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Patterns of relationship and daily interactions between parents and adolescents

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The adolescent period is one which has perplexed parents, psychologists and adolescents themselves for many years. Adolescents experience a decline in the desire for companionship with their parents, experience an increase in conflict and distance in relationships with their parents. The magnitude of this disturbance is still under some debate within the body of research that examines the relationship between adolescents and their parents.

The aim of this study is to assess the patterns of relationship and daily interactions between parents and adolescents. Two tools were used to collect the necessary data: one questionnaire sheet to obtain demographic data including gender, age, and family structure. Second tool was Parent- Adolescent Relationship Survey Questionnaire (PARQ). It consists of 32 questions that explore the dimensions of parent –adolescent relationship from adolescent's perspective. These dimensions are time spent with parents, frequency of interactions, quality of interactions and parental affect during the interactions, to predict the overall patterns of relationships between adolescents and parents. The results showed how adolescents react to parental affect and how much it determines the patterns of interactions. Also parental affect and the frequency of interactions were particularly meaningful in the maintenance of positive parent - adolescent relationship.

Methods

Subjects

A total sample of 100 adolescents aged from 11 to 16 years were randomly selected from general population in Alexandria, representing adolescents who were available at net café and different social clubs.
Size of the Sample: (50 males and 50 females).

Tool

Parent- Adolescent Relationship Survey Questionnaire (PARQ). (developed by Beazer (1998) to assess the parent – adolescent relationship and interaction). It consists of 32 questions that explore the dimensions of parent –adolescent relationship from adolescent's perspective.
These dimensions are:

1. Time spent with parents:
2. Interaction quality:
3. Parental affect:
4. Importance of the relationship:
5. Overall quality of the parent- adolescent relationship:
6. Desired changes in relationship:

In addition, a socio demographic data sheet was developed to elicit data about age, sex and living situation.

Results

Description of Subjects

As Table (1) shows the socio-demographic data of male and female adolescents. It has found that the mean age of male adolescents was 14.24 ± 2.01.
Whereas the mean age of female adolescents was 13.60 ± 1.76. With no statistical significant difference was found between their mean ages. (t = 1.695, p = 0.093).

Regarding the adolescents grades, one third of male adolescents (34%) receive very good grade while 44% of female adolescents receive excellent grads. Fisher Exact Test (FET) indicates no statistical differences between them (FET = 4.475, MCP =0303).Concerning the living situation, the majority of male and female adolescents lived with both parents at the time of the study, with no statistical difference was found between them (FET = 8.886 , MEP = 0.057).

Patterns of relationships and interaction of Adolescents with their parents

As Table (2) reveals the comparison between male and female adolescents in relation to the patterns of relationships and interaction with their parents. It was found that male scores averaged 4.71 when rating the quality of their relationship with their fathers and 4.56 when rating the quality of their relationships with their mothers.

Whereas female averaged scores of 4.79 when rating the quality of relationships with fathers and 5.69 when rating the quality of relationships with mothers. T tests show that there are significant differences between male and female ratings of relationship quality with their mothers (T = 3.27, P < 0.0.

Concerning the total time spent with fathers, male adolescents spent 163.90 minutes with their fathers as compared to 257. 68 minutes for female adolescents. However there is no statistical differences was found between them (T = 1.307, P = 0.196). As regard the total time spent with mothers, male adolescents spent 183.72 minutes with their mothers, whereas female adolescents spent 405.32 minutes with their mothers, with statistical significant differences was found (T = 2.856,Pd" 0.01).

Speaking about the importance of relationship, male scores averaged 2.24 when rating the importance of their relationship with both father and mother. While female averaged scores of 2.40 when rating the importance of their relationship with fathers and 2.71 when rating the importance of their relationships with mothers. T test indicates significant differences exist between the adolescent male and female in their ratings of the importance of the relationship with their mothers. (T = 2.608, P d" 0.05).

Regarding the parental affect, it was noted that 50% of male adolescents reported positive father's affect during interactions in weekday and 70 % in weekend. X^2 test revealed that male's descriptions of positive affect in the presence of their fathers in weekday occurred significantly more often (X^2 = 7.250 , Pd" 0.001). While the majority of male adolescents reported having more positive mother's affect during interaction (76 %) in weekend as compared to the majority of

female adolescents reported having more positive mother's affect during the interaction in weekday (74%). However, there is no statistical significant difference was found between mother's affect and gender differences in weekday and weekend (X^2 = 2.216, P>0.05 and X^2 = 1.214, P>0.05 respectively). Looking at the interaction with the mothers and fathers, it was found that more than half of males reported having positive interactions with their fathers in weekday and weekend (58% and 68% respectively). While 26 % of females adolescents reported having positive interaction with their fathers in weekday and more than half of female adolescents reported having positive interaction with their fathers in week end (62%), with statistical significant difference was found between the percentage of positive interaction with fathers and gender in weekday. (X^2 = 10.509, Pd" 0.01).

