence of ethical climate and moral courage. They help nurses to turn challenge into opportunity, improve their performance, increase productivity, decrease moral distress and increase organizational citizenship behavior among nurses. So the aim of this study was to explore the relationships among ethical work climate, moral courage, moral distress and organizational citizenship behavior among nurses at Zagazig university hospitals.

Aim: To explore relationships among ethical work climate, moral courage, moral distress and organizational citizenship behavior among nurses.

Research Questions: What is the nurses' perception towards ethical work climate?

What are the levels of nurses' moral courage, moral distress and organizational citizenship behavior?

Are there relations among ethical work climate, moral courage, moral distress and organizational citizenship behavior?

Material and Method

Design: A descriptive correlational design was utilized for this study.

Setting: This study was performed at all Zagazig University Hospitals, Egypt, which includes two sectors, involving 8 teaching hospitals and providing free treatment.

Subjects: Staff nurses working in the aforementioned setting with one year of experience at the least.

Sample Size: It was estimated at confidence interval 95%, a margin of errors 5.0%, a total population size of 2246 staff nurses, by using this formula [n= N/ 1+ N $(e)^2$] [7]; the required sample size was 384 staff nurses. A stratified random sample was used.

Instruments:

Tool 1: Ethical work climate questionnaire: Divided into two parts; first: personal characteristics of staff nurses. Second. Ethical work climate questionnaire: developed by **Victor & Cullen**[8] to measure nurses' perception regarding ethical work climate (26 items);grouped under five domains. Answers were measured along a continuum of five-point Likert scale ranged from 1 (almost never true) to 5 (almost always true). When score≥ 60% reflects positive perception and when it was < 60% reflects a negative perception. Cronbach alpha coefficient ranged 0.81-0.92.

Tool 2: Professional moral courage Scale: It was developed by **Sekerka et al.,**[9] to assess and quantify the construct of moral courage among nurses. It consists of 15 items, grouped under five dimensions. Answers were measured on five point Likert scale ranged from 1 (never) to 5 (always). Scores from 0 to ≥39 demonstrate low level and scores ≥ 40 demonstrate high level. The Cronbach alpha coefficient was 0.85.

Tool 3: Moral Distress Scale of Nurses: It was developed by **Hamric et al.,**[10] to assess moral distress level of nurses. It included 21 items and divided into four dimensions. Answers were measured on five point

Likert scale ranged from 0 (never) to 4 (always). The Score was considered high if it was ≥ 60% and low if it was < 60%. The Cronbach alpha coefficient was 0.94.

Tool 4: Organizational Citizenship Behavior (OCB): It is 24-items scale, developed by **Organ** in **Podsakoff et al.,**[11]; grouped into five dimensions. Answers were measured on five point Likert scale; ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores ≥ 96 indicated a high level, from 72 to 95 indicated a moderate level and < 72 indicated a low level. The Cronbach alpha coefficient was 0.96.

Fieldwork: Data collection started in March till end of June 2019. The researchers clarified study aim to nurses either individually or through groups. The questionnaire took about 25-35 minutes to be completed.

Pilot Study: It was conducted on 38 staff nurses (10% of the study sample), selected randomly and not involved in the main research sample to ensure clarity and applicability of the tools, and to estimate required time for completing the questionnaire. The required adjustments were done.

Validity: The researchers translated the instruments into Arabic. After translation, they were tested for validity by a panel of experts in nursing administration (5 professors) at Zagazig University to ensure clarity, applicability and understanding. Accordingly, all necessary adjustments were done.

Statistical Analysis: Data were analyzed using computer software The Statistical Package for Social Science (SPSS), version 21. Qualitative data were represented by numbers and proportions while mean and standard deviation for quantitative data. Pearson correlation used for estimating interrelationships among variables.

Results

Table 1: Clarifies that 43.5% of nurses aged from 30 to < 40 years, with a mean age of 35.27 ± 8.38. Additionally, the highest proportions of them were female, married, with experience less than 10 years and had a technical diploma in nursing (70.1%, 78.7%, 67.5%, and 55.5% respectively).

Table (1): Distribution of personal characteristics of nurses (n=384).

Personal and job characteristics	No	%
Age in year:		
< 30	120	31.2
30 - < 40	159	41.4
≥ 40	105	27.3
Mean ± SD	35.27 ±8.38	
Gender:		
Male	115	29.9
Female	269	70.1
Marital Status:		
Single	82	21.3
Married	302	78.7
Widow	6	1.6
Experience:		
< 10	259	67.5
≥ 10	125	32.5
Mean ± SD	7.68 ±5.03	
Educational Qualification:		
Nursing diploma	89	23.1
Technical diploma in nursing	215	55.9
Bachelor of nursing	80	20.8

Table (2): Distribution of different study variables' total mean scores as reported by studied nurses (n=384).

Study variables	Mean	±	SD
Ethical work climate	77.33	±	22.19
professional moral courage	53.48	±	15.04
Moral distress	69. 29	±	10. 62
Citizenship behaviors	85.08	±	12.09

Table 2: Demonstrates total mean scores of ethical work climate, moral courage, moral distress and organizational citizenship behaviors as reported by nurses (77.33± 22.19, 53.48± 15.04, 69. 29± 10. 62 & 85.08 ± 12.09 respectively).

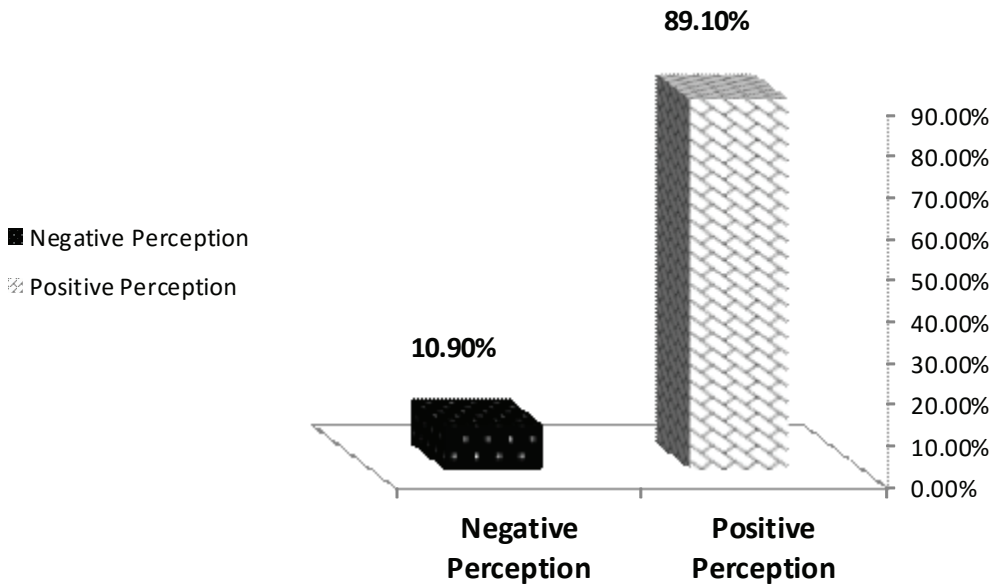

Figure 1: Nurses' perception as regards ethical work climate (n=384).

Figure 1: Illustrates 89.1% of nurses had a positive perception of ethical work.

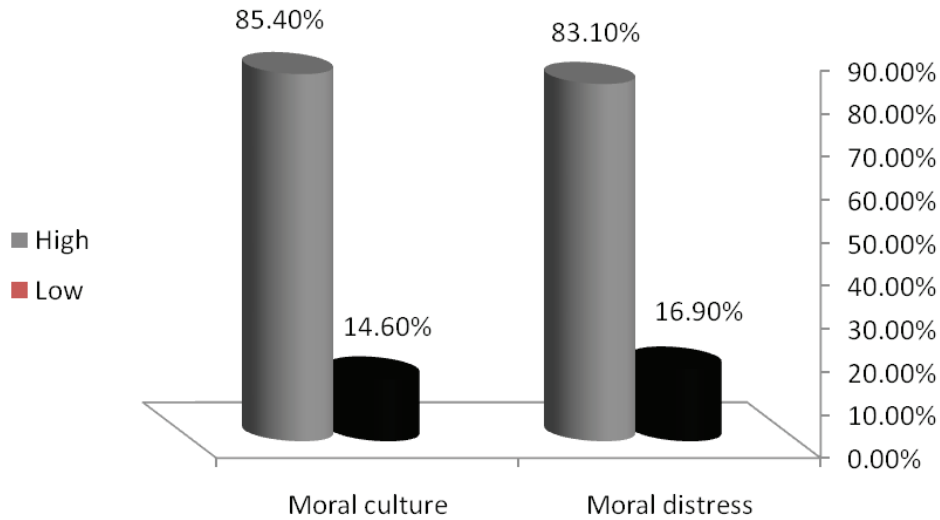

Figure 2: Levels of moral courage and moral distress among the studied nurses (n=384).

Figure 2: Shows that more than three quarters of nurses had a high level of moral courage and moral distress (85.4% & 83.1% respectively).

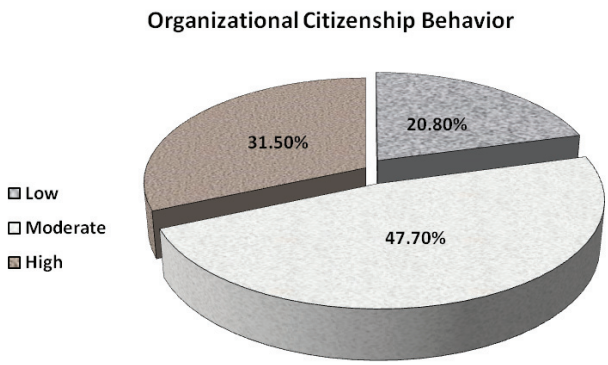

Figure 3: Levels of organizational citizenship behavior among the studied nurses (n=384).

Figure 3: Revealsthat 47.7% of nurses had a moderate level of organizational citizenship behavior.

Table (3): Correlations between study variables as reported by studied nurses (n=384).

Study Variables	Ethical Work Climate		Moral Courage		Moral Distress	
	R	p	R	p	R	P
Moral courage	0.651**	0.000				
Moral distress	0.263**	0.000	-.269**	0.000		
Organizational citizenship behavior	0.493**	0.000	0.719**	0.000	-0.631**	0.000

**Highlystatistically significant at p< 0.01

Table 3: Displays that ethical work climate was significantly and positively correlated to moral courage and organizational citizenship behavior (r=0.651, P=0.000 & r=0.493, P=0.000, respectively) and negatively with moral distress (r=-0.263, P=0.000).

Discussion

Ethical work climate in the organization is very important to increase its effectiveness and productivity and improve the quality of management and performance. Although personal and professional factors influence the moral courage of nurses, but in organization, it seems that the organization's ethical climate can affect the ethical courage of employees, reduce moral distress and improve nurses' behaviors toward organization [12]. Therefore, this study aimed to explore the relationship among ethical work climate, moral courage, moral distress and organizational citizenship behavior among nurses at Zagazig university hospitals**.**

The findings of this research showed that the highest proportion of nurses had a positive ethical work climate perception. These findings could be due to the clear and shared sense of the hospital's mission and vision and commitment toward organization. The previous study findingwas supported by a study carried out in Turkey by**Numminen et al.** [13] and reported that nurses' overall perception of the ethical climate was positive. However, these findings were inconsistent with a study done by**Shafipour et al.**[14] in Iran, whostated that the nurses' perception of the ethical work climate was negative.

Concerning the moral courage level; more than three quarters of the studied nurses had a high level of the moral courage.These findingsmight be due to that nurses have good relationships with their supervisor. These findings are in agreement with a studycarried out inTehran by **Moosavi et al.**[15] and demonstrated that nurses reported high level of moral courage. However, these findings were incongruent with a study done by **Day** [16], whoshowed that nurses had a low level of moral courage.

Regarding moral distress level; the highest proportions of the studied nurses had a high level of moral distress.This may be due to a rigid hierarchy between physicians and nurses and they are often considered as subordinate to physicians.These findings in the same line with a study conducted in the U.S.A by **Allen et al.**[17], who reported thatthe majority of nurses had a high level of moral distress. In disagreement with the previous findings, a study donein the Island by**Gonzalez**[18], who found the majority of nurses had a low level of moral distress.

In relation to OCB; two thirds of the studied nurses had a moderate level of OCB. This result may be due to lack of motivation and incentive. Additionally, most of nurses seek to achieve their personal goals rather than organizational goals. Inthis context, **Bahrami et al.**[19] conducted a study in Iran, whostated that the mean score of the OCB was moderate. Contradicting with previous results**,** in Turkey, **Altuntas and Baykal** [20] revealed that the OCB level of nurses was high.

Regarding correlation amongstudy variables; the current findings emphasized thatethical work climate was significantly and positively correlated to moral courage and organizational citizenship behavior. On the other hand, it is negatively correlated to moral distress. These findings could be due to that ethical climateprovides a framework for ethical decision making in the clinical environment and enables employees to cope with moral distress and other causes of dissatisfaction. Similar results found by **Tarazet al.**[21], who declared that there was a significant positive correlation between nurses' ethical climate and their moral courage.

Conclusion

Ethical work climate was significantly and positively correlated to moral courage and organizational citizenship behaviors while it is negatively correlated to moral distress.

Recommendations:

For hospital administrators:

- Enhanceethical climate in hospitals by creation of suitable working environment for professional performance.
- Maintainethical relationship with nurses thathelp them to improve their performance.
- Develop continuing education and discussions to promote positive ethical climates within the organization.
- Create a learning and informative environment for nurses where makes them competent to accomplish organizational objectives.

Further research about: Issues in nurse managers' ethical leadership in creating positive ethical work environments.

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Ethical Clearance: Before data collection, the content of this study was approved by the ethics committee and dean of the Faculty of Nursing, Zagazig University. Nature and aim of the study were explained to the nurses who took part in this study. They were given an option to discontinue at any time without explanation and their personal information was maintained confidential.

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Lived Experiences of Mothers with Leukemic Children Residing in Kathmandu

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Abstract

Childhood leukemia is one of the expanding non-communicable diseases in Asian countries including Nepal with significant mortality and morbidity. The main objective of study was to explore lived experiences of mothers with leukemic children residing in Kathmandu. This was a hermeneutic phenomenological study conducted in 2017. Ten participants were selected purposively from hospital record of Kanti Children's Hospital, Nepal. In-depth interview guideline, case study method, digital recording and field notes were used for data collection. Data was analyzed using Interpretative Phenomenological Analysis and ATLAS. ti 7 software 7.5.7 version. Five major themes emerged: Socioeconomic Burden, Alteration in Life, Crisis Situation, Coping Strategies and Optimistic Attitude. Initially, mothers experienced distress, disbelief, denial and gradually accepted the condition. It has created distressing adverse impact on life. Hence, an educational package and counseling should be provided focusing on disease, child care and coping strategies to make aware to mothers and prepare them physically and emotionally.

Keywords: *Leukemia, lived experience, qualitative research.*

Introduction

Childhood cancers are unnoticed in developing countries, 80 % of the childhood cancer occur in the low-income and middle-income countries.[1] In India, leukemia is the most common childhood cancer with 25% to 40% of relative proportion which contributes to mortality in children.[2]

In the Western Development Region of Nepal, 33 cases recognized as childhood cancer among 1217 total cancer cases.[3] In Nepal, among 755 children with cancer diagnosed at Kanti Children's Hospital, number of Acute Lymphoblastic Leukemia Children was 300 from March 1998 to March 2012.[4] Leukemia accounts for 36 cases among 77 new cases of cancer diagnosed in Kanti Children's Hospital between December 2015 to November 2016.[5]

Mother experience burden in emotional, mental and physical aspects which may affect quality of care provided to children and lead to imbalances in their own health.[6]

This study aims to explore lived experiences of mothers with leukemic children residing in Kathmandu.

Material and Method

Hermeneutic phenomenological, qualitative study was conducted in residence of participants who were selected from hospital record of Kanti Children's Hospital, Kathmandu. The total study period was eleven months (28/05/2017 to 13/04/2018). Ten mothers who had a Leukemia child having treatment in Kanti Children's Hospital were enrolled purposively in the

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study. After taking verbal and written consent, face to face interview was conducted in an actual, natural environment by using semi-structured In-depth interview guideline from 5th July to 28th July 2017. Among 10 participants, four were selected for case study that were distinct to each other and followed after 2 months. With permission, all interviews were digitally audio-taped and a field note was taken for unspecified behavior and critical information. Two to five interviews were taken from each study participant until data saturation.

The collected data were transcribed in Nepali language in reference to memos, field notes and tape recordings. Coding of transcripts was aided using ATLAS.ti 7 qualitative data analysis software of 7.5.7 version (1993-2017 Atlas.ti Gmbh, Berlin). Data was analyzed thematically by using Interpretative phenomenological analysis.

Findings: Majority of the participants were from upper caste groups and advantaged janajatis. Nine out of the 10 participants belonged to nuclear family and Hindu religion. Half (5/10) of the participants had completed secondary level education, worked as homemakers and their spouse worked as abroad worker before child's diagnosis. Eight participants mentioned that their income was sufficient for less than 6 months.

Leukemia children were from age group 2-13 years and mean age was 5.8 years. Most of the children (6/10) were female. Half (5/10) of them were first born child and under Maintenance Phase of treatment. The duration of diagnosis at the first interview was 2-27 months and 6.7 months in average.

Five themes were recognized from various levels of analysis and **pseudonyms** were used:

1. Socioeconomic Burden
2. Alteration in Life
3. Crisis situation
4. Coping strategies
5. Optimistic Attitude

Theme 1: Socioeconomic Burden: All participants faced financial problem. Almost all (9/10) of them were residing in rented houses in Kathmandu for the sake of treatment of their leukemia child. They said that earning also stopped but anyhow treatment should be continued and had taken a lot of loans.

"*If we had any asset, we would sell them but we have nothing to sell. If I could, I would sell my own body. But it is also not possible*". [Rita]

"Earning has stopped as both of us (parents) are engaged in treatment of our son. Because of this we are unable to continue business". [Rama]

In response to treatment process, majority of participants perceived leukemia treatment as a long and expensive treatment process.

"Treatment does not end after 1-2 months and *it takes 3 years to complete the treatment course".*
[Sita] [Yamuna] [Gita]

One participant experienced distrust by friends and relatives as every time help is not possible and in case of leukemia, mothers were deemed as being unable to return back money so didn't get financial help every time. Three participants also expressed that financial support is not always possible from the hospital.

"*There is no free service in hospital except in oncology ward. We don't always get chance and are not always lucky to admit in that ward".* [Rama]

Participants expressed increased expenditure.

" *I need money not only for expense of medicine but also for transportation, school fee, food for sick baby like meat and fruits".* [Rama]

Participants could not attend any social functions as well as other's invitations as they can neither leave their child at home nor take them along. Almost all participants were isolated from relatives, friends, parents and neighbors. Four participants expressed that they could not contact their relatives as their homes were far. One participant used to avoid her parents to hide her problems and control herself. Two participants want to be on their own world.

"Feel sad when relatives come to visit. I am in my own world. Slowly, I will be maintaining to become fresh but when someone comes, I again remember the past days". [Rama]

Participants had restricted the relatives from smoking, wearing shoes in room, also limited visit of relatives who were not clean and the child was kept in distance with other sick children and who coughed a lot. They thought that others will infect their child.

Theme 2: Alteration in Life: Almost all of them experienced disturbance in work. Four of them had left their farming work and one can't continue business. Both of the parents can't do any work well as they are mostly devoted in caring for their leukemic child rather than in earning and other works. They are not able to complete any work as before.

"Daughters cook themselves and eat whatever they like. I am unable to care for them"."My elder son also has exam but I can't give him time during his study". Sita]

All interviewed participants expressed that they have no leisure time.

"Learned Boutique works and used to design clothes before child's illness. Now, I cannot do anything and just take care of my babies". [Sita]

Participants experienced that care is unavoidable and must do work anyhow as majority of the participants were from nuclear family. Participants experienced increased work load.

"When I go to hospital my husband stay at home and vice versa, doing for the child without caring our own health". [Ishwori]

"*Work increased after child's illness. Require frequent hospitalization, investigations, blood transfusion and should maintain cleanliness in everything else".* [All participants]

Participants eating pattern and daily schedule were planned according to leukemia child's condition or days passed haphazardly without any plan.

"Our eating time is not fixed". [Manita]

"Only eat those things which are healthy for my child. Previous eating pattern has changed". [Prema]

Theme 3: Crisis Situation:

Nature of Leukemia: Three of the participants expressed that there is no disease more difficult in Nepal than leukemia which brings many sorrows in life. One of the participants was surprised to learn that it also occurred in children as only seen in elderly people. They experienced fear from time to time that it was incurable.