In relation to the percentage of positive interaction with mothers, it was noted that more than half of male adolescents (54%) reported having positive interactions with their mothers in weekday and the majority of them (88%) reported having positive interaction with their mothers in weekend as compared of 82% and 70 % of female adolescents who reported positive interaction with their mothers in weekend. A significant statistical difference was found between positive interactions with mother and gender in weekday (X^2 = 9.007 , P d" 0.01).

Desire of adolescents for change in the relationship with their parents

The table (3)reveals the adolescents desired change in the relationship with their parents. The majority of male adolescents reported that the main options which needed to be changed are less arguing and more understanding (88 % and 72% respectively), while more than half of female adolescents reported the same options (58% and 54% respectively) in addition to having more time together (56 %) .

As Table (4) shows the bivariate relationships between the variables of parent – adolescent relation ship. The results of this table reveals that the percentage of father's affect being positive in weekday was found to be significantly correlated with the percentage of fathers affect being positive in weekend (r = 0.244, P < .05); the percentage of positive interactions with fathers in weekday (r = 0.817, p < .01); the importance of relationship with fathers (r = 0.275, p < .01); the percentage of mothers' affect identified as positive in weekday and weekend (r = 0.229, p < .01 and r = 0.398, p < .01 respectively); the percentage of positive interactions with mothers in weekend (r = 0.290, p < .01); and time spent with fathers (r= 0.277,p <.01).

On the other hand, the percentage of fathers affect being positive in weekend was found to be significantly correlated with the percent of fathers' affect being positive in weekday (r= 0.244, p <.01); the percentage of positive interactions with fathers in weekend (r = 0.740, p < .01); the relationship quality with father (r = 0.289, p < .01); the percentage of mothers' affect being positive in weekend (r = 0.332, p<.01); the percentage of positive interactions with mothers in weekend (r = 0.203, p < .05);and time spent with fathers (r = 0.289, p <.01).

The percentage of positive interaction with fathers in weekday was found to be significantly correlated with the percentage of fathers' affect being positive in weekday (r=0.817, p p<.01); the percentage of positive interactions with fathers in weekend (r= 0.242, p<.01); gender (r=0.324, p<.01); the percentage of mothers' affect being positive in weekend (r=0.276, p<.01); the percentage of positive interaction with mothers in weekend (r=0.351, p<.01); and time spent with fathers (r = 0.265, p <.01). While the percentage of positive interactions with fathers in weekend was found to be correlated with the percentage of fathers' affect being positive in weekend (r = 0.244, p < .01); the percentage of positive interactions with fathers in weekday and weekend (r = 0.242 and 0.341, p < .01 respectively); the percentage of positive interactions with mother in weekend (r = 0.415, p <.01); time spent with fathers (r = 0.227, p <.05).

The relationship quality with fathers was found to be significantly correlated with the percentage of fathers' affect being identified as positive in weekday and weekend (r = 0.275 and 0.289, p < .01); the percentage of p <.01 positive interactions with fathers in weekend (r = 0.341, p < .01); the importance of relationship with fathers (r = 0.643, p <.01); the grades (r = 0.359, p <.01); the relationship quality with mothers (r = 0.477, p < .01); and time spent with fathers (r = 0.212, p <.05).

The importance of relationship with fathers was found to be correlated with the relationship quality with fathers (r = 0.643, p < .01); the grades (r = 0.389, p < .01); the importance of relationship with mothers (r = 0.249, p<.05); and the relationship quality with mothers (r= 0.335, p < .01). Gender was found to be correlated with the percentage of fathers' affect being positive in weekday (r = 0.269, p<.01); the percentage of positive interactions with fathers in weekday (r=-0.324 , p<.01); the importance of relationship with mothers (r=0.255, p<.01); the percentage of positive interactions with mothers in weekday (r=0.300, p<.01); the relationship quality with mothers (r=0.314, p<.01); and time spent with mothers (r= 0.277, p<.01).

The grades was found to be correlated with the relationship quality with fathers (r = -0.359, p <.01); the importance of relationship with fathers (r = 0.389, p <.01); and the relationship quality with mothers (r = -0.224, p <.01).

The importance of relationship with mothers was correlated with the importance of relationship with fathers (r = 0.255, p <.01); gender (r = 0.255, p <.01); the percentage of mothers' affect being positive (r = 0.391, p <.01); the percentage of positive interactions with mothers (r = 0.267, p <.01); and the relationship quality with mothers (r = 0.595, p <.01).

The percentage of mothers' affect being positive in weekday was found to be significantly correlated with the percentage of fathers' affect being identified as positive (r = 0.229, p <.01); the importance of relationship with mothers (r = 0.391, p < .01); the percentage of positive interactions with mothers in weekday (r = 0.567, p <.01); and the relationship quality with mothers (r = 0.479, p <.01). While the percentage of mothers' affect being positive in weekend was found to be correlated with the percentage of fathers' affect being positive in weekday and weekend (r = 0.398 and 0.332, p <.01 respectively); the percentage of positive interactions with fathers in weekday (r = 0.276, p <.01); the percentage of positive interactions with mothers in weekday and weekend (r = 0.317 and 0.668, p <.01).

The percentage of positive interaction with mothers in weekday was found to be correlated with gender (r = 0.300, p <.01); the importance of the relationship with mothers (r = 0.267, p <.01); the percentage of mothers' affect being positive in weekday and weekend (r = 0.567 and 0.317 p <.01 respectively); the percentage of positive interactions with mothers in weekend (r = 0.560, p < .01); the relationship quality with mothers (r=0.241, p<.01); and time spent with

Table 1: Socio demographic characteristics of male and female adolescents

Items	Male(n=50)	Female(n=50)	Test of sig.	p
Age (Mean ± SD)	14.24 ± 2.01	13.60 ± 1.76	t = 1.695	0.093
Academic grade (No. (%))				
Excellent	11 (22.0%)	22 (44.0%)		
Very good	17 (34.0%)	13 (26.0%)	FET = 4.475	MCp = 0.303
	Good	11 (22.0%)	10 (20.0%)	
Pass	9 (18.0%)	2 (4.0%)		
Fail	2 (4.0%)	3 (6.0%)		
Living situation (No. (%))				
Both parents	45 (90.0%)	47 (94.0%)		
Mother only	1 (2.0%)	3 (6.0%)	FET = 8.886	MCp = 0.057
Father only	1 (2.0%)	0 (0.0%)		
Parent and stepparent	1 (2.0%)	0 (0.0%)		
Grandparents	2 (4.0%)	0 (0.0%)		

Table 2: Comparison between male and female adolescents in relation to the patterns of relationships and interaction with their parents

	Male(n=50)	Female(n=50)	Test of sig.	p
Over all quality of the relationship with father	4.71	4.79	t = 0.205	0.838
Over all quality of the relationship with mother	4.56	5.69	t = 3.273**	0.001
Total time spent with fathers (including both)	163.90	257.68	t = 1.307	0.196
Total time spent with mothers (including both)	183.72	405.32	t = 2.856**	0.006
Importance of relationship with fathers	2.24	2.40	t = 1.303	0.196
Importance of relationship with mothers	2.24	2.71	t = 2.608*	0.011
Interactions with positive fathers affect in weekday	25(50.0%)	12(24.0%)	c^2=7.250**	0.007
Interactions with positive fathers affect in weekend	35(70.0%)	28(56.0%)	c^2 = 2.102	0.147
Interactions with positive mothers affect in weekday	30(60.0%)	37(74.0%)	c^2 = 2.216	0.137
Interactions with positive mothers affect in weekend	38(76.0%)	33(66.0%)	c^2 = 1.214	0.271
Positive interactions with fathers in weekday	29(58.0%)	13(26.0%)	c^2=10.509**	0.001
Positive interactions with fathers in weekend	34(68.0%)	31(62.0%)	c^2 = 0.396	0.529
Positive interactions with mothers in weekday	27(54.0%)	41(82.0%)	c^2 = 9.007**	0.003
Positive interactions with mothers in weekend	34(68.0%)	35(70.0%)	c^2 = 0.047	0.829

Table 3: Desired changes in the relationship with their parents from adolescent perspective

Desired changes	Male(n=50)		Female(n=50)	
	No.	%	No.	%
More time together	19	38.0	29	58.0
More talking	8	16.0	17	34.0
Less talking	9	18.0	3	6.0
More activities	13	26.0	10	20.0
Fewer activities	0	0.0	1	2.0
Less arguing	44	88.0	27	54.0
More one-on-one time	0	0.0	1	2.0
More listening	23	46.0	24	48.0
More under standing	36	72.0	28	56.0
I wouldn't change anything	14	28.0	12	24.0
Others	5	10.0	5	10.0

mothers (r=0.275, p<.01).