Most of the participants experienced that children with leukemia had multiple symptoms of leukemia which were mild in appearance distressed participants when diagnosed as leukemia and symptoms were different in every child. Initial symptoms subsided itself or after giving minor cetamol/vitamins. Eight participants perceived diverse causes of initial symptoms occurred in children. Due to this, early diagnosis of disease was missed.

"Child had mild leg pain. He could go to school and come home regularly. I had once seen bluish patches at the side of his leg but thought that he had fallen somewhere and subsided itself without any treatment". Rama]

Period of agony, Disbelief and Denial: Participants experienced that their life became nerve-racking due to unpredicted happening while receiving breaking bad news. Initially, participants experienced distress. Most of the participants had visited various hospitals, blood tested repeatedly and sent bone marrow biopsy investigation to India for confirmation but report comes only after 14-20 days.

" Felt sad wondering about the report but even after receiving report I felt very sad". [Rama]

" Felt that sky and earth joined each other". [Sita]

"I should have died first, instead, my child will die on my lap...how can I control myself". [Rita]

"Felt what to do, what not to do and where to go to die". [Lata]

"I felt uneasy and became blind surrounded by black cloud. I just remember carrying baby and not seeing anything in front of me". [Prema]

Two participants experienced anxiety towards God and their fate.

"*Used to say to God that you gave me child yourself then why you make my child suffer from such things. I wonder how much time I have left to stay with my child. I pray that God take her away soon if you have already planned to take her away from me. I cannot tolerate my child's pain anymore".* [Anita]

Uncertainty of Life: Participants felt self-doubting and experienced difficulty living with uncertainty. Participants experienced that anything can happen at any time when their child suffered from side effects.

Multiple Problems of Mother: After child was diagnosed with leukemia, participants experienced deterioration in their own physical health. Majority of them hide their own problems. They reported weight loss, severe headache, gastritis, increased uric acid, weakness, fatigue, leg pain swelling,whole body ache, anorexia, bitter taste, heart burning and low pressure.

Emotional Disturbance: Six participants experienced tension and three of them started to forget things. One of them had sleep problem and experienced fear. Participants experienced being preoccupied in thoughts even during leisure period.

"Now-a-days, I used to forget things and when I go for one work, I end up doing something else". [Anita]

Participants experienced restlessness when they left their children at hospital with other family members. They experienced speechless or difficulty in answering queries of child and other people.

Theme 4: Coping Strategies: All participants used to ventilate their emotions by crying. They relieved stress and pain when they went to hospital and shared feelings with friends who had same problem. Also, participant and child used to support each other; participant, by taking good care of child emotionally, physically, mentally and child, by providing reassurance to participant when she felt tensed. Almost all participants strengthened their inner power to control self and accepted the unavoidable condition as well.

"Now I feel that there is no solution by crying". [Anita]

"I make my heart little bit strong. I feel that if I take good care of him, he will become healthy and recover soon". [Yamuna]

Participants hide their pain and spend time in rearing and caring child. When they involve with children, they forget their difficulties.

Nine participants expressed that they had no time to do any alternative therapy such as yoga, recreational activities and meditation. However, one of the participants who is from Newar community used to meditate occasionally. One of the participants used smoking as coping strategy to relieve stress.

Theme: 5 Optimistic Attitude: All participants had strong faith in God. They believe that child will get well as God may favor them positively.

"I keep praying to God to save my daughter. For her health, performed Pooja and also went to Phukne Manchhe. What is written in our fortune...Just hope to God". [Manita]

Nine participants expected for recovery from the disease.

"I have seen others being recovered so if there is no any obstacles, he eats well and if we also care properly in all things it will be recovered". [Rama]

Participants experienced untiring attempt for the sake of child's treatment as they had hope of recovery. They experienced sense of responsibility and determination as they said that they will do whatever they can for their child. All of them regularly maintained leukemic child's health.

"I will save her by doing anything and facing any difficulties. Our asset is our daughter. If she is with us, we have everything and if she is not with us, nothing in our life". [Anita]

Participants experienced sense of positivity due to harmonious relationship with Family. They trust doctors and nurses for recovery of their children. One participant being optimistic expressed that she will make her son doctor and another participant had planned to educate her child well in future.

Participants had positive attitude towards recovery as they got some help from others and hospital has managed free bed charge, free investigation and distributing available medicines in oncology ward.

Triangulation between In-Depth Interview and Case Study Findings: The case study findings were congruent with the verse of the participants. Somatic problems of participants continued as they undermine own health in front of their child's condition. Some contradictory findings as the duration of diagnosis and type of leukemia vary. Contradictory findings after 2.5 years of treatment as child's health was improving and hospital visit for child's treatment had decreased. Participants worried about relapse of disease. All participants had fear regarding side effects of the treatment and upcoming emergency situations. This fear was present constantly.

Discussion

Participants experienced many financial challenges during treatment which is a long process. Similarly, another study mentioned that mothers face financial burden regarding treatment.[7]

Participants were isolated from relatives, friends, parents and neighbors. This finding is supported by another study which showed that the treatment process had restricted social interaction as they spent a lot of time in taking care of the sick child.[8]

Majority of parents had left their work and were not able to complete any work as before. This is in consistent with the Canadian study which revealed that 64% of mothers left their job after their child's diagnosis.[9]

Participants experienced that their life became scary because of unexpected happening. These findings were supported by other study which mentioned that mothers experienced sadness and grief.[7]

Participants felt insecure as leukemia child had various side effects and experienced that anything can happen at any time. Another study reported that basic feelings of security departed and family members underwent more vulnerable when confronted with facts about disease.[10]

It was found that uneducated participant felt difficulty in coping as child's treatment option was bone marrow replacement and more worried in comparison to other educated participant. This finding is supported by other study which mentioned that those having lowest level of education had more psychological distress than those with university education.[11]

Conclusion

Child's Leukemia affected mothers socially, physically and psychologically. Almost all participants faced financial challenges, alteration in their daily routines and crisis situation. Most of the participants coped effectively but one participant coped ineffectively. Participants need help to cope in such situation. Support group and self help group need to be formed in order to safeguard mothers having leukemia children.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Clearance: The ethical permission was obtained from Tribhuvan University, Institute of Medicine and Kanti Children's Hospital, Maharajgunj, Nepal before conducting the research.

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Effect of Implementing Guidelines Regarding Administering Inotropic Medications for Critically Ill Patients on Nurses' Practice

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Abstract

Background: There was Limited teaching guidelines depicted for improving the practice of nurses towards inotropic medication administration, which emphasizes the importance of teaching guidelines in improving nurses' practice,

Purpose: To assess the effect of implementing guidelines regarding administering inotropic medications for critically ill patients on nurses' practice.

Method: This single-hospital, Quasi-experimental research design was used in the study. The present study was carried out at Critical Care Units. A convenient sample of all staff nurses (60 nurses), the data were collected using one tool named nurses' observational checklist.

Results: 93.3% of studied nurses had satisfactory level of practice regarding inotropic medications post implementing intervention guidelines. The post and follow up-intervention practice mean score was high 48.80, 48 respectively when compared with pre-intervention practice mean score 31.40 with P value < .001*.

Conclusion: There was significant difference in the nurses' practice mean scores regarding inotropic medications in post and follow-up implementing guidelines when compared with pre-intervention mean practice score with P value < .001. .

Keywords: *Critically ill patients, Inotropic medications, Nurses' practice and Teaching guidelines.*

Introduction

Inotropes are medications which affect the contractile activity of the myocardium. These medications are frequently used in critical care units. Inotropic medications are short- to medium-acting medications which are used to increase tone of vessels and cardiac output in variable conditions that affect critically ill patients. They are temporary used as measure until adequate cardiovascular function returns on resolution of the pathological process**.** Inotropic medications are among the most widely used medications in Critical Care Units, since they help patients to correct hemodynamic instability**(1)**.

A critical care nurse is a vital part of the health care profession, the process of medication administration is thought as one core nursing action and nursing practice daily component that spend about 40% of nurses time in the hospital to administer medications. Also, there are

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many causes why medication administration errors can be done by a nurse, which is inadequate training, lack of knowledge and practice regarding inotropic medications and high workload[2].

Inotropic medications infusion therapy is associated with many complications including myocardial ischemia and may induce hypotension in some cases. Apart from metabolic, cardiovascular and dermatologic side effects, these sympathomimetic medications may result in central nervous system stimulation including, tremors, restlessness, and even confusion and psychosis. Also, infiltration and extravasation which might occur when the intravenous solution leaks into the surrounding tissues. When a vesicant solution leaks from the vein into the surrounding tissue, extravasation occurs, whereas leakage of a no vesicant solution is called infiltration[3].

Furthermore, in Egypt and developing countries, it is hard to obtain accurate data and statistics regarding medication administration errors due to lack of proper archiving as well as the data registered system absence. Also, in Egypt there is a lack of clinical educational guidelines aimed at improving the nurses' knowledge toward medication administration in the critical care field, which affects negatively on the quality of nursing care[4]. Observational studies likewise have revealed that the majority of nurses fail to follow the 'protocols' for the safe administration of medications[5]. Therefore, the core aim of this study is to evaluate the effect of implementing intervention guidelines regarding inotropic medications for critically ill patients on nurses' practice.

Purpose: To assess the effect of implementing guidelines regarding administering inotropic medications for critically ill patients on nurses' practice

Research Hypothesis:

The following research hypothesis is formulated be formulated to fulfill the aim of this study: The nurses' practice about administering inotropic medications for critically ill patients is improved after implementing guidelines regarding administration of inotropic medications.

Method and Procedures

Design: A single-hospital, Quasi-experimental research design was used in the study; pretest and posttest design was used for this study.

Participants: A convenient sample was used in this study. At time of data collection 1st of June 2018 to end of March 2019 participants comprised nurses (male and female) (60 nurses)

Procedures:

Instruments:

Data were collected using parts as the following:

Part (1): Tool (1): It was concerned with demographic data of the studied nurses

Part (2): Tool (I): Nurses' practice observational checklist

It was developed by the researcher based on the literature[6] to assess nurses' practice regarding the administration of inotropic medications

Scoring System: The total score of the nursing practices was ranged from 0 to 53 of the 53 items of steps. The possible choice for each item was done and not done. Each nurse was given one scores for step done and zero for that was not done. A total score of 75% and more was considered satisfactory, while a score below 75% was considered unsatisfactory[4].

Data Collection: Data collection of this study was carried out over eight month period that started from 1st of June 2018 to end of March 2019.Data collection was conducted through four phases (assessment, planning, implementation and evaluation phase).

Assessment Phase: Assessment of critical care nurses' practices about inotropic medications was performed.

Planning Phase: Based on the work completed in phase one,the researcher designed the teaching guidelines based on the actual need assessment of studied nurses through reviewing the literature and based on recent evidence based teaching guidelines for administered inotropic medications.

Implementation Phase: Data of current study were collected from June 2018 to March 2019. Each nurse's practice as regards the pre-determined procedure was evaluated before any information (pre-test) utilizing the formulated checklists. Then the subject was divided in small group (6 nurses), demonstration and redemonstration were carried on 2 sessions for each nurse. Practical booklet was given to each nurse.

The number of nurses was (6 nurses) during the session. The content was repeated for each group by researcher. Demonstrations and redemonstration were used in practical teaching method as regards to media used; they were booklet, posters, real object video and redemonstration.

The tools were administered to the study subject three times (1) before guidelines implementation (pre-test); (2) immediately after guidelines implementation; and (3) follow up after guidelines to assess the effect of designed guidelines.

Evaluation of designed teaching guidelines: Nurses' practice was evaluated three times pre/ post and two months later after implementation of teaching guidelines.

Statistical Analysis: Data collected through observation checklist were coded, entered and analyzed using Statistical Package for the Social Sciences (SPSS version 20).

The following statistical techniques were used:

* Percentage.
* Mean score degree $\overline{X}$.
* Standard deviation SD.
* Paired T test
* Repeated measured ANOVA test
* Proportion probability of error (P- value) and confidence interval.

Significance of results:

* When P<0.05, there is a statistically significant difference.
* When P<0.01, there is a highly statistically significant difference.

Results

Text (1): shows that 80.7% of studied nurses' age was from 20 to less than 30 with mean age 26.13±3.35. As regard the level of education, the technical institute was the highest percent with 63.9% followed by diploma 21.3%.Also, 38.3% of studied nurses had from 3 to less than 6 years of experience. The majority of studied nurses (90.%) didn't attend courses regarding inotropic medications ago.

Table (1): Total mean scores of nurses' practice (pre-post-follow up) guidelines regarding inotropic medications (n=60)

Practice item	Pre	Post	Follow up	F test	P value
	Mean±SD	Mean±SD	Mean ±SD		
Preparation phase (drugs via infusion Pump)					
Preparing phase	2.75±1.52	4.48±1.04	4.38±.95	43.439	<.001
Preparation phase (intravenous digoxin)					
Preparing phase	2.16±1.23	4.68±.77	4.61±.78	150.86	<.001
Administration Phase (infusion pump)					
General steps	6.36±2.20	7.75±.60	7.60±.69	23.331	<.001
Administration of Adrenaline	4.31±1.26	6.55±.94	6.50±.91	118.06	<.001
Administration of Noradrenaline	2.46±1.11	4.60±.90	4.58±.86	112.53	<.001
Administration of Dopamine	3.66±1.29	5.73±.70	5.56±.85	69.721	<.001
Administration of Dobutamine	1.91±.56	2.80±.51	2.75±.50	62.72	<.001
Total Score of administration skills of infused inotropes	18.73±4.19	27.43±3.27	27.00±3.34	168.99	<.001
Administration Phase (intravenous digoxin)					
Administration of Digoxin	2.75±.79	3.91±.27	3.81±.50	87.531	<.001

Practice item	Pre	Post	Follow up	F test	P value
	Mean±SD	Mean±SD	Mean ±SD		
Post Procedure Phase (infusion Pump)					
General Steps Post-procedure	1.46±1.44	3.61±.84	3.53±.91	95.44	<.001
Post Procedure Phase (intravenous digoxin)					
General Steps Post-procedure	2.94±1.45	4.66±.91	4.66±.83	185.03	<.001
Total Practice Score (54 items)	31.41±7.71	48.80±6.60	48.01±6.65	165.207	<.001

N: sample size; SD: standard deviation; F repeated measures anova P value is significant ≤.05

Table (2): clarifies that there was statistically significant difference between the pre-practice of studied nurses and post-nurses' practice regarding inotropic medication with P value = <.001 with significant increase in their mean scores with total mean 48.80 with SD 6.60 and 48.01 with SD 6.65 respectively compared with the pre implementation phase with mean 31.41 and SD 7.71. Furthermore, that there was an improvement in the total mean scores of administration skills of infused inotropes in the post phase and follow up phase with total mean 27.43 with SD 3.27 and 27 with SD 3.34 respectively compared with the pre implementation phase with mean 18.73 and SD 4.19. Also, there was an improvement in the total mean scores of administration skills of digoxin in the post phase and follow up phase with total mean 3.91 with SD .27 and 3.81 with SD .50 respectively compared with the pre implementation phase with mean 2.75 and SD .79.

Table (2): Relationship between nurses' practice (pre and post) guidelines regarding inotropic medications (N=60).

Item	Pre- guidelines Mean (SD)	Post guidelines Mean (SD)	Confidence interval (CI)		t test	P value
			Lower	Upper		
Value	31.41(7.71)	48.80(6.60)	14.80	19.96	13.47	<.001
Mean difference (Effectiveness)	17.38(9.99)					

t test is paired sample t test, P value is significant <.05

Table (3): reveals that there was statistically significant difference between the pre-nurses' practice score of studied nurses and post-nurses' practice regarding inotropic medication with t=13.47 and P value = <.001. Also, the mean difference between the pre-nurses' practice versus post- nurses' practice was 17.38 with SD 9.99 with significant increase in their mean scores.

Table (3): relationship between nurses' practice (pre and follow up) guidelines regarding inotropic medications (n=60).

Item	Pre-guidelines mean	Follow up-guidelines mean	Confidence interval (CI)		t test	P value
			lower	Upper		
Value	31.41± 7.71	48.01±6.65	13.96	19.23	12.61	<.001
Mean difference (Effectivness)	16.60±10.19					

t test is paired sample t test, P value is significant <.05

Table (3): reveals that there was statistically significant difference between the pre-practice of studied nurses and post-nurses practice regarding inotropic medication with t=12.61 and P value = <.001. Also, the mean difference between the pre- practice versus post- practice was 16.60 with SD 10.19 with significant increase in their mean scores.

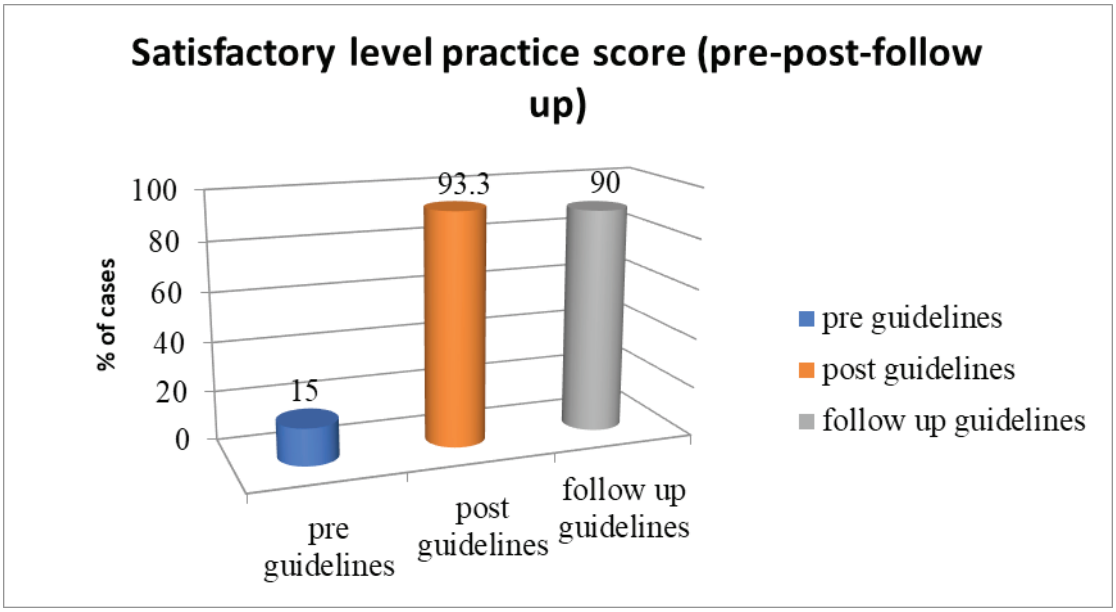

Figure (1): percentage distribution of studied nurses according to (pre- post- follow up) guidelines satisfactory level of practice (n = 60).

As illustrated by **figure (1)**, the satisfactory level of practice before guidelines implementation was 15%.On the other hand the satisfactory level of knowledge post and follow up guidelines implementation was 93.3% and 90% respectively.

Discussion

As regards nurses' practice regarding administering inotropic medications, the current study results revealed that the great majority of studied nurses had unsatisfactory practices related to administration of inotropic These results could be due to lack of medication knowledge base of nurses, limitation of medication administration process on preparing and giving to the patients. Furthermore, lack of policies, rules and training controlling the medication administration process and work overload. This point of view was generally supported by a study done by[7] which confirmed that there is no training program for improving the nurses practical performance towards medications errors, that emphasizes intervention guidelines importance to improve the practical performance of nurses

On the same line, a study done by[8] that revealed that the nurses generally did not adhere to the preparation and administration good practices, especially in double-checking, the administration and syringe labeling. Also these results were in identical line with a study done by[9] that revealed that nurses had insufficient practice regarding the medication administered.

Furthermore, these results were consistent with[10] who demonstrated lack of nurses' medication practical skills In the same context, the current results were consistent with[11] a study conducted to evaluate possible risks associated with medication administration in critical care units which depicted that there were incorrect practices related medication checking and documentation process in the medication administration as regard to the prescription, medication dosage and the administration route, preparing medication and its labeling with the appropriate patient identifiers and hand washing before and after medication administration.

As regards the nurses' practice after and follow-up intervention guidelines, these study results revealed

that the great majority of studied nurses had satisfactory level of practice regarding administering inotropic medications. These results were in correspondence with[8] who showed that the majority of studied nurses had good practices following application of intervention program.