On the other hand, the percentage of positive interactions with mothers in weekend was found to be correlated with the percentage of fathers' affect being positive in weekday and weekend (r = 0.290, p <.01 and r = 0.203, p<.05 respectively); the percentage of positive interactions with fathers in weekday and weekend (r = 0.351 and 0.415 p <.01 respectively) the percentage of mothers' affect being positive in weekend and weekday (r = 0.668 and 0.569 p <.01 respectively) .

Concerning the relationship quality with mothers , it was noted that it was correlated with the relationship quality with fathers (r = 0.477, p <0.01); the importance of relationship with fathers (r = 0.314, p <0.01); the gender (r = 0.314, p <0.01); the grades (r = -0.224, p <0.01); the importance of relationship with mothers (r = 0.595, p <0.01); the percentage of mothers' being positive in weekday (r = 0.479, p <0.01); the positive interaction with mothers in weekday (r = 0.241, p <0.05); and time spent with fathers and mothers (r = 0.234, p <0.05 and 0.258, p <0.01 respectively).

In relation to the time spent with fathers, It was significantly correlated with the percentage of fathers' affect being positive in weekday and weekend (r = 0.277 and 0.289, p <0.01 respectively); the percentage of positive interactions with fathers in weekday and weekend (r = 0.265, p <0.01 and 0.227, p <0.05 respectively); the relationship quality with mothers (r = 234, p <0.01).

As regard the time spent with mothers, it was significantly correlated with gender (r = 0.277, p <0.01); the percentage of positive interaction with mothers (r = 0.275, p <0.01); the relationship quality with mothers (r = 0.258 , p <0.01); and time spent with fathers (r = 0.816, p < 0.01).

As Table (5) shows the results of the regression analysis. It was found that the only two variables which added significant variance to the prediction of the overall quality of the adolescent's relationship with mothers were the importance

Table 4: variant analysis of different factors in parent- adolescent relationship

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		0.244*	0.817**	0.172	0.275**	0.040	-0.269**	0.029	0.023	0.229**	0.398**	0.126	0.290**	0.126	0.277**	0.094
B			0.149	0.740**	0.289**	0.168	-0.145	0.123	0.022	0.079	0.332**	-0.037	0.203*	0.028	0.289**	0.115
C				0.242**	0.157	-0.048	-0.324**	-0.073	-0.095	-0.006	0.276**	0.149	0.351**	-0.032	0.265**	0.067
D					0.341**	0.171	-0.063	-0.021	0.000	0.065	0.085	0.171	0.415**	-0.003	0.227*	0.059
E						0.643**	0.021	-0.359**	0.188	0.126	0.011	-0.013	0.030	0.477**	0.212*	0.038
F							0.132	-0.389**	0.249*	0.043	0.036	-0.039	-0.014	0.335**	0.164	0.114
G								-0.107	0.255*	0.149	-0.110	0.300**	0.022	0.314**	0.131	0.277**
H									-0.164	-0.013	0.182	0.034	0.083	-0.224*	-0.101	-0.042
I										0.391**	0.114	0.267**	0.134	0.595**	0.081	0.132
J											0.161	0.567**	0.173	0.479**	0.155	0.166
K												0.317**	0.668**	0.128	0.180	0.179
L													0.560**	0.241*	0.159	0.275**
M														0.124	0.151	0.160
N															0.234*	0.258**
O																**0.816****
P																

* Significant at p £ 0.05 ** Significant at p £ 0.01

A : % of dad's affect being positive in weekday
B : % of dad's affect being positive in weekend
C : % of positive interactions with dad in weekday
D : % of positive interactions with dad in weekend
E : Relationship quality with dad
F : Importance of relationship with dad
G : Gender
H : Grade
I : Importance of relationship with mom
J : % of mom's affect being positive in weekday
K : % of dad's affect being positive in weekend
L : % of positive interactions with mom in weekday
M : % of positive interactions in weekend
N : Relationship quality with mom
O : Total time with dad
P : Total time with mom

Table 5: Predictors of relationship quality with both parents among adolescent.