On the same line, results done by[12] that revealed increase in post intervention mean skill regarding medication administration. Also, this study results concur with[13] who revealed that there were high statistically significant differences between pre-test, post-test and three months post-test in total mean practices scores. Moreover, these results were in the same context with [14] who revealed that there was a statistically significant difference regarding nurses' practice pre and post guidelines implementation.

Conclusion

There was significant difference in the nurses› practice mean scores regarding inotropic medications pre and after implementing guidelines with P value<.001. There was significant difference in the nurses› practice mean scores regarding inotropic medications pre and follow up implementing guidelines intervention with P value<.001

Declaration of Conflicting Interest: There is no conflict of interest

Funding: The research was not funded

Ethical Clearance: Ethical approval was taken from the faculty ethical committee that adopt the ethics rules taken by university. Nurses were informed that they were able to participate or not in the study, they have the right to withdraw from the study at any time, confidentiality and anonymity will be assured and protection of the nurse from hazards. Oral and written consent was obtained from each nurse prior to participation in the study.

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Female Caregiver Devotion as a Stress Factor in Caring for Hospitalized Elderly in Indonesia

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Abstract

Objective: To explore the female caregiver stress factors during caring for hospitalized elderly with chronic illness at Universitas Sumatera Utara/USU Hospital, Medan.

Method: This study was a qualitative research with phenomenological approach. The participants are collected with purposive sampling method with inclusion criteria; a primary female caregiver for the elderly for more than one year, have a family relationship with the elderly, above 18 years old, suffer from moderate to heavy stress and willing to participate. Before data collection, the participants are identified for stress level with the Zarit Burden Inventory instrument which consists of 12 questions and 0 to 4 scale. The data collection was conducted with an in-depth interview. The interview is verbatim transcribed and analyzed with thematic analysis.

Result: The result of this research involved nine female informal caregivers. Six caregivers are the the elderly's daughter and three of them are the elderly's wife. The age of the caregiver is varying, from 32 – 67 years old. Seven caregivers are suffering from moderate stress and two of the participants assessed with heavy stress. The research themes emerge four main themes, namely (1) Financing elderly, (2) Caregiver fatigue, (3) Experiencing negative relationship, and (4) Female devotion in the family.

Conclusion: Female devotion in a family is considered as a functional duty which impact the women in many aspects, physically and mentally. This research showed that the filial piety impacts the female caregiver in a stress condition. Therefore, it is strongly advised to consider female caregiver in a holistic intervention along with the elderly during hospitalization.

Keywords: *Female devotion, Female caregiver stress, Hospitalized elderly.*

Introduction

Caregiving process is the provision of care that are usually voluntarily and mostly carried out by the family members[(1)]. This informal health careis delivered among the children, parents, elders and the patients by involving emotional connections and a devotion to those who receive the treatment[(2)]. The female are the main caregivers among the family members who usually provide services to meet their daily needs and contribute to financial support occasionally[(3)]. Further, there are several factors that make female caregivers involved in the caregiving process such as the influence of relationship, instrumental,[(4)] and cultural dimensions[(5)].

The relationship dimension involves emotions between caregivers and the care recipients[(6)]. Mostly it is influenced by a strong bond between the families and family values that have been hereditary[(7)]. Therefore, in most cases, the female caregivers have to do the obligation without any hesitant. It's a filial piety, a devotion in which the women are responsible for

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meeting the basic needs of the person being cared for in the family, and ensuring that those people are available for a good treatment. In terms of instrumental dimension, the female be liable for financial commitment for the patient(Yu et al., 2017). And, the cultural factor is the inherent family values, such as a sense of dedication, solidarity, protection, and compassion towards others [2]. However, in many cultures, this social norms are found detrimental for women, especially in countries with patriarchal culture, such as Indonesia [8].

It is obvious that in Asian culture the women reproductive function requires women to do domestic chores, and on the other hand women were also demanded to double roles as a financial supporter[9]. This is strongly related to the community's view of the function of women as gender groups that have a main task in the internal affairs of the household. In the other hand, most women showed a submission role in which underestimate the women's rights as wives and mothers who must be respected. According to [8] the burden and responsibility of women in the household raises a complex problem, such as family conflict [7], financial burden[10], and deterioration of female caregiver health status.

In addition, the caregiving burden contribute to the women's stress and affect the mental health status [3]. According to research[11], the main stressor among female caregivers is related to the elderly decline in physiological and psychological abilities. Both health status changes of the elderly burdened the female psychological condition and suffered from a poor health status, depression, anxiety, and loneliness [12]. It is worsening since most those female is also the financial supporter for the elderly during the health care provision. Therefore, the obligation of devotion in Asian culture impact these caregivers in most of their life, affect their daily routine and in some case related to the caregiver's quality of life.

Material and Method

This is a qualitative study with phenomenological approach. The population were all informal female caregivers who deliver care to the hospitalized elderly at Universitas Sumatera Utara Hospital/USU Hospital. The sampling technique applied was purposive sampling and research samples are determined with several inclusion criteria(13), such as female above 18 years old, the female caregivers were the elderly daughters,wife, daughter-in-law, or granddaughter who act as the primary caregiver for the elderly. The elderly should receive the treatment for more than one year with chronic illness such as cancer, diabetes, dementia and frail elderly conditions. In addition, the female caregiver is the most responsible person for health care activities fulfill among the elderly, cooperative, able to speak Indonesian and determined suffer from moderate to severe stress. Prior the interview, the caregiver stress was assessed with the short version of Zarit Burden Inventory/ZBI-12[14] to screen for stress level. It consists of 12 questions with the score zero to four, from no to mild stress (0-10), mild to moderate stress (10-20) and heavy stress (above 20).

The participants recruited in this study should have the stress score above 10 and willing to participate during the data collection. There were nine female caregivers included as the research samples and interviewed with some unstructured questions such as, "*how is your feeling as the caregiver in your family? "*, or "*Would you tell me what did you feel during care your family members?"*. Interview are conducted in private area of the hospital while the others family members visit the elderly, so the caregiver had their own time for interview. All interviews are conducted in Bahasa and lasted around 60 minutes for each participant in one session. Verbatim transcription is analyzed with thematic analysis to determine themes and sub-themes.

Findings: There were nine caregivers who were participate in this study; six of them are the elderly's daughter and three of them are the elderly's wife. All participants are the main caregivers and obligate to fulfill the elderly activities daily living. The participants age is varying, from 32 – 67 years old. Seven caregivers assessed for moderate stress score and two participants identified with heavy stress. Analysis of the qualitative data emerges four themes, namely; (1) Financing elderly, (2) Caregiver fatigue, (3) Experiencing negative relationship, and (4) Female devotion in the family. The fourth theme emerged as one important aspect in Asian culture especially in Indonesia and need to be explored more in this research result.

Financing the Elderly: The most common themes in this study was financing the elderly with two sub-themes found, that are; supporting the elderly daily living expenses and less income during hospitalization. All participants were the person who took in charge for the elderly daily life activities expense including the hospitalization expenditure. One participant stated about

the monthly amount that should be provided for the elderly during treatment, *"So, we need to find strategy based on our parent need. Three of us try to give him money for daily life (P5)*.Others participants' comments about the daily living expense during hospitalization and the transportation costs,"*Since we need to bring our parent to the hospital, we try to adjust our finance, even though it really need more money (P9). "Yes, we do need to visit her twice a week in this hospital. It need money for transportation and our meal during our visit (P2)*. In addition, the result showed that the elderly hospitalization revealed less income during hospitalization since the caregiver have no chance to go to work such as the caregiver comment, *"I feel so stress since I can't make any money during his hospitalization"(P7).*

Caregiver Fatigue: The study result asserted that fatigue affects the female caregiver physically and emotionally. It found three sub-themes to describe the theme, that are; taking care of the elderly daily living activities, the elderly misbehavior and mentally exhausted. All participants are the person who deliver daily care for the elderly in the hospital. The caregivers feel exhausted to fulfill all the elderly daily activities. Some participant's statements as follows, "*Sometimes I told my husband that I'm not a nurse, I'm an ordinary person. I feel disgusted when he defecates but refuse to clean himself. I offer him my help; he insists not to. Sometimes I told him why he always silent? I want him to know that I'm so tired taking care of him (P6)*. "*Definitely I feel so tired to take care of my husbands' need. I also need to do all my chores, and taking care of my grandson (P7)*. In addition, while caring for the elderly in the hospital, the caregivers often feel pressured by elderly behavior during treatment, such as ignoring caregiver requests for prescribed treatment, as well as the elderly who show misbehavior responses, which makes the caregivers mentally exhausted like the following caregiver comments, "*My husband is so stubborn that he always refuses to obey the treatment. Sometimes it is made me so mad of him*"*(P7)."For instance, if the nurse gives her meal, I try to feed her but she always keeps silent, don't want to chew her food until I force her to do so"* (*P2).* During the hospitalization, the caregiver admits that they feel mentally exhausted with the elderly misbehavior. Some statements are as follows. "*Yes, I feel depressed. Sometimes I can't handle my emotion. But she is my mother and she's sick already. I'm the only person who works on everything for her (P9). "I feel guilty, angry, depressed. However, I need to do all of this (P5)*.

3. Experiencing Negative Relationship

The research result showed two sub-themes, that are had a negative relationship with the siblings and negative relationship with the family in law. Caregiver complains about the adjustment of the household chores, work and the elderly treatment. This situation leads to an internal conflict between families and families in law. *"For instance, I have to take care of my mother in the hospital, but a have a small child who need to go to school. So, I need my sister to change my shift and come to the hospital as soon as possible. But, she came too late, so that's why I feel angry to her (P2)*. Another participant complained about the family in law authority into their own family issues since their father hospitalization. "*No, my father denies my sister in law help since he doesn't like her. It's because her family interferes my father treatment too much. It's normal if my brother helps us, but they didn't like it (P3).*

Female Devotion in the Family: There are two main themes found related to the female devotion in the family that are females' obligation in the family and female multiple role in the family. A participant admit a statement as follows, *"What should I say? I'm the only female in my family. It is my obligation as a daughter of my parents" (P5).* This statement showed that the feeling of serving among female caregivers are considered as a functional duty in the family that must be carried out. The demands of the elderly treatment require 24-hour work with numerous care. It makes the female caregiver then sacrifice the professional job work and change into the informal sector that is more flexible in managing time. One participant said, *"I have to take care of my mother. I quit from job since it's my responsibility to take care of my mother" (P8).* This statement is similar with one of the caregiver testimony, *"I quit from my job since I need to take care of my mom. I cannot complain about it" (P4).* These two statements showed that the feeling of devotion is related to the women responsibility to take care of the family. This responsibility brings out the women destiny that should be received without any hesitation, even though the caregivers feels so stressed during the caregiving process. One participant added, "*"I said to my sister that this is what I should be, as a wife and as a caregiver for my husband" (P6).* All of these statements showed that the caregiving process among the female caregiver become an obligation in the family and culturally accepted. In fact, most of the

participants in this research showed multiple roles in the family as a daughter, a wife, a mother, a financial provider and a caregiver. This lead to a complicated situation for the female caregiver. Some respondents support with some statements. *"Yeah, I need to arrange all my responsibilities. Before 3 o'clock in the evening, I cook cookies to sell. Then, I work as a housemaid in one of the college students' house. I prepare my son's needs for his school then I also need to take care my mother after I did all my jobs" (P5).* A participant complaint for her roles in many aspects, *"Definitely I feel exhausted since I need to do my chores, taking care of my husband, taking care of my grandsons, do laundry and clean the house" (P7).*

Based on the statements above, it showed that the participants roles in the family are considered as a filial piety. It is how to return the parents' or husband in an affection way. Therefore, the participants see the caregiving process as an obligation that should not refuse. It is overwhelmed physically and stimulate stress among the caregivers, in addition, the caregivers also serve as a financial support for the elderly, not only as informal care provider. Thus, the participants must manage all the issues along with different responsibilities and different roles in a moment.

Discussion

According to the research result, it found four main themes related to the female caregiver stress during the elderly hospitalization. All female caregivers are the primary caregivers and suffer from moderate to heavy stress. According to [3], the female caregivers for hospitalized elderly showed a significant stress during care delivered, and this condition lead to a poor health status among the caregivers. It is because the caregiving process is a very stressful situation [12] and impact the caregivers physically and emotionally [4]. Based on this study result, there were nine female caregivers participated in this research; the elderly's daughters and the elderly's wife. Research revealed that women are found as the most caring gender among the family. It reached around 80% compared to the male caregiver [11].

This study asserted four themes, namely; (1) Financing elderly, (2) Caregiver fatigue, (3) Experiencing negative relationship, and (4) Female devotion in the family.Many researchers found the stress related factors to the elderly caregiving process is the issue in finance, physically and mentally exhausted and impact the family relationship. It is overwhelmed among the caregivers as the caregiving process delivered. So, it is obvious that the three main themes are normally found as the stress factor among female caregiver. But, not many researches related the stress factor to the devotion among the female caregivers. Cultures values in some ethnic groups are socially accepted are greatly influences family norms in caregiving process. This can be seen from the results of the study, that the values of female caregivers are responsible for household chores such as cooking, caring for children, washing, and taking care of the elders and being a family nurse [9]. And, in some cultures, the domestic chores among the women are considered as a pride and it describe their own position in the family [15]. Therefore, the women should support the family daily activities, social, emotional and financial support without any complaining since it's part the female responsibility [16]. The women should spare a lot of time and energy to do the chores delivered [17]. Female caregivers cannot refuse what the culture has determined them to do in caring for family members, this is considered a resistance and has an impact on family relationships [18]. The research results showed that several statements from the participants indicated that caregiving was something they could not refuse. The position as a woman in the family is a big responsibility which then demands women to feel obliged to meet all the needs concerning the elderly. In fact, all these responsibilities impact the female caregivers to suffer from stress and risk of decreasing health status [19].

Several studies have shown that the women triggers depression globally[1] with double risk compared to men[20]. Moreover, there is a habit that socially accepted in communities that the women are the financial provider. On the other hand, the women also required to serve the whole family, parenting the children and do the nurture care. Obviously, these factors are contributing to the female stress during caring for the elderly[21]. For instance, it is mostly known in Asian culture that women are the main gender who responsible in domestic chores and fulfilling family obligations[22]. In Indonesia, domestic chores are related to the female responsibility to provide daily family care[23]. Therefore, women in most regions are suffered from discrimination and injustice in most aspects, such as access for education, low payment and multiple roles in family[24,25]. In terms of family obligation, it related to the women's feeling of devotion and less autonomy to decide for herself[26]. In this case, most women are accustomed to obeyall the cultural rules

that are generally accepted in the family and community, such as not being able to have an independent opinion, or not be able to defend for her own decision. Definitely, this condition is considered in equal since woman and men have the same rights and obligations as men in most aspects.

According to the research result, it can be shown that the society recognition about the women's role is accustomed and accept the habits as determine by the society. Therefore, many of the participants chose to leave their jobs in various sectors because of the cultural values which gave responsibility for parental care to women. It is because women provide a holistic caregiving as well as support the family in household work, financial assistance and family care provider [27]. Obviously, these long-standing values in societyrelated to the women's role eventually become habits and cultural values. Thus, the factor values that civilize women as the most responsible person for the elderly care in Indonesianis considered as a factor that impacts stress on women[27]. Stress on female caregiver should be prevented because women are a gender group that is vulnerable to mental illness [20]. Instead, these women should be given interventions to increase knowledge, coping and support while providing care to the elderly[28]. So that stress on female caregiver can be prevented as early as possible.

Conclusion

Culture is a group of values that is inherent in communities and affects social life. In some cases, these values affect the women as the family caregiver. Researches revealed that women's multiple roles as caregivers and domestic workers showed a decrease in the condition of physical and mental health status. Then, it leads to the vulnerable condition of fatigue and stress. The study result showed that the tendency of women to experience stress was also caused by the women's responsibilities in household chores and elderly care which has been become a habit in community. Therefore, these women are not supposed to refuse and must provide services for 24 hours to care for families and the elderly.

Conflict of Interest: There is no conflict of interest in this study result.

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Ethical Clearance: As part of research ethics, the researchers explained the study purposes to the participants before data collection and were given informed consent to be signed as a proof of agreement as participants in this study. All participants are allowed to withdrawn anytime and there is no sanction approved. No funding was provided to caregivers during the data collection process. Written permission is obtained from the Research Ethics Committee of the Faculty of Nursing, Universitas Sumatera Utara. The permission also obtained from the Universitas Sumatera Utara Hospital

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Effectiveness of Soya Beans Versus Diaphragmatic Breathing Exercise on Level of Menopausal Symptoms among Postmenopausal Women

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Abstract

The study was conducted to evaluate the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women. Quasi experimental design was adopted for the study. The structured interview questionnaire was developed to collect the data. The sample were selected by simple random sampling (lottery) method and data collection was carried out among 70 postmenopausal women in selected villages. Pretest was conducted with Modified Greene Climacteric Scale and Post test was conducted on 21st day. The findings revealed that the mean score level of menopausal symptoms among postmenopausal women in study group I was 39.25 in pre test and 36.34 in post test respectively. The paired 't' value of 1.69 which is significant at $p<0.05$ .It shows that soya beans was effective in reducing the menopausal symptoms. In study group II the mean score on level of menopausal symptoms among postmenopausal women was 36.71 in pre test and 29.62 in post test respectively . The estimated paired 't' value was 1.69 which was also significant at $p<0.05$. In this study the investigator concluded that soya beans and diaphragmatic breathing exercise are effective in reducing menopausal symptoms, but diaphragmatic breathing exercise was more effective than soya beans.

Keywords: *Effectiveness, diaphragmatic breathing exercise, soya beans,menopausal symptoms, postmenopausal women.*

Introduction

Women experience various turning points in their life cycle, which may be development or transitional. Midlife is one such transitional period which brings about important changes in women[9]. Menopause is a unique stage of female reproductive life cycle, a transition from reproductive to non-reproductive stage .All women who live up to 50 years or more go through a period of transition from reproductive to non-reproductive stage of life[8]. Soy products contain isoflavones are part of a group of plant based chemicals called phytoestrogens .These chemicals act like a weaker form of estrogen in the body. The main isoflavoens in soy are genistein and daidzein. When consuming soy, bacteria in your intestines break it down into its more active forms. Soy isoflavones bind to the same receptors as estrogen .Receptors are like docking stations on the surface of cells. When isoflavones bind to some receptors, they mimic the effects of estrogen . When is flavones mimic estrogen, they might help reduce hot flashes and other symptoms of menopause[10]. Diaphragmatic breathing, or deep breathing, is breathing that is done by contracting the diaphragm, a muscle located horizontally between the thoracic cavity and abdominal cavity. Air enters the lungs, the chest does not rise and the belly expands during this type of breathing .Diaphragmatic breathing is also known scientifically as eupnoea, which is a natural and relaxed form of breathing in all mammals[10].

Statement of the Problem: A Quasi experimental study to compare the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in selected villages at Kanyakumari district.

Objectives:

- To assess the pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.
- To evaluate the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in study group I and study group II.
- To compare the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among post postmenopausal women in study group I and study group II.
- To find out the association between pretest level of menopausal symptoms among postmenopausal women with their selected demographic and clinical variables in study group I and study group II.

Hypotheses:

H_1: There is a significant difference between pre and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H_2: There is a significant difference between posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H_3: There is a significant association between pretest level of menopausal symptoms in study group I and study group II among postmenopausal women with their selected demographic and clinical variables.

Research Methodology

Research Approach: The investigator utilized quantitative research approach study

Research Design: Quasi experimental design was adopted for the study,

Research Setting: The study was conducted at villages, Kanyakumari district.

Population: The population under study constituted postmenopausal women with menopausal symptoms

Sample: Postmenopausal women with menopausal symptoms between the age group 40 to 60 years.

Sample Size: 70 postmenopausal women with menopausal symptoms**.**

Sampling Technique: Simple random sampling technique (lottery method).

Description of Tool: The tool used in the study consisted of three parts

Part I and Part II: Demographic and Clinical variables: In this part, structured questionnaire was used to collect the demographic variables such as age, education, occupation, marital status,type of family, dietary pattern, previous knowledge on soyabeans and diaphragmatic breathing exercise and the Clinical variables such as Body Mass Index, age at menarche, number of children, type of delivery, history of medical illness, under any treatment and duration of menopausal symptoms.

Part III: Modified Greene Climacteric Scale: Modified Greene Climacteric Scale was used to assess the level of menopausal symptoms among postmenopausal women. The total score was 66 and it was categorized as follows

Range Level of Menopausal Symptoms

0-22 Mild

23-44 Moderate

45-66 Severe

Method of Data Collection:

Phase I: Pretest: After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing, Chunkankadai and the Block Medical Officer, Structured interview schedule was used to collect the demographic and clinical variables.

Pretest was conducted from the selected postmenopausal women with Modified Greene Climacteric Scale in study group I and study group II.

Phase II: Intervention: The investigator explained the postmenopausal women about the importance of soyabeans and diaphragmatic breathing exercise to reduce the menopausal symptoms. 50 gram of boiled soyabeans, once daily for 21 days before breakfast for 35 women in study group I and diaphragmatic breathing exercise twice a day for 21 days for 35 women in study group II.

Phase III: Post test: The post test was conducted on 21st day with Modified Greene Climacteric Scale. Analysis of the data was done by using descriptive and inferential statistics.

Results

Table 1: Comparison of mean SD and paired ~t| value on pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II. N=70

S.No.	Group	Mean	SD	df	Paired ~t| test
1	Study group I n=35 pretest	39.25	5.57	34	1.69
	post test	36.34	4.45		
2	Study group II n=35 pre test	36.71	9.64	34	1.69
	post test	29.62	4.47		

Significance at < 0.05

Table 2 Mean standard deviation and value of posttest level of menopausal symptoms of soya beans versus diaphragmatic breathing exercise in study group I and study group II N= 70

Variable	Study group-I n=35		Study group II n= 35		~t| value	Table Value
Level of menopausal symptoms during post test	Mean	SD	Mean	SD	4.57	2.776*
	35.48	4.54	29.62	4.47		

Significance at <0.05

Discussion

The study is to compare the effectiveness of Soyabeans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women. Based on the data collected, the mean score on level of menopausal symptoms post test value was 35.48 in study group I and mean score in 29.62 post test in study group II . The unpaired' t' value is 2.77. It shows that Diaphragmatic breathing exercise is more effective in reducing the menopausal symptoms among postmenopausal women.

Conclusion

The study concluded that soya beans and diaphragmatic breathing exercise are effective in reducing menopausal symptoms, but diaphragmatic breathing exercise was more effective than soya beans.

Acknowledgement: I wish to thank god almighty for all the blessings showered upon the beginning to till end of the research study. It is my privilege to express my sincere gratitude and heartfelt thanks to Dr. A. Reena Evency, Principal,Dr. Feby ., Vice Principal, and my research guide Mrs. D. Shiny Mary., Associate professor in St. Xaviers Catholic College of Nursing, Chunkankadai, and my mother Mrs. S. Mallika, Brother's S. Muthu Vel, S. Seenivasan and my husband Mr. Sahaya Prince for their endless support throughtout the study.

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Conflict of Interest: There was no conflict of interest.

Source of Funding: Self

Ethical Clearence: The proposed study was conducted after the approval of the Dissertation Committee of St . Xaviers Catholic College of Nursing, Chunkankadai.

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Effectiveness of Foot Reflexology on Level of Depression among Old Age People

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Abstract

Depression is the most common mental disorder among old age in India and one of the most disabling condition worldwide. It is difficult to differentiate clinical symptoms of depression in old age from symptoms of normal ageing. Depression is found among 15% to 50% of residents in long term care depending on old age home. It is possible to improve mental capacities and coping skills that are affected by depression with daily activities that delay the onset of behavioural disturbances and reduce caring time. Foot reflexology would be the tool that may help to preserve mental capacity of old age people. The study was conductedto evaluate the effectiveness of foot reflexology on level of depression among old age people. Pre experimental one group pre-test post-test design was adopted to evaluate the effectiveness of foot reflexology on level of depression among old age people. 50 participants were selected using purposive sampling technique. Yesavage's Geriatric Depression scale was used to assess the level of depression among old age people. Pre-test was done among old age people with depression and foot reflexology was given to the selected participants with mild and severe depression for 20 minutes, once in every three days for 10 sessions. The post-test was done after the intervention with the same scale. Findings reveals that pre-test score of depression among old age people, none of them were normal, 38(76%) of them had mild depression, 12(24%) of them had severe depression. While analysing the post-test score of depression among old age people, 26(52%) of them were normal, 18(36%) of them had mild depression, 6(12%) of them had severe depression. The mean pre-test value was 17.94, the mean post-test value was 10.86,the standard deviation was 4.948 and the calculated 't' value was 26.2*. The calculated 't' value was greater than the table value, so there was a significant difference between pre-test and post-test score. Hence the research hypothesis (H_1) is accepted. The score represents that foot reflexology was effective in reducing the depression among old age people.

Keywords: *Effectiveness, foot reflexology, depression, old age people.*

Introduction

Depression is a condition which can impact the entire body. It changes how we think about ourselves and other people. Depression impacts our nervous system, influences how we react to some situations, and changes our mood. Although depression can be treated and managed with traditional medicine, reflexology has promised to work wonders in terms of depression treatments[4].

World's populations of old age people between 2015 and 2050 will nearly double from 12% to 22%. Mental and neurological problem among old age people may be 6.6% of the total age group. Approximately 15% of old age people will suffer from a mental disorder[3].

There are issues involving in the old age are neurological disorders, substance use problem, diabetes, hearing loss, osteoarthritis. In 2050 the proportion of the world's old age population is about 22%; this is an expected increase from 900 million to 2 billion people over the age of 60. At this age people face physical and mental health problems which need to be treated. These disorders in old age people account for 17.4% of years lived with disability. In the world's old age population 7% affected with depression and dementia, 3.8% of old age population affected by anxiety disorder, 1% affected by substance use problems.

In worldwide depression is a common illness. Depression is different from mood fluctuations and emotional responses. Depression may become a serious

health condition if mood fluctuations and emotional responses long lasting. In the family depression can cause the person to suffer greatly and function poorly at work. Depression may cause suicide. Suicide results in an estimated death of 1 million per year. Depression can cause impairment in functioning of daily life. Symptoms of depression untreated due to co-occur with other problems[4].

Even though there are effective treatment for depression, many of those affected in the world is not receive such treatments. Lack of resources, lack of trained health care providers, and social stigma associated with mental illness are the barriers to effective treatment. Inaccurate assessment also a barrier to effective care. Even in some high income countries, depression is not correctly diagnosed and in some occasion people are misdiagnosed by the medical professionals. The burden of depression is on the rise globally[6].

Reflexology is aimed at promoting health in body organs and releasing stress from the body. Bystroking, massageing and applying pressure to such points, therapist can unblock energy flow and release stress from the nerve endings. According to ancient chinesephilosophy, energy flow can be blocked in the nerve endings and cause disease like depression[3].

Statement of the Problem: A Pre experimental Study to Evaluate the Effectiveness of Foot reflexology on Level of Depression among Old age people in Selected Old age homes at Kanyakumari district.

Objectives:

- To assess thepretest and posttest level of depression among old age people.
- To evaluate the effectiveness of foot reflexology on level of depression among old age people.
- To find out the association between pretest level of depression among the old age people with their selected demographic variables.

Hypotheses:

H_1: There is a significant difference between pretest and posttestlevel of depression among old age people.

H_2: There is a significant association between pretest level of depression among old age people with their selected demographic variables.

Research Methodology

Research approach: The investigator utilized Quantitative Research approach.

Research Design: Preexperimental one group pretest posttest research design was used in this study.

Research Setting: The study was conducted at old age home, Kanyakumari District.

Population: Old age people with depression.

Sample: The investigator selected old age people with mild and severe depression between the age group of 61 to 80 years.

Sample size: Sample size consisted of 50 old age people with mild and severe depression.

Sampling technique: Purposive sampling technique was used to select the old age people.

Description of Tool: The tool used in this study consisted of two parts.

Part-1:

Demographic Data: A Structured Interview schedule was used to collect the demographic variables like age, sex, religion, education, previous occupation, previous income, present income, previous type of family, marital status, number of children, duration of stay at old age home, reason for joining in old age home, medical illness.

Part-2: Yesavage's Geriatric depression scale (1983) Assessment

J.A. Yesavage's Geriatric depression scale (1983) consisted of 30 items, scores ranged from 0 to 30, the Yesavage's geriatric depression scale questions are answered as "yes" or "no". One point was assigned to each answer and the total score was rated on scoring grid.

Scoring interpretation of Yesavage's Geriatric Depression Scale (1983)

Score	Level of depression
0-9	Normal
10-19	Mild depression
20-30	Severe depression

Description of Intervention: Foot reflexologyis a therapeutic method of relieving pain by stimulating pre-defined pressure points on the feet and hand. Explain procedure to the old age people. Provide comfortable position to the old age person. Provide warmth to the left foot by simply massageing the foot. Start from the left foot. Provide massage to the solar flexes for 5 times. Massage upward for 5 times from the solar flexes. Massage downwards toward the foot for 5 times from the solar flexes. Rotate each toe 5 times in clockwise likewise in anticlockwise motion. Massage the upper part of the foot and then ankle of foot. Give pressure in the base of big toe. Do the same for the right foot.

Method of Data Collection:

Phase -I: Selection of old age people: After obtaining formal permission from the Principal of St. Xavier's catholic college of nursing, Chunkankadai and Administrator of old age home, Old age people were selected based on the criteria of sample selection. The investigator obtained oral consent from each participant and proceeded with data collection.

Phase-II: Pre test: The data was collected from the selected old age people and the Yesavage's Geriatric Depression Scale was used to assess the level of depression. Among them 50 old age people had mild and severe depression were selected for the study.

Phase-III: Intervention: Foot reflexology was given to selected old age people who were mild and severe depression. The intervention was given for the duration of 20 minutes once in every three days for 10 sessions. 50 old age people were divided into three groups. Foot reflexology was given to the 1st group for 1st day, 2nd group for 2nd day, 3rd group for 3rd day. Accordingly the foot reflexology was given for 10 following sessions.

Phase-IV: Post test: The post test was conducted at the end of fourth week by using Yesavage's Geriatric Depression Scale.

Findings: The distribution of demographic variables of the participants of 50 old age people with mild and severe depression. Regarding age, 16(32%) of them were 61- 65 years old, 5(10%) of them were 76-80 years old. Regarding sex, 21(42%) of them were males, 29(58%) of them were females. Analysing religion, 36 (72%) of them were christians, 14 (28%) of them were hindu. According to education, 21 (42%) of them were illiterate, 1 (2%) of them did higher secondary education. With regard to the previous occupation, 26(52%) of them were self-employed, 1 (2%) of them was private employed. Regarding to previous income, 20 (40%) of them got Rs.1000-5000, 2 (4%) of them got above Rs.20000. According to present income, 1(2%) of them were getting Rs.1000-5000, 48 (96%) of them were not getting any income. Regarding to previous type of family, 35 (70%) of them belongs to nuclear family, 1 (2%) of them belong to extended family. Analysing marital status, 6 (12%) of them were separated, 24(48%) of them were widower. According to number of children, 14 (28%) of them don't have children, 8 (16%) of them had more than 3 children. With regard to duration of stay in old age home, 8 (16%) of them were staying for 1-3 years, 22 (44%) of them were staying for more than 3years. Analysing reason for joining old age home, 6 (12%) of them were joined due to poor economic status, 19 (38%) of them were joined due to family conflicts. According to medical illness, 16 (32%) of them had illness, 34 (68%) of them had no illness.

Figure 1 shows that during pre-test, 38 (76%) were had mild depression, 14 (24%) were had severe depression. During post-test 26 (52%) of them were normal,18 (36%) of them were mild depressive, 6 (12%) of them were severe depression.

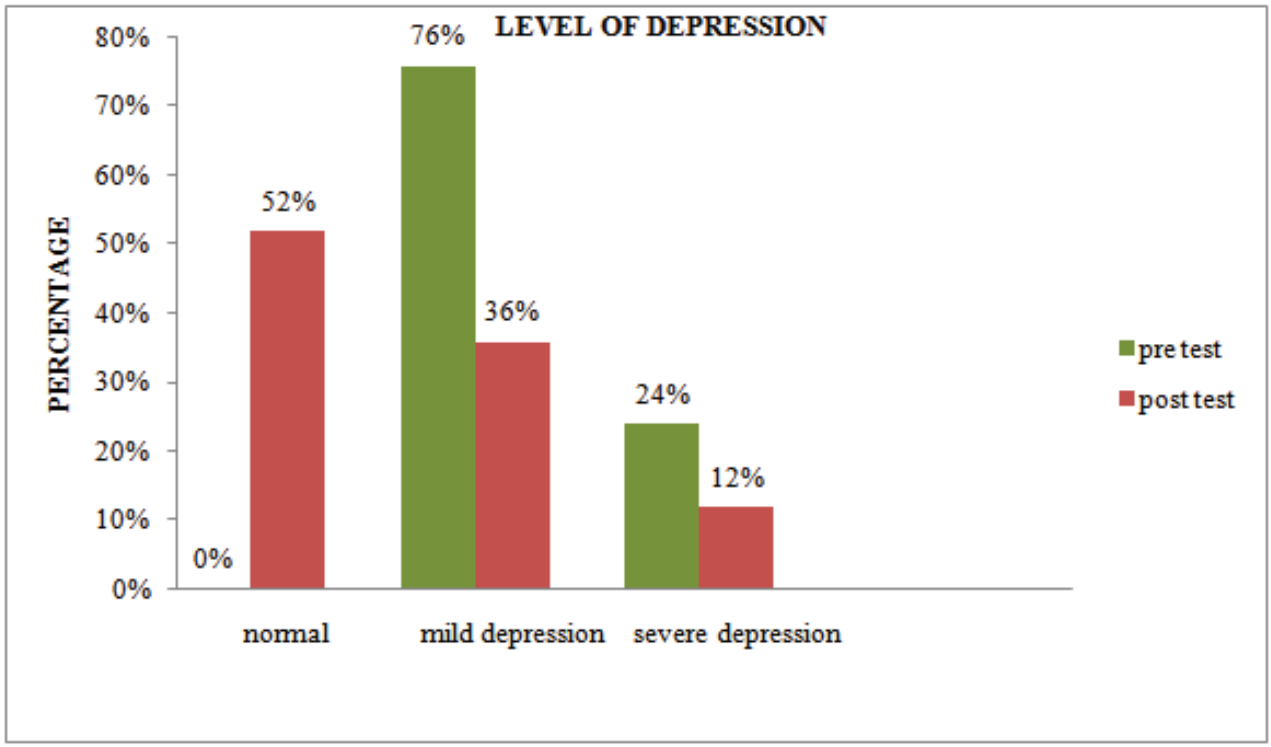

Figure 1: Pre-test and post-test percentage distribution of level of depression among old age people.

Table 1: Comparison of mean, standard deviation, and paired 't' test value of pre-test and post-test level of depression among old age people. n=50

S.No.	Variables	Mean	Standard Deviation	't' value	Table value
1.	Pre-test	17.94	4.637	26.2*	2.02
2.	Post-test	10.86	4.948		

*Significant at $p<0.05$

Table 1 shows that the pre-test mean score of depression was 17.94 and standard deviation was 4.637. In post-test mean score was 10.86 and standard deviation score was 4.948. The't' value between pre-test and post-test score was 26.2*. The calculated 't' value was greater than the table value which was significant at $p < 0.05$. Hence the foot reflexology was effective in reducing depression.

Discussion

The prevalence of level of depression among old age people, 28(31.1%) were normal, 38(42.2%) were mild depressive, 24(26.6%) were severe depressive. During pre-test, 38 (76%) were had mild depression, 14 (24%) were had severe depression. During post-test 26 (52%) of them were normal, 18 (36%) of them were mild depressive, 6 (12%) of them were severe depression.

The pre-test mean score of depression was 17.94 and standard deviation was 4.637. In post-test mean score of depression was 10.86 and standard deviation score was 4.948. The 't' value between pre-test and post-test score was 26.2*which was significant at $p<0.05$. The calculated 't' value was greater than the table value so there was significant difference between pre-test and post-test score. It shows that foot reflexology was effective in reducing depression among old age people.

Conclusion

The study concluded that providing foot reflexology was effective in reduce depression among old age people.

Conflict of Interest: Nil

Source of Funding: The study was self funded.

Ethical Clearance: Obtained permission from institutional ethical clearance committee. Confidentiality of subjects was ensured.

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Prevalence of Dental Caries and the Effectiveness of Demonstration on Dental Hygiene among Primary School Students in Selected Schools of Rural Community, Assam

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Abstract

Introduction: Oral health promotion through schools is recommended by WHO for improving knowledge, attitude and behaviour related to oral health and for prevention of dental diseases among school children. In India, 70 -72% of population live in the rural areas of which more than 40% are children. These children tend to be more vulnerable to oral health problems.

Aim and Objective: To assess prevalence of dental caries and the effectiveness of demonstration on dental hygiene among primary school students.

Material and Method: The study was a cross-sectional study conducted at selected schools of Rani rural community of Kamrup District, Assam. 118 primary school students of class IV and V were selected using consecutive sampling technique. The subjects were assessed for the presence of dental caries using dmft scoring and observed for their practice of brushing with Fones method of brushing. Later demonstration for the Fones method was given to the participants and post test was done to evaluate the effectiveness of demonstration. The collected data was analyzed using SPSS version 20 software.

Results: The study showed that more than half i.e., 92 (78%) of the students have dental caries. It was found that in pre-test, 79 (61%) of the participants have good practice of dental hygiene which was increase to 93 (78.8%) in post test. Again, in pre-test 46 (39%) of the participants have poor practice of dental hygiene, which was reduced to 25 (21.2%) in post test. The mean post test practice score (7.03) is higher than the mean pre test practice score (4.70) of dental hygiene. The median post test practice score (7) is also higher than the median post test practice score (5) of dental hygiene and the post test SD (0.67) seems to be less disperse than the pre test SD (0.73) of dental hygiene. It also shows that the "t" value (-28.482) and p -value 0.00 is highly significant at 0.05 level of significance. So it is evident that the demonstration on Fones method of brushing is effective in increasing the dental hygiene practice among the students.

Conclusion: Regulating good practice of dental hygiene is important during the early school period. As health personnel, community nurse can take active role in imparting information on dental hygiene practice among students by conducting school health programme and demonstrating on brushing technique. And also recommending inclusion of dental hygiene in the curriculum of the school.

Keywords: *Practice of dental hygiene, Fones method of brushing.*

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Introduction

"Children are like wet cement; whatever falls on them makes an impression." –Haim Ginott

School children represent about 25% of total population in India. This very size of the population

suggests that health care of the school children can contribute to the overall health status of the country. The health and well being of school children has become a high profile issue, lying at the heart of numerous government initiatives and policies and receiving considerable public attention.[1] Dental caries is one of the most common chronic disease that affect individuals at all ages. The ages for greatest vulnerability are 4-8 years for the primary dentition and 12-15 years for the secondary (or) permanent dentition. Dental caries, if untreated, result in total destruction of involved teeth.[2]

There is a saying that "Mere teaching of cleanliness of body and surrounding is not enough unless it is effectively demonstrated". "Cleans" to be observed by all children include clean environment, clean hands, clean food, clean water, clean mouth, clean teeth and clean tongue. Therefore, the mouth has to be kept clean and healthy. School age is a period of overall development. If proper oral hygiene habits are cultivated during this period, habits will go a long wayin maintaining the oral health of a child throughout the life.[4]

According to Osler "Oral cavity is a mirror of rest of the body." Dental caries remain one of the commonest disorders affecting the teeth, starting right from the early age. School ages are lost because of dental problems and dental visit, with poor children reporting almost 12 times restricted activity day due to dental related illness than higher income children. Between 11% to 72% of poor children have been found to have early childhood caries. One study found that school age dental decay could be predicted in toddler by determining the frequency of brushing and other variables. This suggests the importance of regular brushing of young children.[6]

WHO reports that 60-90% of school children worldwide have experienced dental caries, with the disease being most prevalence in Asia and Latin America.[1] The scenario in India also shows similarities with other developing countries. Prevalence study on dental caries in India has shown a results ranging from 31.5% to 89% (Wolters et al. 2011).[7]

Healthy, clean, strong and good teeth are like a valuable possession. Therefore, attention should be paid to the dental care.

Material and Method

A quantitative research approach was considered to be the most appropriate and adopted for the study.

Research Design: A pre-experimental one group, pre-test post test design has been used to attain the objectives of the present study.

Group	Pre-test	Intervention/Treatment	Post test
Experimental group (class IV and V students of primary schools in Rani rural community)	O_1	X	O_2

O_1- Pre-test: Observation on correct practice of brushing among primary school children.
X- Intervention: Demonstration on Fones method of brushing teeth.
O_2- Post test: Observation on correct practice of brushing among school going children.

A total of 118 primary school students of class IV and V from selected schools of Rani rural community of Kamrup District, Assam, were selected using consecutive sampling technique for the study.

The data were collected from 4th February to 4th March 2019. The investigator checks for the presence of dental caries of all the participants one by one. The time taken to check the oral condition for each student was 2-3minutes. Later observation of their practice of brushing teeth with the observation checklist on Fones method of brushing teeth. The time taken by each student was 3-5 minutes. Followed by demonstration on Fones method of brushing teeth using model of denture and toothbrush for 5 minutes. On the 8th day, post-test was done to observe the skills in practice of brushing teeth by the participants using the same tool.

Ethical approval was obtained from Institutional Ethical Committee of Army Institute of Nursing Guwahati. Formal permission was taken from the Headmaster/ Headmistress of the selected schools of Rani rural community. Informed consent was taken from the parent/guardian of the participants prior to the study.

Privacy and confidentiality was maintained throughout the study.

Findings: Data analysis was done using spss version 20.

Description of selected demographic variables: a total of 118 students were present in the study, out of which 61(52%) of participants are girl and 57(48%) of them are boy. Most of the participants have one sibling (39.8%) and (46.6%) of the participants are first child of their parent. More than half of the participant's parent was daily wagers by occupation (70.3%) and only few (2.5%) of the participant's parent have completed their senior secondary standard.

Prevalence of Dental Caries: The prevalence of dental caries in this study is found to be high i.e. 92 (78%) out of 118 are having dental caries and only few i.e., 26 (22%) of them does not have dental caries.

Effectiveness of Demonstration: It was found that in pre-test, 79 (61%) of the participants have good practice of dental hygiene which was increase to 93 (78.8%) in post test. Again, in pre-test 46 (39%) of the participants have poor practice of dental hygiene, which was reduced to 25 (21.2%) in post test. The mean post test practice score (7.03) is higher than the mean pre test practice score (4.70) of dental hygiene. The median post test practice score (7) is also higher than the median post test practice score (5) of dental hygiene and the post test SD (0.67) seems to be less disperse than the pre test SD (0.73) of dental hygiene. It also shows that the "t" value (-28.482) and p -value 0.00 is highly significant at 0.05 level of significance. So it is evident that the demonstration on Fones method of brushing is effective in increasing the dental hygiene practice among the students.

Table 1: Frequency and Percentage Distribution of Participants with Dental Caries N =118

Dental Caries	f	Percentage
Present	92	78%
Absent	26	22%

Table 2: Frequency and Percentage Distribution of Practice of Dental Hygiene of the Participants. N=118

Category	Pre-test			Post test		
	Score range	f	%	Score range	f	%
Poor practice	0-4	46	39%	0-6	25	21.2%
Good practice	5-8	79	61%	7-8	93	78.8%

Table 3: "t" Test of Pre Test and Post Test Practice Score on Dental Hygiene. N=118

Knowledge Score	Mean	Median	Standard deviation	"t" value	P value
Pre test	4.70	5	0.73	-28.482	.000
Post test	7.03	7	0.67		

Conclusion

Dental caries is one of the common problem of children. The education has a vital role in improving practice of the students regarding dental hygiene. Since school education is an integral part of medical and dental services, nurses can play an important role in health educational programme, making the children an important channel for disseminating the health information to the families and the communities. Frequent screening for dental caries and demonstration on correct technique of brushing teeth can help in reduction in prevalence of dental caries among the primary school students.

Limitations:

The present study has following limitations:

- Small sample size from selected schools of Rani rural community of Kamrup district, Assam, which limits the generalization of the findings.
- Sample of the study was limited to class IV and V students only.
- Sampling technique was non- probability consecutive sampling technique.

Recommendations:

- A comparative study can be conducted on the prevalence of dental caries among rural and urban primary school children.
- A follow-up study can be conducted to determine the effectiveness of the demonstration method of teaching on dental hygiene for school children.

CONFLICT OF INTEREST: There is no conflict of interest.

SOURCE OF FUNDING: Self

Ethical Clearance: The study was approved by Institutional Ethical Committee of Army Institute of Nursing Guwahati, Assam on 4th May 2018.

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Facilitators and Barriers in Initiation of Breastfeeding within One Hour of Child Birth among Women at Selected Community

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Abstract

Introduction: Most of the world's new-born are left waiting too long to begin breastfeeding. In 2017, 78 million new-borns were estimated to wait more than one hour to be put to the breast. This study aimed to assess the facilitators and barriers in initiation of breastfeeding within one hour of child birth.

Methodology: A retrospective study was conducted at selected community in Chennai with a sample size of 60 mothers through purposive sampling technique. Data was collected using demographic variable proforma, obstetrical variable proforma, checklist to assess the facilitators and barriers in initiation of breastfeeding within one hour of childbirth.

Results: In initiation of breastfeeding Majority of the mothers felt antenatal preparation (100%) and support from health professionals (54.4%) as Facilitators,96% of the mothers considered Pain during labour and new-borns refused to feed as the barriers. There was significant association between initiation of breastfeeding within one hour of childbirth and selected Variables such as age of the mother (χ^2 = 5.1428), knowledge about breastfeeding (χ^2 = 4.826) and source of information from health professionals (χ^2 = 4.343, p>0.50).

Conclusion: This study helps in understanding the facilitators and barriers in initiation of breastfeeding. By analysing these factors, Nurses and nursing students can step up to empower mothers to promote early breastfeeding.

Keywords: *Facilitators, Barriers, Initiation of Breast feeding.*

Introduction

The first hours and days after birth are one of the riskiest periods of a child's life — but getting an early start to breastfeeding offers a powerful line of defence. India ranks 56th among the 76 countries that were analysed. The report, released ahead of World Breastfeeding Week (August 1 to 7), says that only two in five newborns are breastfed within the first hour of life across the world.[1]

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According to NFHS 2017, Mishra, Secretary, Ministry of Health and Family Welfare, stated that about 20% new-born deaths and 13% under-five deaths can be prevented by early initiation of breastfeeding. At about 99.9% in both urban and rural areas, Kerala has the highest institutional births in the country. Tamil Nadu is close to second position with 99.2% institutional births in urban areas and 98.7% in rural areas. Yet, In Tamil Nadu only 55% of them only were initiated to breastfeed within one hour of birth[2].

Breastfeeding within the first hour of life has been shown to reduce high neonatal mortality by 22%. A Study was conducted on Delayed Breastfeeding Initiation Increases Risk of Neonatal Mortality. The analysis was based on 10947 breastfed singleton infants born between

July 2013 and June 2014 who survived to day 2 and whose mothers were visited in the neonatal period. The results showed that breastfeeding was initiated within the first day of birth in 71% of infants and by the end of day 3 in all but 1.3% of them; 70% were exclusively breastfed during the neonatal period. Thus promotion of early initiation of breastfeeding has the potential to make a major contribution to the achievement of the child survival millennium development goal[3].

Today, breastfeeding continues to play an important role in infant and child health. Skin-to skin contact immediately after delivery will help us in the promotion of early initiation of breast feeding which would save 1.45 million lives of new-born. Therefore the investigator has conducted this study to evaluate the facilitators and barriers in initiation of the breast feeding within one hour of childbirth that can enhance the initiation of breastfeeding at the earliest which is safe and can be easily practiced by the health personnel.

Statement of the Problem: A Community Based Retrospective Study on Facilitators and Barriers in Initiation of Breastfeeding within One Hour of Child Birth among Women in Selected Community.

Objectives:

1. To assess the facilitators and barriers in initiation of breastfeeding within one hour of delivery among mothers
2. To find out the association between the selected demographic variables and initiation of breastfeeding within one hour of delivery among mothers
3. To find out the association between the selected obstetrical variables and initiation of breastfeeding within one hour of delivery among mothers.

Null Hypotheses:

H01: There will be no significant association between the selected demographic variables and initiation of breastfeeding within one hour of delivery among mothers.

H02: There will be no significant association between the selected Obstetrical variables and initiation of breastfeeding within one hour of delivery among mothers.

Materials and Method

The study was conducted after obtaining ethical clearance from IEC of the institution and setting permission from concerned authorities. Rapport was established by explaining the research purpose to the participants. Sixty participants were selected using Purposive sampling technique. The sample includes mothers with babies of 6 months to 1 year of age. The data was collected using tools such as Demographic and Obstetric Variable proforma. Check List to assess the facilitators in initiation of breastfeeding consists of 10 items. Checklistto assess the barriers in initiation of breastfeeding consist of 15 items. The data was collected through interview method.

Results

The collected data was entered in excel and analysed with appropriate descriptive (frequency, percentage, mean and SD) and Inferential (chi-square) statistics using SPSS-20.

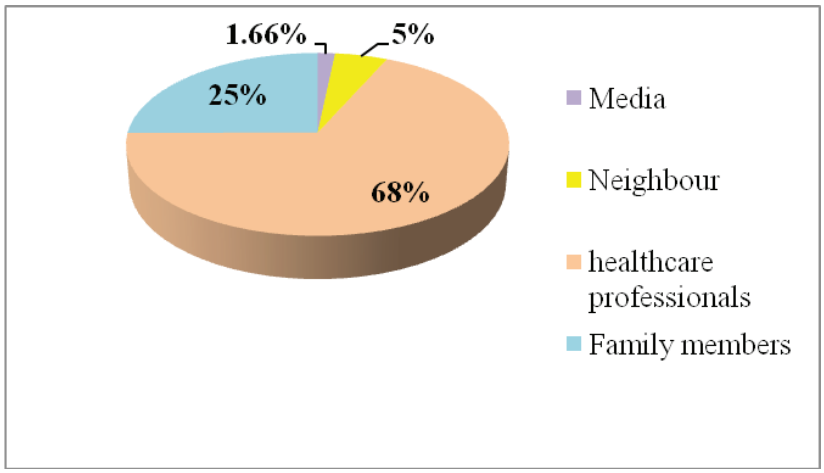

Figure 1: Percentage Distributions on Source of Information on Initiation of Breastfeeding among Mothers.

Results show that in the demographic variable proforma, majority of the mothers age were between 21 – 30 yrs. (63.33%). Nearly half of the mothers lived in nuclear family (48.33%) and in the urban (46.66%) and majority of the mothers responded that they were aware about early initiation of breastfeeding (73.33%).

Figure 1 Depicts that majority of the mothers' source of information on breastfeeding was from health care professionals (68.33%).

Table 1 Frequency and Percentage Distribution of Obstetrical Variables in Initiation of Breastfeeding within 30 to 60 mts of Delivery among Mothers (N=60)

Obstetrical variables	f	%
Parity		
Primi para	38	63.33
Multi para	22	36.66
Gestational age at birth		
38- 40 weeks	49	81.66
41-42 weeks	11	18.33
Mode of delivery		
Normal vaginal delivery	25	41.66
LSCS	35	58.33
Breast condition of the mother		
Normal	59	98.33
Breast complications	1	1.66

Table 2 depicts majority of the mothers were primi mothers (63.3%), gestation age at the time of delivery was 38 to 40 weeks (81.6%), delivered through LSCS (58.3%), babies born were boys (66.6) and didn't have any complications during labor (98.33%). More than half of the mothers had difficulty in promoting an effective latch of the baby (58.3%).

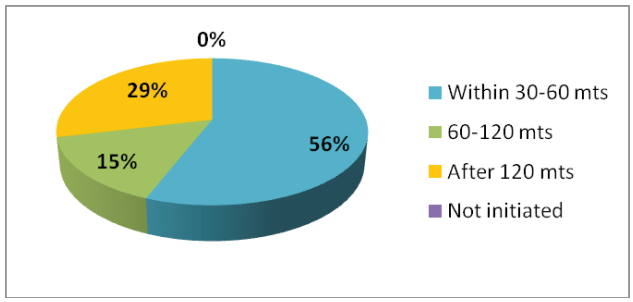

Fig. 2. Percentage Distribution of Initiation of Breastfeeding after Delivery

Figure 2 reveals that 56% of mothers initiated breastfeeding within 30 to 60 mts after child birth and 15% of them initiated within 60 to 120 minutes and 29% of them initiated after 120 minutes.

Table 2: Item Wise Analysis of Frequency and Percentage Distribution of Facilitators in Initiation of Breastfeeding within 30 to 60 mts of Delivery among Mothers (N = 33)

Item. No	Facilitators	f	%
1.	I was prepared during antenatal period	33	100
2.	I had consistent feedback and encouragement from health professionals	18	54.54
3.	My family members motivated me to feed	33	100
4.	I was interested to initiate early feeding as I know its benefits	28	84.84
5.	I wanted my baby to be healthy	33	100
6.	Breast feeding was the god gifted opportunity to bond with the baby	33	100
7.	I believe contribution of breast feeding to infant's growth and wellbeing	33	100
8.	I feel I am normal, if I feed my baby early	33	100
9.	I can understand the feeding cues of baby	22	66.66
10.	Did the staff encourage you to look for signs your baby was ready to feed and offer you help with breastfeeding.	33	100

This table shows that all of the mothers (100%) responded that they were prepared during antenatal period, their family members motivated them to feed, they want their babies to be healthy, and they felt that breastfeeding was God gifted opportunity to bond with the baby. The mothers also assured that the staffs encouraged to breastfeed early. More than half of the mothers (54.4%) had consistent feedback and encouragement from health professionals. Majority of the mothers were interested to initiate early feeding as they knew its benefits (84.4%) and understood the cues of the baby (66.66%).

Table 3: Item Wise Analysis of Frequency and Percentage Distribution of Barriers in Initiation of Breastfeeding within 60 to 120 mts or > 120 mts among Mothers (N = 27)

Item. No	Barriers	f	%
1.	I was having pain after labour process	26	96.29
2.	I had fear of distorted breast shape by breast feeding	2	7.40
3.	I had poor prenatal and postnatal support to initiate breast feeding within one hour of delivery	10	37.03
4.	I thought I would not have enough milk	15	55.55
5.	I was embarrassed to feed in front of health professionals/ family members	10	37.03
6.	I was upset on the sex of the baby	14	51.85
7.	I was tired or had to take medicine	4	14.81
8.	I believe that formula is as good as breastfeeding or formula is better	10	37.03
9.	I thought breast feeding is too in convenient	12	44.44
10.	I tried breast feeding before and didn't like it or it didn't work out	13	48.14
11.	I don't want to breastfeed since I am working	4	14.81
12.	Family members did not allow me to initiate breastfeeding within one hour after delivery.	10	37.03
13.	I thought disease could transfer to the kids through breast feeding,	4	14.81
14.	I was depressed because my child refused breast feeding	26	96.29
15.	I was not having enough knowledge on early initiation	15	55.55

It can be noted from Table 3 that majority of the mothers had pain during the labour process (96.29%). More than half of them thought that they wouldn't have enough milk (55.55%) and were depressed when the child refused to feed (96.29%). More than half of the mothers were not having enough knowledge on early initiation of breast feeding (55.55%). Half of them were upset upon the sex of the baby (51.85%).

Table 4 Association between Selected Demographic Variables and Initiation of Breastfeeding within 30 to 60 minutes among Mothers (N=60)

Demographic Variables	Initiation of breastfeeding within 30 to 60 minutes		$\chi 2$ & p Value
	Yes	No	
Age in years			
21- 30	38	12	5.1428*** P>0.50
31- 37	4	6	

Demographic Variables	Initiation of breastfeeding within 30 to 60 minutes		χ2 & p Value
	Yes	No	
Educational Status of the mother			
Illiterate	2	0	0.8865
Literate	40	18	
Awareness about early initiation of breast feeding			
Yes	42	16	4.826*** P>0.50
No	0	2	
If Yes, Source of Information is from			
Health Professionals	26	15	4.343*** P>0.50
Others	17	2	

Note: The categories were clubbed for the sake of chi- square analysis
*** (p>0.50): 98% confidence level
*(p>0.50): 80% confidence level

Table 4 Shows that there was significant association between the initiation of breastfeeding within 60 minutes and selected demographic variable such as age of the mother (χ2= 5.1428), knowledge about breastfeeding (χ2=4.826) and source of information from health professionals (χ2= 4.343, p>0.50). Hence Null Hypothesis Ho1 ''There will be no significant association between the selected demographic variables and initiation of breastfeeding within one hour of delivery among mothers'' with regard to age of the mother, awareness about breastfeeding and sources of initiation of breastfeeding was rejected.

Discussion

A significant number of mothers were between 22-30 years of age (63.33%) it could be interpreted that the public had adequate awareness about the opportune time for pregnancy. It was noted that none of them were above 30 years, and the findings suggest that they are less prone to develop a high risk pregnancy; this view was highlighted in a study that women older than 35 years have an increased incidence of sub fertility and inability to conceive[4].

Most of them live in nuclear family (48.33%), in the urban residence (46.6%) and nearly half of the mothers were graduates (48%) which can be recognized as a facilitating factor to understand the importance of breastfeeding initiation within 60mts of birth. This view was emphasized by the study finding that the educational level of the people was a determining factor towards the attitude and knowledge of the people on their own health[5].

The source of information on breastfeeding was from health care professionals (68.33%) on a large scale. It showed that though female literacy rate is high, the mothers are not aware about initiation of breastfeeding within an hour of birth. So, the healthcare professionals need to have extensive knowledge about the same, to motivate the mothers through evidence based practice.

Majority of the mothers were Primi para (63.33%), their babies were 7 to 10 months of age (50%), more than half of them had delivered between 38-40 weeks (81.66%). The findings on gestational age can be interpreted that labour process in appropriate gestational age will promote positive labour outcome without any fetomaternal complications. This view was presented in a study stating that on an average, number of boy babies was higher than the number of girl babies in rural communities. The sex ratio at birth is the refined indicator of the extent of prenatal sex selection[6]. More than half of the mother underwent LSCS (58.3%).A significant number of mothers initiated breastfeeding within 30-60 mts of delivery and majority of the babies sucked well after delivery (76.66%) and felt peaceful and fell asleep (78.33%).

Majority of the mothers were prepared during antenatal period and their family members motivated them to feed. All mothers had desire to make their baby healthy and thought that breastfeeding was the God

gifted opportunity to bond with the baby which also contributes for the wellbeing and growth of the infant. More than half of the mothers understood the cues of the baby. (78.33%) Most of them were interested to feed their babies early as they know its benefits (91.66%). A study supported this finding, with the conclusion that through the expression of new mother's experiences towards motherhood, healthcare providers can reach a better perception of the emotional and psychological changes as well as the various aspects of mother's acceptance of their maternal role and helps a better preparation of effective training programs for mothers and families[7].

A study stressed that New mother Breastfeeding Promotion Act, 2005, found that although breastfeeding has been recognized as a prerequisite for healthy child growth development in the modern urban setting, it was complicated by the increasing tendency of women to work in situations where they were separated from their infants and depend on the formulated feed[8].

Majority of the mothers had pain during the labour process (83.33%). More than half of them thought that they wouldn't have enough milk (48.33%) and was depressed when the child refused to feed (68.33%). Less than half of the mothers had a previous experience where breastfeeding didn't work out (28.33%) as it was too inconvenient (26.66) and were not having enough knowledge on early initiation of breast feeding (31.33). Few of them were upset upon the sex of the baby. (33.33%)

This shows that the barriers in initiation of breastfeeding within 30 to 60 mts was self-perception, this view was highlighted in a study quoting that most mothers felt unprepared, lack of control over their lives, incomplete maternal feelings and unstable relationships with their husbands after delivery. By identifying these factors as barriers, we can eliminate these factors to promote early initiation of breastfeeding[7].

There was significant association betweeninitiation of breastfeeding within 60 minutes and the selected demographic variable such as age of the mother ($\chi 2$= 5.1428), knowledge about breastfeeding ($\chi 2$=4.826) and source of information from health professionals ($\chi 2$= 4.343, $p>0.50$). Hence Null Hypothesis Ho1with regards to age of the mother, awareness about breastfeeding and sources of initiation of breastfeeding was rejected. Thus the initiation of breastfeeding within one hour of childbirth depends on the factors such as age of mother, awareness about breastfeeding and source of information.

Conclusion

This study shows antenatal preparation on benefits of breastfeeding and professional support as the facilitators and barriers such as self-perception that breastfeeding was inconvenient and will not be sufficient breast milk and pain during labour influence in the initiation of breastfeeding within half an hour of delivery. Nurses and nursing students should take initiative to empower mothers to promote early breastfeeding. Thus the mothers will be empowered to take the necessary steps to promote early breastfeeding

Conflict of Interest: Nil

Source of Funding: Self

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Clinical Practice of Women's Health Nursing Lesson in Turkey of Analysis: An Example of University

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Abstract

Objectives: The aim of this study was to conduct a "Strengths-Weaknesses-Opportunities-Threats"(SWOT) analysis in order to assess strengths and weaknesses, threats and opportunities clinical practice of women's health nursing lesson (CPWHN) is facing.

Method: Embedded single-case research design was used in this study conducted with methodology of qualitative research. Academicians and mentor nurse trainers who were teaching women's health nursing lesson were included in this study (n=13). Case analysis method was used to assess the data.

Finding: Strengths of CPWHN included the university being located in the capital of Turkey and certain application hospitals offering case variety. Its weaknesses included failure to provide individualized education due to high quotas for nursing students, lack of interest in CPWHN among male students due to gender stereotypes. Opportunities of CPWHN included national and international exchange programs for both students and academicians in addition to developments in innovative health practices; whereas the threats it was facing included opening nursing programs at universities with insufficient academicians and high quotas for nursing students due to high demand in nursing work force.

Conclusions: Improving weaknesses and turning threats into opportunities for CPWHN would be beneficial in improving quality of nursing care after graduation.

Keywords: *practice, university, analysis, women's health, nursing.*

Introduction

Clinical practice is an important part of nursing education. Clinical practice education helps students develop teamwork and communication, critical thinking, and decision-making skills in addition to developing psychomotor skills, all in order to help them find out their professional identities.[1,2] Effectiveness of clinical practice education is affected by various factors such as national health policies, physical environment of the hospital, educators, clinician midwives-nurses, other health professionals and students.[3] Students feel satisfied of their clinical education when they are accepted and supported by their clinician colleagues. At the same time, they develop professional relationships; they start seeing themselves a part of a team, and increases their motivation and willingness to learn.[4] In a study, nursing students stated that university-hospital cooperation strengthens their theoretical knowledge (%60.9) and increase their professional adaptation (%22.2) and professional development (%15.6).[5]In addition, a study on identifying the difficulties nursing students face in learning environments found that the difficulties faced were ineffective communication, wrong treatment, feeling unready, lack of theoretical knowledge, insufficient practical skills, and emotional responses.[6] In this regard, cooperation between students, academicians and health professionals is required to solve these issues in clinical practice.[7]

The aim of this study was to assess strengths, weaknesses, opportunities and threats of a CPWHN in a public university in Ankara, the capital of Turkey. At the same time, the aim of the study was also to conduct

a self-assessment in order to formulate improvement strategies for CPWHN.

Material and Method

Research Type: Embedded single-case research design was used in this study conducted with methodology of qualitative research. In the case analysis was carried out by SWOT analysis. Researcher regulates the data, separates them into analysis units and synthesize qualitative data analysis. Additionally, it is a process in which qualitative data analysis styles are revealed, important variables are explored, and which information is decided to be reflected on report.[8,9]

Case analysis study is a comprehensive scientific research method investigating current cases in real life statuses.[9,10] Being one of method used in case analysis studies, SWOT analysis is developed as a method to obtain information to provide the ideal use of resources and capabilities of various systems and structures in their environments.[11,12] SWOT is a simple framework that helps us assess the organization's or situation's current performance (strengths and weaknesses) and the organization's future (opportunities and threats) by taking into consideration the factors that exist in the external environment. This method has been used previously in the research in order to analyze nursing in Europe and Turkey.[13,14,15]

Participants: Academicians (n=6) and mentor nurse trainers (n=7) who were working in Division of Obstetrics and Gynecology Nursing of Nursing Department of a State University located in Ankara and teaching women's health nursing (WHN) lesson were included in this study (n_{total}=13).

Data Collection: The Study Constructed Interview Form (S-CIF) were used in this study. Form consists of four section. What are "strengths", "weaknesses", "opportunities" and "threats" of CPWHN lesson?

The participants were informed about the purpose of the study before the data collection and their verbal consents were obtained. The data of the interview were collected under presidency of a mentor on January 13, 2018. The themes involved in semi-structured interview form were verbally presented by the researchers and the data were recorded by providing a consensus with the group.

Data Analysis: The case analysis method was used to assess the data. In the present study, the data were collected over four themes of SWOT analysis specified previously and arranged according to the themes were formed by directly quoting, the results were identified by being supported with quotations, the identified results were commented and put into report form.

Findings

Four main themes were determined at the end of the case analysis.

In the first main theme is "strengths of CPWHN", subthemes are "the university, clinical trainers and student" and "the clinical practice areas" in the study. The participants listed the strengths of the university, clinical trainers and student as *"The university being located in the capital of Turkey", "The university being in the quality and accreditation process", "The university being part of national and international exchange programs for both students and academicians", "Curriculum being compatible with the European Union Directive", "WHN theoretical lesson being culturally sensitive and based on case presentations", "Access to a professional skills laboratory", "Standard patient care guide and check-list being included in the WHN lesson", "Having a high rate of clinical interaction among nursing master's and doctorate students and undergraduate students","General health insurance for all students prior to clinical practice", "Vaccination of students against certain diseases prior to clinical practice","All nursing students having occupational health and safety certificates", "Assigning mentor nurses to clinical practice", "Introducing clinical forms and clinical assessment criteria to students prior to clinical practice", "Reinforcing clinical practices with articles, cases and seminar presentations", "Weekly evaluation and feedback for students' care plans", "Evaluating satisfaction outcomes on end-of-term clinical application and formulating improvement strategies".* In addition, the participants presented opinion about the clinical practice areas as *"Providing orientation training to students in clinical practice hospitals", "For certain clinical practice hospitals: variety of cases, evidence based care standards, innovative health services, culture alert care services", "Cooperation between the university and hospital in terms of organizing in-service training, seminars, lessons and similar scientific activities", "Students being allowed to attend to scientific activities held at hospitals", "Communication channel between health professionals and students due*

to certain mentor nurses also being hospital employees", "Growing feeling of belonging among students due to students-only changing rooms and lunch in certain hospitals".

In the second main theme is "weaknesses of CPWHN", subthemes are "the university, clinical trainers and student" and "the clinical practice areas" in the study. The participants listed the weaknesses about the university, clinical trainers and student as *"High quota of students for nursing", "Failure to individualize laboratory practices training due to high number of students", "Difficulty in finding mentor nurses in the field of women's health", "Orientation problems due to inability to work with the same mentor nurse each semester", "Lack of equality of opportunity in education due to the fact that it is not possible to offer each clinical practice in every tertiary women's health hospital", "Male students having difficulties in adapting to WHN lesson and be assertive due to gender stereotypes", "Patients being reluctant to receiving care from male students", "Failure of some healthcare professionals to provide equality of opportunity to male students in women's health practices".* In addition, the participants presented opinion about the other weaknesses of the clinical practice areas as *"Burnout syndrome in the profession of nursing reflecting poorly on professionalism", "Nurses/midwives in certain hospitals resisting change in certain hospitals", "Professional role models being insufficient in certain hospitals", "Sub-standard examples in terms of evidence based practices in certain hospitals", "Lack of communication between doctors, nurses, and students", "Misalignment between practice in clinical environment and theoretical lesson content", "Students not allowed being active during practice due to legal reasons","Students being expected to perform duties that are not their responsibility", "Clinics being crowded in terms of student nurses", "Lack or comprehensive and standardized orientation training for students in hospitals", "Lack of standardization in terms of duties expected of students and inconsistencies among hospitals", "Insufficient national standard care protocols regarding women's health practices".*

In the third main theme is "opportunities of CPWHN". The participants listed the opportunities of CPWHN as "*Higher chance for students to see more women's health cases due to national pronatalist population policies", "Women's health policies promoting fulfilling mother and infant-friendly hospital criteria", "Brain drain due to globalization", "Growth in health tourism", "National and international guidelines on WHN", "Increase in multi-disciplinary studies", "Increase in evidence based studies", "Easy access to information thanks to advances in information technologies", "National and international exchange programs for both students and academicians", "Frequent scientific activities", "Advances in innovative health practices", "Increase in specialty among nurses".*

In the fourth main theme is "Threats of CPWHN". The participants listed the threats of CPWHN as, *"Increase in healthcare needs and health expenses due to an aging population", "Opening of new nursing programs at universities with insufficient number of academicians", "Faculty members preferring private universities", "Failure to employ nurses based on their specialties", "Increase in student quotas due to high demand in nursing workforce", "Increase in malpractice cases", "Increase in mobbing cases".*

Discussion

World Health Organization suggests that nursing education should be in accordance with ethical principles, based on evidence and teamwork, provide systematic and holistic care, improve health, and teach life-long learning and effective communication skills.[16] In the scope of European Union (EU) Directive is suggested that nursing education should provide a minimum three year full time education that includes 4600 hours of theoretical and clinical education based on 10 years of education. This directive also emphasizes that clinical education is an integral part of nursing education and should be organized in a manner that allows students to gain sufficient clinical experience.[17] On its way to entering the EU, our country has standardized nursing education based on this EU directive. In our study, our curriculum being compatible with the EU directive has been identified as a strength. In addition, "*teaching the theoretical WHN lesson in a culturally sensitive manner*", "*access to a professional skills laboratory*", "*standard patient care guide and check-list being included in the WHN course*", "*reinforcing clinical practices with articles, cases and seminar presentations*"were listed as strengths. These strengths support us in achieving our goal of having students gain sufficient clinical experience as stated in the EU directive.

According to international standards, the ratio between academicians and students is one academician per 10-20 students.[18,19] In our country, the number of

students in nursing undergraduate programs was 38.112 while the number of academicians was 574 in 2013, which indicates that there are on average 66.4 students per academician.[20] The number of students who were not admitted to undergraduate and graduate nursing programs due to lack of academicians, application environment, and lack of funds in 2013 was 78.089.[21] This fact points out to the quantitative deficiency of academicians at nursing undergraduate programs in our country. Yet, it is crucial to provide education at special learning environments and under tutelage of academicians in order to enable nursing education to promote knowledge, skills and behavior.[22] In this study, student-to-academician ratio being too high and having high quotas for nursing students were identified as weaknesses. Our strength is working with mentor nurse trainer in the scope of CPWHN. This ensures 10 students per academician at the clinic. In addition, this provides a communication channel between health professionals and students, as certain mentor nurses are also hospital employees.

CPWHN education should ensure that students develop critical thinking, analysis, communication, and problem solving and management skills.[23] WHN students are expected to develop various complex skills in a short period of time.[24] However, students are having trouble applying theoretical skill they have learned in class to clinical practices.[25-27] Thus, integration of theoretical education and clinical education is important. Women's health hospitals having limited quotas for students is a problem, as there are six universities in the same city as our university which offer nursing education. WHN lessons at our university includes five different hospitals. Only two of these hospitals were tertiary hospitals specialized in women's health. In our study, "*offering case variety, evidence based care standards, innovative care services, providing culturally alert care services"* were identified as strengths of these hospitals. Therefore, establishing nursing student quotas based on clinical fields of application, which is carried out by the Council of Higher Education in our country, is thought to be important.

Conclusion

Improving weaknesses and turning threats into opportunities for CPWHN would be beneficial in improving quality of nursing care after graduation. At the same time, it would reflect positively on women's health indicators such as mother-infant mortality rates, morbidity, and contraceptive use in our country.

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Quality of Life in Cardiac Surgery: A Concept Analysis

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Abstract

The concept of quality of life has been widely used in various fields, especially health and nursing. The concept of quality of life in cardiac surgery patients requires a specific definition. Various experts have defined the concept quality of life. However until now there has not been an agreement on appropriate and specific definitions. The aim to present a concept analysis of quality of life from the perspective of cardiac surgery. The method used in this paper was the approach of Walker & Avant (2011). This concept analysis was carried out with the aid of literature on quality of life obtained through the internet databases of CINAHL, Proquest, and Google Scholar. The key words of interest were "Quality of Life" and "Cardiac Surgery." The search timeline was adjusted to articles published within 1976 to 2019. This concept analysis was performed using the 8-step method Proposed by Walker and Avant. This method is identification of the attributes, antecedents and consequences of quality of life led to an operational definition of the concept of quality of life as the individual's perception of himself subjectively related to physical, psychological and social behavior to be prosperous in his life. This concept analysis was able to show that, quality of life is the individual's perception of himself subjectively related to physical, psychological and social behavior to be prosperous in his life. Quality of life will provide benefits to cardiac surgery patients: reduce length of stay and maintenance costs, prevent complications and social isolation

Keywords: *Cardiac surgery, concept analysis, Walker and Avant, quality of life.*

Introduction

The concept of quality of life has been widely used in various fields, especially health and nursing. Discussions about the concept of quality of life are an important consideration for evaluating the end results of health services provided by health workers such as perioperative cardiac surgery, so the concept of quality of life in cardiac surgery patients requires a specific definition. Quality of life is an individual condition that is influenced by physical health, psychological health, social relations, and environmental aspects[1]. But until now there has been no agreement on the definition of quality of life that is precise and specific, besides that there has been no agreement on the instrument used to assess the quality of life of a person in his condition. Because there is no agreement on the definition of quality of life, the concept of quality of life is still ambiguous.

Research on quality of life has been carried out a lot, but until now there has not been a clear definition of quality of life that applies in research and clinical practice in cardiac surgery perioperative units. Therefore, this study aims to find a definition of the concept of quality of life that does not only limit pedagogical definitions but reaches a definition related to interoperative cardiac surgery interventions.

Method

The method used in this study is using Walker & Avant 2011 concept analysis approach. Concept analysis enables researchers to clarify a concept and is one building block in the theory building process. Through systematic analysis of scientific literature and cases, the main characteristics of the construct can be synthesized into a theoretical definition, which

is 'precise, understandable to others, and appropriate for the context in which the term will be used'[2]. The analysis of a new and immature concept that is not yet grounded in a pre-existing theory can therefore be an important step towards theory development[3], one of our predominant aims.

This concept analysis was carried out with the aid of literature on quality of life obtained through the internet databases of CINAHL, ProQuest and Google Scholar. The key words of interest were "quality of life" and "cardiac surgery." The search timeline was adjusted to articles published within 1976 to 2019.

Finding and Discussions

Select a Concept: Patients who are decided to take heart surgery undergo chest pain due to blockage of the coronary arteries, unstable hemodynamic, very high anxiety, fear of dying on the operating table, changes in behaviour such as focusing on oneself, reducing contact with others, refusing to do activities, the body feels weak, the patient feels himself less useful after surgery because of his condition[4-7]. The condition of the intraoperative stage of the patient complains of increasing anxiety because of fear of changes in body structure and function, pain that will appear more severe, and death that threatens, hemodynamic changes due to surgical procedures occur. In the postoperative stage the patient experiences severe pain, hemodynamic changes, the patient is dependent on drug therapy, when in the ICU room the patient feels strange, and feels alone, the patient has a sleep disorder, the patient depends on the nurse to meet self-care and needs, immobilized patients, patients feel helpless8. Based on these phenomena, the authors label the decline in quality of life, based on these labels, the authors set a positive concept of quality of life.

Determine the aims of analysis: The purpose of analyse the concept of quality of life is to refine the concept that is still ambiguous, obtain an operational definition of quality of life in patients who undergo cardiac surgery, and evaluate pre-existing instruments or obtain new and appropriate quality of life instruments in cardiac surgery patients.

Determine the defining attributes: Characteristics of the attributes obtained are individual, subjective, physical and psychological perceptions, in their lives, becoming prosperous, social, behavioural, and conditions. From the characteristics of the attributes obtained, it can be formulated an operational definition of quality of life, namely the individual's perception of himself subjectively related to physical, psychological and social behaviour to be prosperous in his life.

Identify a model case: A 54-year-old male patient complained of severe chest pain such as being hit by a heavy object, shortness of breath and cold sweating by his family being taken to the emergency room at the Mulia Hospital. Patients were given oxygen therapy sublingual nitrate 5 mg, Aspirin 320 mg and Clopidogrel 300 mg. Patients undergo 12 lead ECG examinations from ECG examination. Patients experience extensive anterior STEMI. Because the onset of the onset of pain is more than 12 hours, the patient is given an angiography procedure. Angiography results in coronary artery occlusion in 4 locations. The next day when the doctor visited the patient the doctor delivered the angiography results to the patient. These patients must undergo cardiac surgery for the CABG procedure. After listening to the explanation of the angiography results the patient denied why there were so many contributions and why heart surgery should be done. The patient said he was afraid to die while being operated on, the patient looked nervous, did not want to be seen, his blood pressure became unstable, the patient was worried he could not work as before and would be laid off. The patient feels helpless with the conditions currently being experienced. The days leading up to the operation made him become tormented and felt uncomfortable with the conditions and plans of the operation he was going to carry out.

Identify borderline cases: A 48-year-old male patient complained of left chest pain, body weakness, nausea and vomiting, the patient was taken to the Harapan Jaya Heart Hospital, when he arrived at the ER the patient was given oxygen therapy, ISDN 5 mg sublingual, aspirin 320 mg and clopidogrel 300 mg orally. The patient was then tested for 12 lead ECGs and the result was posterior inferior STEMI. Complaints of the patient's chest pain are frequent but can still be detained by the patient so that the patient falls into the late onset category. Patients have an angiography procedure. The angiography results obtained artero coronary occlusion at 3 locations so that the patient was decided to undergo cardiac surgery to perform the CABG procedure. When the patient is told to do a heart surgery the patient is shocked so many ask the doctor who treated him. The patient said he was anxious and feared that the operation would fail which would cause death, the results of the vital sign examination in the patient were obtained by

HR and the patient's pressure had increased since the information was given. The patient feels happy when his co-worker visits him and asks for prayer so that the operation runs smoothly.

Identify contrary cases: 56 years old patient experienced severe chest pain on the left, shortness of breath, anxiety and nausea. Patients have a history of diabetes mellitus and hypertension for 5 years. Because the chest pain that felt more and more intense, the patient asked his family to take him to Harapan Jaya heart hospital. Arriving at the ER, patients were given oxygen therapy, ISDN 5 mg sublingual, Aspirin 320 mg and clopidogrel 300 mg. The patient then performed a 12-lead ECG examination, the patient's ECG results experienced extensive anterior STEMI. Patients performed angiography examinations. The results of the angiography examination are blockages in the 4 coronary arteries. Patients are planned to undergo cardiac surgery for the CABG procedure. When informed by a doctor that he is going to have an operation the patient says surrender whatever is going to be done and the patient is sure the problem he is experiencing will soon be overcome. Patients still socialize with other patients, feel happy when visited by relatives and coworkers. Although still chest pain but the results of examination of vital signs are all within normal limits. The patient seems to pray a lot and is sure he can still work after healed and can always give good to others. The patient considers the pain he experiences as a sin. Patients still feel comfortable because all families support the operation process that they will experience

Identify antecedents and consequences:

Antecedence Concept Consequences:

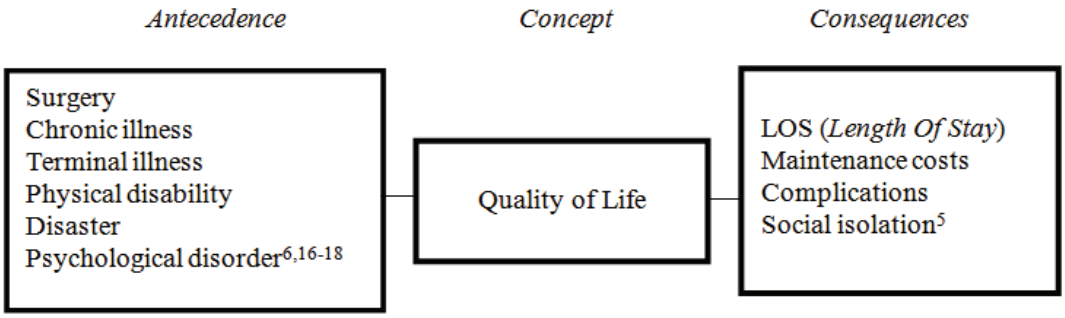

Figure 1: Overview of antecedents, attributes and consequences of quality of life in cardiac surgery

Define empirical referents: Empirical referent is a class or category of actual phenomena which through its existence shows the occurrence of the concept itself. Empirical referents are not a tool for measuring concepts. Empirical referent is a means by which you can recognize or measure the characteristics or attributes that define it, so that referent empirical is directly related to the decisive attribute, not the whole concept itself. Empirical referents, once identified, are very useful in developing instruments because they are clearly related to the theoretical basis of the concept, thus contributing to the content and building the validity of any new instrument[3]. The results of identification of the attributes and concepts of quality of life then referent empirical are physical and psychological comfort, activities without obstacles, physical and mental well-being and health. After obtaining referent empirical, the appropriate instrument that will be used to measure the concept of quality of life for cardiac surgery patients is Short-Form Questionnaire (SF-36). Short-Form Questionnaire (SF-36). The questionnaire consisted of 36 question items consisting of aspects of quality of life including: physical function, mental and emotional function, general health and free of pain[19]

Conclusions

The results of the concept analysis obtained an operational definition of the quality of life of cardiac surgery patients, namely the individual's perception of himself subjectively related to physical, psychological and social behavior to be prosperous in his life after cardiac surgery. The appropriate instrument that will be used to measure the concept of quality of life for heart surgery patients is Short-Form Questionnaire (SF-36). Short-Form Questionnaire (SF-36). The questionnaire consisted of 36 items of questions consisting of aspects

of quality of life including: physical function, mental and emotional functions, general health and free from pain.

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Women's Views and Experience of Respectful Maternity Care While Delivering in three Regional Referral Hospitals of Bhutan

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Abstract

Background: Labour and childbirth represent one of the most vulnerable periods in women's life and ensuring the quality of respectful care during labour and childbirth still remains challenging. There are activities to promote respect for women's right, including respect for their autonomy, dignity; feelings, choices and preference. However, little has been known about the elements of respectful maternity care provided to women during labour and childbirth in health facilities.

Objectives: The purpose of the study is to explore the attitudes, views, behaviors and emotional experienced by women related to labour and childbirth and to describe women's satisfaction with RMC in three regional hospitals of Bhutan.

Method: Cross-sectional study with the sample size of 426 from JDWNRH in Thimphu, CRRH in Gelephu and ERRH in Mongar. All women who delivered in November - December 2018 were included in the study. The structured questionnaire was used, relevant literature sources were reviewed and finalized in our setting and was piloted in Bajo Hospital after approved by Research Ethics Board of Health (REBH). Descriptive analysis done and all the information gathered are presented in the form of frequencies, percentages and number for categorical variables. The scientific significance shows in foul language (0.033) and scolding (0.020).

Results: Satisfaction rate ranged from excellent to unsatisfactory concerning the services, women stated excellent (37.10%), very good (31.20%), Good (20.20%), mixed feeling (9.20%), rather unsatisfactory (1.90%) and unsatisfactory (0.50%). Concerning the whole process of labour and childbirth, dreadful experiences was **(41.8%)**.

Conclusion: There is need to improve on communication for information, permission, policy for dignity and privacy for women. Need to include in the pre-service curriculum for nurses and health workers and to provide in-service education on RMC to all health personnel providing maternity services.

Keywords: *Bhutan, women, attitudes, views, behaviors, emotional, satisfaction, communication, dignity, privacy, hospitals and RMC.*

Introduction

Labour and childbirth represent one of the most vulnerable period in women's life and ensuring the quality of care with respectful maternity during labour and childbirth still remains challenging. There are activities to promote respect for women's right, including respect for their autonomy, dignity, feelings, choices and preference. However, little is known about the elements of respectful care provided to women during labour and childbirth in health facilities. Respectful maternity care are been neither reflected in pre-service curriculum nor mentioned in any policy document.

The study intends to gain in-depth understanding of RMC from the perspective from women during labour and childbirth in referral hospitals. Generally, women were encouraged to choose to give birth in health care facilities to ensure proper skilled health care professionals but disrespectful and undignified care is prevalent in

many facility settings particularly for underprivileged, which will not guarantee good quality care and negative childbearing experiences remains with the woman throughout her life. This study aims to find out the experiences of women about all these aspects: attitudes, views, behaviors and emotional experiences, while availing the maternity services during the time of labour and childbirth in the three regional namely JDWNRH at Thimphu, ERRH in Monger and CRRH of Gelephu so that it can help in informing decision and policy makers to come up with appropriate strategies and program related to RMC for both the care provider and for the consumers. Therefore, this is a timely study to assess the RMC from the perspective of consumers' women and their family members as study had already been carried out on care providers especially among nurse midwives [(8)] as there was no study done on it, in Bhutan. This study intends to gain in-depth understanding on views and experience of women in receiving respectful maternity care based on seven rights charter of childbearing women developed by White Ribbon Alliance during labour and childbirth while delivering in health facilities of Bhutan, which unites citizens to demand the right to a safe birth for every woman, Although, Bhutan has made significant progress in bringing down Maternal Mortality Ratio from 560 deaths per 100,000 live births in 1990 to 86 in 2012, the proportion of births attended by skilled health personnel in Bhutan has been only 74.6% in the same year 2016.[(1&8)]

Method

Study design and setting: Cross-sectional study with the sample size of 426 from JDWNRH in Thimphu, CRRH in Gelephu and ERRH in Mongar from November to December 2018 was taken. Ethical consideration was approved by REBH, Ministry of Health (MoH), Thimphu and administrative clearance from JDWNRH, ERRH and CRRH to conduct the study was obtained. The study sites are chosen purposefully as there is high delivery volume taking place in these hospitals every year.[(1)]

Moreover, there is separate birthing unit in these hospitals where nurse midwives are assigned in birthing unit to provide maternity care to the pregnant women in labour and childbirth. Only those participants who had agreed to participate and signed the informed consent which was made available both in English and Dzongkha were included and interviewed for the study.

Data Collection: Structured questionnaire was adapted and used from Survey Report[(8&10)] and relevant sources which was pilot tested for its reliability in Bajo Hospital, Bhutan. The tool was in depth interview questionnaire with both open and closed ended questions to allow the women to express freely of their opinions. Interview were done for women who had delivered after 6 hours of delivery and during postnatal period (42 days) which was expected to take not more than 30 minutes. Interviewing was considered an appropriate method in collecting data for this study due to women's differing literacy levels.

Statistical Analysis: Descriptive analysis were undertaken and the information from this are presented in the form of frequencies, percentages and number for categorical variables on demographic profile, experiences on labor on childbirth, experiences on vaginal examination, scolding, episiotomy, physical abuse, verbal abuse, affects of attitude, views, behaviors, emotional experiences, and the satisfaction rate of RMC. The most applicable regressions analyses is done to examine factors associated with delivery of respectful maternity care and a two sided p-value of <0.05 will be regarded as indicating statistical significance.

Findings:

Demographic Profile: Minimum age was 18 years, maximum age was 44 years and mean age was 27.37. The finding of different age groups were in between 25-34 years (64.80%), 18-24 years (30.30%) and 35-44 years (4.90%) respectively.

The occupations of the women in the study were house-wives (74.60%), government service (12.10%), private sectors (7.30%) and business (4%).

According to the number of women receiving the services in these three hospitals, we obtain the sample to be collected from each regional hospital were, from JDWNRH (70.7%), from ERRH (10.6%) and from CRRH (18.8%).

Experiences of labour and childbirth: Dreadful experience (41.8%) was expressed by the women and only 4% had wonderful experience. There are women who had unpleasant experience (18.10%), pleasant experience (10.10%) and even okey (26.80%) with the labour and childbirth.

Amongst the care providers, nurse midwives play significant role in shaping the maternal health experiences of a woman from the ways in which maternity services to mothers and their babies are provided that would either empower and comfort the woman or inflict lasting damage and emotional trauma.[8,11&12]

Women's Experience on Vaginal examination: 88.7% of women were asked for permission to perform vaginal examination had but there women who were not even asked (0.6%) and some did not response to the question (0.7%).

One of the important components of maternal health care quality is the women's experience of childbirth and that their feelings, dignity and preferences must be respected.[4,5 & 9]

Women's Experience on Physical and verbal abuse: Through interview, women in the study experienced physical and verbal abuse during the time of their labour and childbirth, even though the number is not high, but women had experienced scolding (75.8%) which is higher than beating with hand or instrument (2.3%), Pinch on their thigh (1.6%), Use of Foul language (0.9%).

Regression analysis shows the scientific significance in use of foul language (0.033) and scolding (0.020).

The concept of RMC acknowledges that women's experiences of childbirth are vital components of health care quality and that their "autonomy, dignity, feelings, choices, and preferences must be respected.[2,5 & 8] While concerted efforts have been put in globally to remove barriers against accessing skilled birth attendance, studies have suggested that disrespect and abuse that woman often encountered in facility based maternity care are more potential deterrent to skilled birth care utilization than the usually recognized ones such as financial and geographical obstacles.[7,10 & 11]

Women's Experience on episiotomy: During the study, some women received explanation about the episiotomy procedure, but some women did not receive any explanation about the episiotomy procedure. This clearly shows that there is lack of communication, the right to information, right for consent for episiotomy procedures around the time of childbirth for women in labour and childbirth. It also indicates that the practice of episiotomy without woman's notification or consent is taking place.

Women's view to have nurse midwife to be present during labour: Preferable, it is better for the midwife to be near the patient for the entire process of the childbirth because 37.1% prefer health to be professional present during labour during entire process or as much as possible and 25.8% prefer health professional when necessary.

Women view on health professional to be present during the labour and childbirth; they preferred to have them during entire process or as much as possible, which indicates the value of presence of midwife during the entire process.[5,11 & 12]

Growing evidence from both low and high resource countries suggest that the care women receive during labour and childbirth is sometimes rude, disrespectful, abusive and not responsive to their needs. It also shows that quality of care received at the facility-based maternity services is not optimal and often lacking in the element of respectful maternity care. There are also seven categories of disrespect and abuse in childbirth identified: physical abuse, non-consented care, non-confidential care, non-dignified care, discrimination based on specific patient attributes abandonment of care, and detention in facilities.[3,4 & 7]

Women's views on communication, discrimination, dignity: Generally during the labour and childbirth, the service is expected to be 100% excellent because women go into postpartum depression sometimes after the delivery with the traumatic experience of the labour and childbirth. There is different ways that nurse midwife can address this incident through proper communications with the women, no discrimination and by providing dignity for the women. Though the significant number is low, but we still have women who require for good communication, dignity of women and no discrimination while availing the services.

The sustainable goal 3 which is to ensure healthy lives and promote well-being for all woman at all ages brings attention towards improving the quality of maternity health services for the world's over 200 million childbearing women who want and deserve to be treated with respect and dignity during the time of labour and childbirth. It is also a time of an intense vulnerability apart from momentous events of their life. Women who receive mistreatment during childbirth are also less likely to return to health facilities for future birth.[1,4 & 6]

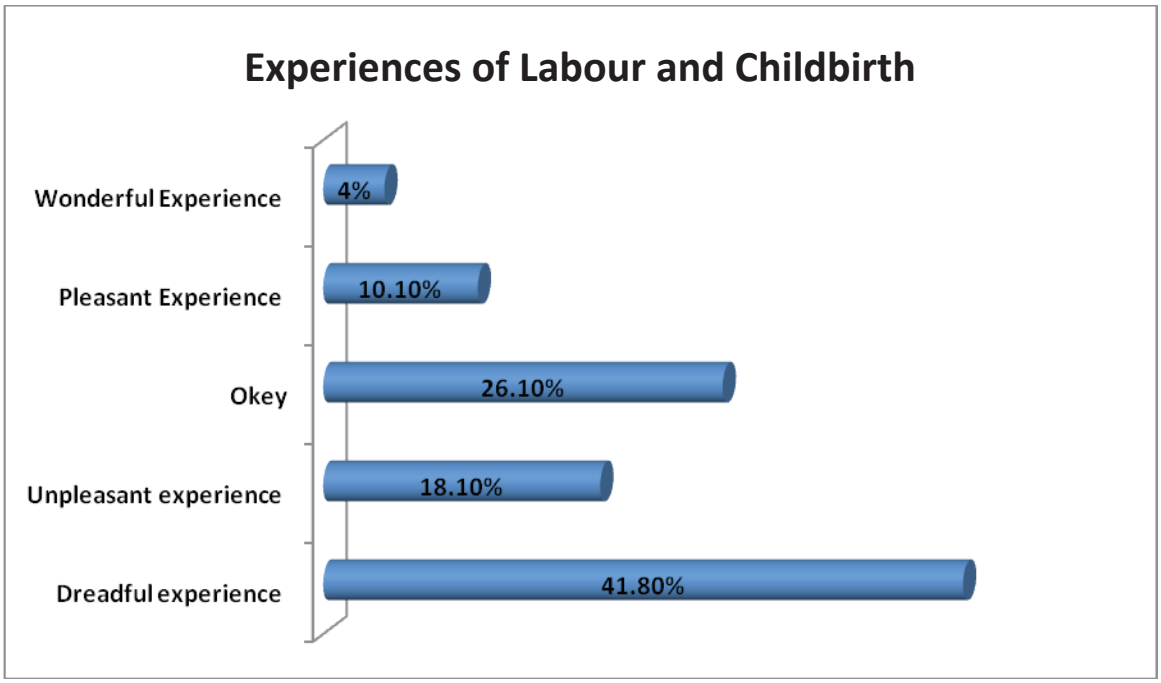

Figure 1: Overall experiences of labour and childbirth

Table 1: Women's Experience on Vaginal examination (n=426)

Variables	Number	Percent	No Response
	Yes	No	
Seek Permission during vaginal examination	378(88.7%)	45 (10.6%)	3 (0.7%)
Preferred not to have them	69	16.2%	
I did not mind	92	21.6%	
Found helpful (information about progress of labour)	264	62%	
No Response	1	(0.6%)	

Table 2: Women's Experience on scolding and episiotomy

Variables	Number	Percent	No Response	n
	Yes	No		
Scolded for making noise and shouting	22 (7.9%)	255 (92.1%)	-	277
Scolded for pushing before time	16 (9.6%)	150(90.4%)	-	166
Explained about episiotomy	68(63.6%)	36(33.6%)	3 (2.8%)	107

Table 3: Affects of attitude,views, behaviors and emotional experiences of women related to labour and childbirth. (n=426).

Variables	Yes	No	No Response
Greet in respectful manner	368(86%)	58 (13.6%)	-
Respect for beliefs, tradition and culture	372 (87.3%)	10 (2.3%)	44 (10.3%)
Encourage women to have support person during labour	410 (96.2%)	11 (2.6%)	5 (1.2%)
Provision of continuous support during labour	410(96.2%)	12(2.8%)	4 (0.9%)
Encourage women to have support person during delivery	420(98.6%)	4 (0.9%)	2 (0.5%)

Variables	Yes	No	No Response
Explained procedure before proceeding	402 (94.4%)	21 (4.9%)	3 (0.7%)
Informed women the findings	422 (99.1%)	3 (0.7%)	1 (0.2%)
Encourage the women to ask questions about her labour and childbirth	313 (73.5%)	11 (26.1%)	2 (0.5%)
Privacy during labour and child birth	422(99.1%)	1 (0.1%)	3 (0.7%)
Right to information about confidentiality and privacy	425 (99.8%)	1 (0.2%)	-
Explained about what will happen during labour	378 (88.7%)	45 (10.6%)	3 (0.7%)
Support women in friendly way during labour	419 (98.4%)	5 (1.2%)	2 (0.5%)
Provide drapes before delivery	414 (97.2%)	7 (1.6%)	5 (1.2%)
Institutional violence against women-Scolding	323 (75.8%)	102 (23.9%)	1 (0.2%)
Beat with hand or instrument	10 (2.3%)	413 (96.9%)	3 (0.7%)
Pinch on their thigh	7 (1.6%)	416 (97.7%)	3 (0.7%)
Use Foul language	4 (0.9%)	419 (98.4%)	903 (0.7%)
Encourage or advice to drink during labour	275(64.6%)	151 (35.4%)	-
Encourage or advice to eat during labour	113 (26.5%)	313 (73.5%)	-

Figure 2: The Satisfaction rate of RMC during their labour and child birth (n=426)

Discussion

Satisfaction rate that ranged from excellent to unsatisfactory concerning the services, we had women who stated excellent (37.10%), very good (31.20%), Good (20.20%), but there were even women who had mixed feeling (9.20%), rather unsatisfactory (1.90%) and unsatisfactory (0.50%). Concerning the whole process of labour and childbirth, there are women who had dreadful experiences **(41.8%)**. There are finding on the services that still needs to improve on lack of communication, right for information and permission, providing dignity and privacy for the women because these all are essential for the services provider to deliver to the women who are in labor and childbirth with so much stress.

The seven rights of all woman while in labour and during the time of delivery are right to be free from ill-treatment and harm; right to information, informed consent, refusal and respect for choices and preferences including companionship during maternity care. It also includes the right to privacy and confidentiality; right to be treated with dignity and respect; right to equitable care; right to highest attainable level of healthcare and right to liberty and autonomy, self-determination and freedom from coercion.[2,4 & 5]

Conclusion

Communications skills are enormously advised to be improved by the health care provider in providing the information, asking permission, follow the policy of dignity and privacy for the women. Though the number is low and not significant, we still have women who refused to response during the interview, which we need them to open up their views to improve the services of RMC.

We still need to include RMC topic in the preservice curriculum for nurses and health workers and in addition require in-service education on RMC to create awareness among health care providers to enhance RMC for women receiving maternity care during labour and childbirth.

Conflict of Interest: None

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Effectiveness of Hand and Foot Massage on Level of Pain Perception among Lower Segment Caesarean Section Mothers

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Abstract

The study was conducted to evaluate the effectiveness of Hand and Foot massage on level of pain perception among Lower Segment Caesarean Section mothers. Quasi experimental non randomized control group design was adopted for the study. The structured questionnaire was developed to collect the data. The samples were selected by purposive sampling technique. The study was conducted on 60 lower segment caesarean section mothers. The participants were divided into two groups 30 each in study group and control group. Pre test was done for both the groups by using Numerical Pain Rating Scale. Hand and foot massage was given for 30 minutes to the study group for 5 days (Morning). Post test was done for both the study group and control group. The estimated paired 't' value was 1.70 which was significant at $p < 0.05$. This shows that the hand and foot massage is effective in reducing the level of pain perception among Lower Segment Caesarean Section mothers.

Keywords: *Pain perception, Caesarean, Hand and foot Massage.*

Introduction

Women are the precious gifts that God has ever created and bestowed on earth. They occupy a significant position in the society, since they are capable of giving birth to children which thereby enriches the population increase. Motherhood is a gift for every woman. Pregnancy and child birth are unique experiences. Pregnancy and delivery bring happiness to the mother as well as her partner[10]. Once immediately after the childbirth while hearing the cry of her baby itself, she feels very happy[8]. Caesarean section is the birth of a fetus through a transabdominal incision of the uterus. The purpose of caesarean birth is to preserve the well being of the mother and her fetus. Since the advent of modern surgical method, care, use of antibiotics, maternal and fetal morbidity and mortality have decreased. Despite these advances caesarean birth still poses threats to the health of both mother and infant[6]. Complementary therapies are commonly used treatment modalities for pain relief in present days. Massage is a technique that applies pressure to parts of the body by stroking, stretching, pulling and kneading. Its aims to offer relaxation mentally and physically. Massage may concentrate on the muscles, the soft tissues, or on the acupuncture points. Massaging hands and foot stimulates the body to come back in balance. Massage can provide several benefits to the body such as increased blood flow, reduces muscle tension and so on[7].

Statement of the Problem: A Quasi Experimental Study to Evaluate the Effectiveness of Hand and Foot Massage on Level of Pain Perception among Lower Segment Caesarean Section Mothers in a selected Hospital, at Kanyakumari District.

Objectives of the Study

1. To assess the pre test and the post test level of pain perception among Lower Segment Caesarean Section mothers in study group and control group.
2. To evaluate the effectiveness of Hand and Foot massage on level of pain perception among Lower Segment Cesarean Section mothers in study group and control group.
3. To associate the pre test level of pain perception among Lower Segment Caesarean Section mothers with their selected demographic and clinical variables in study group and control group.

Hypotheses:

H_1: There is a significant difference between pre test and post test level of pain perception among Lower Segment Cesarean Section mothers in study group and control group.

H_2: There is a significant difference between post test level of pain perception among Lower Segment Cesarean Section mothers instudy group and control group.

H_3: There is a significant association between pre test level of pain perception among Lower Segment Cesarean Section mothers with their selected demographic and clinical variables in study group and control group.

Research Methodology

Research approach: The researcher utilized Quantitative research approach.

Research design: Quasi experimental non randomized control group design was adopted for the study.

Research setting: The study was conducted at Hospital, Kanyakumari District.

Population: Mothers who underwent Lower Segment Caesarean Section.

Sample: The sample consisted of mothers who underwent Lower Segment Caesarean Section.

Sample size: 60 Mothers who underwent Lower Segment Caesarean Section.

Sample technique: Purposive sampling technique.

Description of Tool: The tool used in the study consisted of two parts.

Part I: Demographic data: The demographic variables consists of age, education, occupation, type of family, religion, support of mother, previous knowledge on Hand and Foot massage and the clinical variables consists of parity, type of pain, frequency of pain, time of experiencing pain.

Part II: Numerical Pain Rating Scale for measuring the level of pain.

The scale was categorized as follows:

'0' denotes	:	No Pain
'1-3' denotes	:	Mild Pain
'4-6' denotes	:	Moderate Pain
'7-10' denotes	:	Severe Pain

The maximum score is '10' and minimum score is '0'.

Method of Data Collection:

Phase I Selection of Lower Segment Caesarean Section mothers: After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing and Administrator of Hospital, participants were selected based on the criteria of sample selection. The investigator obtainedoral consent from each Lower Segment Caesarean Section mothers separately and proceeded with the data collection.

Phase II Pretest of Lower Segment Caesarean Section mothers: The data was collected from the selected participants and the Numerical Pain Rating Scale was used to assess the level of pain perception .

Phase III Intervention: Explained the procedure to the mother, made the mother to lie down in supine position, Provided two pillows, one for hand and another for leg, and started with warming up the hand well. Massaging the hand and foot of Lower Segment Caesarean Section mothers by stroking and stretching for 15 minutes on hand and 15 minutes on foot. Total duration of massage is 30 minutes every morning for the following 5 days.

Phase IV Post test: The post test was done for both the study group and control group by using Numerical Pain Rating Scale.

Results

Table 1: Comparison of mean, standard deviation and paired 't' value on pre test and post test level of pain perception among Lower Segment Caesarean Section mothers in study group and control group N = 60

Variables	Group	Mean	SD	paired 't' test
Level of pain perception	Study group n=30 Pre test Post test	 8.6 4.9	 1.88 1.44	1.70*
	Control group n=30 Pre test Post test	 7.96 7.16	 2.47 2.86	2.92

* Significant at p <0.05.

Table 2: Comparison of mean, standard deviation and unpaired 't' value on post test level of pain perception among Lower Segment Caesarean Section mothers in study group and control group. N = 60

Variables	Group	Mean	SD	Unpaired 't' test
Level of pain perception	Study group n=30	4.9	1.44	2.13*
	Control group n=30	7.16	2.86	

*Significant at p <0.05.

Discussion

The study was done to determine the effectiveness of hand and foot massage on level of pain perception among Lower Segment Caesarean Section mothers. Based on the data collected the mean score on level of pain perception among Lower Segment Caesarean Section mothers in study group was 8.6 in the pre test and 4.9 in the post test. The paired 't' value of 1.70 which is significant at p <0.05 shows that Hand and Foot massage was effective in reducing the level of pain perception. In control group, the mean score on level of pain perception among Lower Segment Caesarean Section mothers was 7.96 in the pre test and 7.16 in the post test respectively. The estimated Paired 't' value for pain perception was 2.92 which was also significant at p <0.05. But comparing both the values the Hand and Foot massage was more effective.

The mean score on level of pain perception among Lower Segment Caesarean Section mothers in study group was 4.9 and in control group it was 7.16. The estimated unpaired 't' value of 2.13 which is significant at p<0.05 shows that Hand and Foot massage is effective and reducing the level of pain perception. In study group Education was associated with their level of pain perception and in control group Parity and Frequency of pain was associated with their level of pain perception.

Conclusion

The study concluded that providing Hand and Foot massage reduces the level of pain perception among Lower Segment Caesarean Section mothers. Therefore the investigator feels that Hand and Foot massage for Lower Segment Caesarean Section mothers is effective in reducing pain perception.

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Conflict of Interests: The author declares no conflict of interest with any person or institution.

Source of Funding: The study has no source of funding. It is self – funded.

Training: The primary researcher had taken the hand and foot massage training and got certified to

perform the same from an experienced physiotherapist.

Ethical Clearance: The proposed study was conducted after the approval of the dissertation committee of St. Xavier's Catholic College of Nursing, Chunkankadai.

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Physiological and Biochemical Rationale of Yogasana

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Abstract

Yogic exercises have been known to increase mental and physical control of the body. Earlier practices of yogasan and pranayam have revealed physical and mental well being. Yoga has great therapeutic potential in management of related diseases stress. It improves the psyche of the individual because training causing decrease in psychic stimuli to vasomotor and respiratory centre hence there is less increase in sympathetic activity and less decrease in parasympathetic activity with an optimal blood flow distribution. Greater amount of fat is utilized for providing energy sparing glycogen.

Keywords: *Pranayama, Yogasana, Meditation.*

Introduction

With the fast expanding knowledge in various fields man has to toil not physically but mentally. The need for exercise both physical and mental, for total well being of an individual is no longer unknown to a common man. Physical exercise need to be included as a routine in our day-to-day life, as majority of us lead a sedentary life. Stress leads to generation of free radicals in animal muscle as evidenced by direct measurements of free radicals with the electron paramagnetic resonance technique and by indirect determination of product of free radical reactions. Antioxidant enzymes act directly or indirectly to remove reactive oxygen species and thus elevation of these enzymes with training suggests an increased demand for protection against free radicals. Such a practice leads to an increase in resting tidal volume, decrease in respiratory rate, increase in vital capacity and breath holding time.

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Yogic Exercise: Yoga can be divided into four main categories.

Raja yoga	-	The mystical yoga
Karma yoga	-	The path of selfless service
Bhakti yoga	-	The path of devotion
Jnana yoga	-	The yoga of knowledge

Raja yoga is said to be the king of yoga because it is directly concerned with the mind. A very important component in the Raja yoga practice is the pranayama. Pranayama is restraint of Prana or breath having three components.

Puraka	-	inhalation of breath
Kumbhaka	-	retention of breath
Rechaka	-	exhalation of breath

The time taken for Inhalation/breath retention/ exhalation is kept at 1:4:2 in pranayama.

Various forms of pranayama:

Pranayama	-	inhalation and exhalation
Bhastrika	-	hyperventilation for 10 seconds and then a deep breath

Kapal bhati	-	same as in bhastrika but with forced expiration
Bvjjayi	-	inhalation/retention, exhalation with glottis partially closed
Sitkari	-	breathing through folded tongue
Sitakari	-	breathing with a hissing sound
Suryabheda	-	inhalation through left nostril
Bandhatraya	-	Mule bandha controlling anus during inhalation
Jalandra Bandha	-	press chin against chin in kumbhaka
Diana Banda	-	draws up abdomen during exhalation
Kevala Kumbhaka	-	constitutes an advanced form of pranayama

Pulmonary changes during exercise Udupa et al [1]showed reduction in body weight, improved lung function, decrease respiratory rate, increased vital capacity and breath holding time with yogic exercises. Similar results were also reported by Nayar et al [2]. Udupa et al [3] assessed biochemical parameters in 10 young adults after six months of training and found decrease in catecholamines, cholinesterase and blood sugar level. Increase in mono amine oxidase (MAO), diamine oxidase (DAO) plasma cortisol, serum protein levels has also been reported. Alexander [4] reported 11% increase in PEFR in patients given only relaxation therapy for bronchial asthma.

Sahay [5] found an increase in creatine phosphokinase (CPK) and decrease in pyruvate lactate rates, which was suggestive of increased muscular activity. Kulpati [6] followed 75 patients of COPD in three different groups. The first group received conventional treatment; second group did breathing exercises alone, while the third group did yogic exercises. Author reported that the group undertaking yogic exercises best maintained their lung function. Murlidhara [7] found a significant improvement in cardiac recovery index after 10 weeks of training. They inferred this to be due to para sympathetic predominance. Makwana et al [8] showed effect of short-term yogic practice on ventilatory function. An increased vital capacity, FEV and decreased respiratory rate was observed after 10 weeks of training.

Relationship of free radical generation with exercise: Exercise has a unique relationship with the free radical theory as during exercises when Vo_2 is elevated 10 to 15 fold above rest, it is very likely that free radicals are produced to a greater extent compared with rest. Considering that thousands of radicals produced in each resting cell every day, it is tempting to speculate on the number of free radicals that may be produced as a result of elevated metabolism. Furthermore, damage to active tissue is likely to occur and oxidative stress reactions are known to increase during exercise.

Oxidative stress is due to excess free radical generation in our body. A free radical is defined as a species molecule or atom capable of independent existence with unpaired electron (s) in its outermost orbital. A dot designates the presence of one or more unpaired electron eg. $O_2^{\cdot -}$. A radical might donate its unpaired electron to another molecule or accept an electron from another molecule in order to pair. The living beings are continually exposed to reactive oxygen species (ROS). Such a challenge comes from external noxious sources such as ionizing radiations, toxic drugs, chemicals, and environmental pollutants. The living cell is also capable of generating reactive oxygen species by itself and some cell types are ever specialized to do so. [9]

Potential mechanisms of free radical generation during strenuous exercise:

- Mitochondrial electron chain
- Anoxia- reoxygenation
- Mechanical damage to the muscles
- Increased inhalation of environmental pollutants containing free radicals and/or initiators of free radical generating reactions in the body
- Oxidation of catecholamines

Despite exercise induced free radical changes there is a positive side to oxidative stress associated with regular exercise. An elaborate defense system providing varying degrees of cell protection against free radicals has evolved in all species. Select components of this defense system have been reported to increase in trained tissues following regular exercise. [10]

Potential mechanism of exercise mediated free radical production: There are several mechanisms that could potentially lead to the generation of free radicals during exercise. During oxidative phosphorylation in the

mitochondria, oxygen is reduced by the mitochondrial electron transport system to generate ATP and water. However, during this process some of the molecular oxygen (~2%) of the oxygen consumed in the mitochondria can bind to single electron, which leak from electron carriers in the respiratory chain, resulting in the formation of superoxide (O_2^-) radical. [11, 12]

Furthermore, regular strenuous exercise has been found to lead to increases in both the number and size of mitochondria. [13] Thus, increased flow and metabolism of oxygen in the exercising muscles can enhance the production of O_2^- in the mitochondria. The latter may lead to enhanced generation of H_2O_2 and highly reactive hydroxyl radicals.

Strenuous exercise is known to stimulate catecholamine secretion in circulation. They enhance the cardiac performance needed to increase the blood flow to the exercising muscles. Furthermore, they promote glycogenolysis in the liver to supply glucose to muscles and stimulate mobilization of fatty acids. Both these processes are needed to meet the increased requirement of energy for the exercising muscle. [14] There is evidence that catecholamines could potentially generate free radicals in the body either through auto-oxidation or through metal ion or superoxide catalyzed oxidation.[11,15]

The superoxide radicals thus generated are considered for the formation of H_2O_2 and highly reactive hydroxyl OH* radicals in the presence of copper and iron.[16] There are various defence substances which act as major biological antioxidant compounds.[17]

Super Oxide Dismutase: Super oxide dismutase is classified into three distinct classes depending on the metal ion content: Cu/Zn SOD, Mn SOD and Fe SOD. Any reduction in the level of SOD invariably leads to an impaired protection against the toxic effects of O_2* and this might lead to severe cellular damage. [18] The result of the reaction by SOD is the H_2O_2. This substance by itself can produce damage. It can be neutralised by either of the two mechanisms by catalase or by glutathione enzyme.

Catalase: Catalase is a tetrahemin enzyme with each monomer having tightly bound NADPH molecule. Catalase reduces hydrogen peroxide and thus serves a protective role. The increased H_2O_2 concentration and lipid peroxide levels are often associated with a decresed catalase activity. It has been observed that catalase prevents free radical induced aldehyde formation, lipid peroxidation and DNA scissions caused by H_2O_2. [19]

Glutathione Peroxidase ($GSHP_X$): It can also neutralize H_2O_2. It occurs in two forms: selenium dependent $GSHP_X$ (catalyses the reduction of all H_2O_2) and selenium independent $GSHP_X$ (catalyses the reduction of only organic H_2O_2). H_2O_2 which escapes the scavenging enzymes viz; SOD, catalase and glutathione peroxidase has a great propensity to form a highly damaging hydroxyl radical (OH^*). These are neutralized by the various compounds of the primary defense system i.e. vitamins A, C, E, peroxides, and Uric acid.

Vitamin E is one of the most widely distributed anti-oxidant and major free radical chain terminator. [20] In contrast to vitamin E, Vitamin C is hydrophilic and functions better in an aqueous environment. it directly reacts with O_{2*} and OH* and various hydroperoxides as a reducing and anti-oxidant agent. Vitamin C offers the most effective protection against plasma lipid peroxidation. [21] Moreover, Vitamin C serves both as anti oxidant and pro oxidant. [22] Carotenoids protect lipids against peroxidation by quenching free radicals and other ROS, notably singlet molecular oxygen. [23] Uric acid may act by preserving plasma ascorbate. [24] The OH^* radical which goes un neutralized by the scavenging compounds like vitamin E, C, carotene, can directly cause great amount of damage to lipids, protein, DNA, carbohydrates.

Lipid peroxidation: Lipids within the cell membrane of higher organisms contain large number of polyunsaturated fatty acid side chains. Such fatty acids are prone to undergo lipid peroxidation, involves the generation of carbon radicals followed by production of peroxide radicals. [25] Lipid peroxidation has been identified as a basic deteriorative reaction in a variety of pathological conditions. Biomembranes and sub cellular organelles are the major sites of lipid peroxidation. [26] Its initiation can be due to any species which is capable of abstracting one hydrogen atom. Since hydrogen atom has only one electron, this leaves behind an unpaired electron on the carbon atom. The carbon radical in a polyunsaturated fatty acid tends to be stabilized by a molecular rearrangement to produce a conjughated diene. This diene reacts with O_2 to give hydroperoxy radical. Lipid peroxidation (malonaldehyde formation) was increased by an acute bout of exercise in hepatic mitrochondria of untrained rats. The author suggested that antioxidant enzymes in liver and skeletal muscle are capable of adapting to exercise to minimize oxidative

injury caused by free radicals. [27] Physical training and fasting erythrocyte activities of free radical scavenging enzyme systems was tested in sedentary men. It showed increased catalase and glutathione reductase in erythrocytes. [28] Although antioxidant enzyme activities are related to skeletal muscle oxidative capacity, the effects of exercise training on anti-oxidant enzymes in skeletal muscle cannot be predicted by measured changes in oxidative capacity. [29] A significant uphill was noticed in glutathione-S-transferase, super oxide dismutase and xanthine oxidase activities with the increase in exercise period. Lipid peroxidation in terms of MDA expression was also elevated with exercise. Ji LL [30] concluded that aging is accompanied with an elevation of antioxidant enzymes activities and lipid peroxidation in skeletal muscle probably due to the increased oxygen free radical production and reaction. Bicycle racers performing aerobic exercise showed increases erythrocyte activity of super oxide dismutase, catalase and glutathione peroxidise. [31]

Ji[32] concluded that exhaustive exercise can impose a severe oxidation stress on skeletal muscle and that peroxides, systems as well as antioxidant enzymes are important in coping with free radical mediated injury. Sardessai advised that the best approach for healthy individuals is to regularly consume adequate amounts of antioxidant rich foods e.g. fruits and vegetables.

Facts about Yogasana:

- The yogic kriya brings about cleaning of inner tracts and desensitization of the nerve endings. It has been documented that inflammatory mediators such as air pollution activate sensory nerve endings in the airways causing cough, chest tightness and brochoconstriction.[33]
- Practice of yoga reduces the emotional disturbances there by modifying the airway resistance in easy breathing and well being of the patients.[34]
- Relaxation exercise probably influence the hypothalamus through continuous feedback of slow rhyrhmic proprioceptive and interoceptive impulses and tend to set it at a lower level.[35]
- It has been hypothesized that meditation stimulates neocortex in such a way that these areas produce inhibitory neurotransmitter GABA. This ultimately inhibits caudal sympathetic area hypothalamus while leaving para sympathetic unaffected decrease in firing results in parasympathetic dominance.[36]

Conclusion

A practitioner of yogasana tries to keep his attention on the act of breathing, leading to concentration. This act of concentration removes his attention from worldly worries and 'de-stresses' him. This stress free individual is able to adapt better to the daily emotional, physical and mental stresses.

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A Descriptive Study to Assess the Knowledge Regarding Hand Hygiene among Students of Selected Nursing College in Ludhiana, Punjab

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Abstract

Introduction: Hand hygiene is defined as any method that removes or destroys micro-organism on hands. It is well-documented that the most important measure for preventing the spread of pathogens is effective handwashing.

Aims: To assess the knowledge regarding hand hygiene among students of selected nursing college and to seek the knowledge score with selected demographic variables.

Material and Method: An descriptive research approach was used to assess the knowledge regarding hand hygiene. Convenient sampling technique was used to select 60 nursing students. A self structured questionnaire method was used to assess the knowledge of students regarding hand hygiene.

Conclusion: Based on the findings of the study it can be concluded that 35% of nursing students have moderately adequate knowledge and 65% of students have inadequate knowledge regarding hand hygiene.

Keywords: *Knowledge, hand hygiene, students.*

Introduction

Infection is the invasive of an organism's body tissue by disease-causing agents,their multiplication & the reaction of host tissue to the infectious agents & the toxins they produce. The invasion & multiplication of micro-organism such as bacteria, viruses& parasites that are not normally present within the body.[1,2]

Infections associated with healthcare was targeted by world alliance for the patients safety during the first biennial global patients safety challenge, ' clean care is safety care'. Hospital acquired infections is an assumed attributable mortality of 50,000 to 135,000. The best time to wash the following below- if the person is exposed to germs by the cough, if the person is to wash to reduced the infection, if the person is handling the substance that was transfer the bacteria. In the health care services, hand hygiene is perfomed by- before & after start the duty, before & after touch the patients, different procedure doing on the patients, after assisting the patient in his personal hygiene, before putting on the gloves & after, when your hands is come into the secretion, blood, & body fluids of the patients. The bar soap is not acceptable in the hand hygiene. The antibiotic soap are used in intensive care unit, or other procedures. The hot water is not considered in hand washing.[4]

According to WHO,1,400,000 people suffer from hospital acquired infection. In developing countries, the preventable hospital acquired infection is to medical care is estimate to about 40%. The result os studies have shown that hospital acquired infection is the main cause of infant mortality.[8]

According to the WHO healthcare-associated infection occur in approximately ten patient who was taking treatment in WHO. The worldwide incidents of infection is between 7% & 10% and the cost of these treatment is very high. Specialy, healthcare-associated infection incident of multi-bed hospital is 10% & increase the resistant development.[9]

Hand hygiene is the leading measure to prevent

the cross transmission of micro-organism. The high prevalence of infection is acquired in intensive care unit due to environment & patient. The patients was critically ill in intensive care unit & they are easily to carry the infection.[10]

Various studies has show that effective hand hygiene is lower prevalence in HCIs. Various factors that contribute to lack in compliance like lack knowledge among health care worker regarding the importance of hand washing infor the prevention of transmission of disease.[10]

Methodology

The research design selected for this study was descriptive posttest only design. The study was conducted at SKSS college of nursing, ludhiana, Punjab and 60 subjects were selected by convienent sampling technique. The subjects were the Students of G.N.M 1st year, A.N.M 1st year, B.Sc 1st year studying in S.K.S.S college of nursing, Ludhiana, Punjab. The tool used for the data collection was demographic variables, Structured knowledge questionnaire. The content validity of tool was determined by nine experts in nursing fields and internal consistency was calculated using cohen's kappa reliability was found to be 0.9. Self-introduction was given to the subjects and rapport was maintained with the subjects . Finding of the pilot study revealed that it is feasible to conduct the study.

Data Analysis: Descriptive & Inferential statistics with SPSS version 16.0 were used to analyze the data which showed that:-

Organization and presentation of data: Raw data was collected and entered in a master sheet for the statistical analysis. It was interpreted using descriptive and inferential statistics. The data findings has been organized and presented under the following sections:

Section 1: Demographic variables of sample.

Section 2: Structured knowledge questionnaire .

Table 1: Frequency and Percentage distribution of nursing student in terms of level of knowledge regarding hand hygiene. N=60

Level of Knowledge	Scores	Range	Frequency	Percentage
Adequate	Above 75%	17-22	_	
Modrately adequate	50 to 75%	16-Nov	21	35%
Inadequate	less than 50%	less than 11	39	65%

*Significant($p<0.05$)^{NS} Not significant ($p>0.05$).

Conclusion

Based on the findings of the study it can be concluded that 35% of nursing students have moderately adequate knowledge and 65% of students have inadequate knowledge regarding hand hygiene.

Implication:

1. The findings of the study will help the nursing professional to reduce the infection in the patients. Nurses in clinical area should develop & follow the practices related to hand hygiene
2. Clinical nurses must be given an opportunity for in-services education. In this way, they can get current knowledge about the appropriate decision making & can better educate the general public particularly the nursing students.
3. Nurse administrators have the responsibility to provide a staff development programme for the nursing personnel emphasizing use of hand hygiene to reduce the infection.

Limitations:

- The size of the sample under study was limited to 60 nursing students. Hence, result cannot be generalized due to limited sample size.
- Data collection was based on information provided by the subject.

- The study was limited to residing in nursing students in selected nursing college of Ludhiana only.

Ethical Clearance: Ethical clerance was taken by the principal of SKSS College of Nursing Ludhiana, Punjab.

Source of funding: The source of funding was self

Conflict of Interest: Nil

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