	R	R square square	Adjusted R	F	P
Quality of relationship with fathers	0.715	0.512	0.47	13.481**	<0.001
Gender					0.978
Importance of relationship with fathers					<0.001
Interactions with positive fathers affect in weekday					0.012
Interactions with positive fathers affect in weekend					0.479
positive interactions with fathers in weekday					0.238
positive interactions with fathers in weekend					0.028
Total time spent with fathers					0.786
Quality of relationship with mothers	0.698	0.487	0.448	12.478**	<0.001
Gender					0.033
Importance of relationship with mothers					<0.001
Interactions with positive mothers affect in weekday					<0.001
Interactions with positive mothers affect in weekend					0.761
positive interactions with mothers in weekday					0.046
positive interactions with mothers in weekend					0.461
Total time spent with mothers					0.101

of relationship with mothers and the percentage of interactions in which mother's affect was described as positive. In addition, the results of analysis indicated that the entire model predicted the variance in the quality of the relationship with fathers ($F = 13.418$, $P < 0.01$), the only variable which added significant variance to the prediction of relationship quality with fathers was the importance of relationship .

Conclusion

Based on the study findings, it is concluded that there are certain variables in parent adolescent relationship and daily interactions that can affect and relate to the overall quality of the relationship. These variables include time spent with parents, quality of interactions, parental affect during the interactions, importance of the relationship, and adolescent gender, to predict the overall quality of relationships between adolescents and their parents. The regression analysis found that parental affect and the importance of relationship were capable of significant contributions to relationships with both parents. Comparison between male ($N = 50$) and female ($N = 50$) adolescents' relationships were also made. Females spent significantly more time with their mothers but experienced significantly lower ratios of both positive parental affect and positive interactions with their fathers. On average, the adolescents report that the relationships with their parents were important and that overall quality was good. They also

reported that the majority of their interactions were positive with their mothers for both male and female adolescents.

Recommendations

In the light of the study findings, it was recommended to

- Strengthen the role of nurses as educators, counsellors and researchers in the subject of parent–adolescent relationship and daily interaction. This can be classified into:
- Increase the awareness of parents, educators and counsellors that the areas of parental affect and importance of relationship with parents are areas which should receive attention when changes are desired in parent –adolescent relationship because they are capable of predicting relationship quality.
- Adolescents need to feel that their parents are engaged and supportive of them. Adolescents are more independent than children in many aspects of their lives. Nonetheless, they require ongoing parental support in terms of parents remaining open to communication and responsive if help is needed, while, at the same time, fostering adolescent autonomy. Specific parenting skills include warmth, acceptance of individuality, active listening, understanding and negotiation.
- Parents need to recognize the special role of fathers in supporting the well-being of their children.
- Parental education programs should be developed to assist parents in the development of parenting skills that support their relationship with their adolescents. Programs should focus on fathers' as well as mothers' relationships with their adolescent children.

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Epidemiology of musculoskeletal pain in Indian nursing students

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Abstract

Although musculoskeletal pain [MSP] represents a significant occupational issue for professional nurses worldwide, few epidemiological studies have been conducted in India. Therefore, we investigated the epidemiology of musculoskeletal pain (MSP) among a complete cross-section of 317 nursing students from all three grades of two nursing colleges in India, by means of a questionnaire survey (response rate: 88%). The prevalence of MSP at any body site varied from 70.5 percent in the first-year students, to 81 percent in the third-year students, with an overall prevalence of 74.5 percent across all three years of study, with symptoms most commonly reported at lower back (58.7%) followed by neck (31.6%), the shoulder (29%), upper back (25.6%). Although the percentage of students reporting pain in general appeared to increase with number of years in nursing school, we found no statistically significant difference based on years in nursing school. Overall, this investigation suggests that MSP is more frequent among Indian nursing students, when compared to their counterparts around the world., although the prevalence, distributions, and correlations for these conditions do not appear to be uniform. MSP is a common complaint of nursing professionals that may lead to serious physical disability. Since this type of pain occurs early in nursing training, nursing is obligated to further examine the mental, physical and ergonomic factors that may be contributory..

Key words

Epidemiology, India, low back pain, musculoskeletal pain, student nurse.

Introduction

Musculoskeletal disorders have become increasingly common worldwide during the past decades. Nurses represent an important occupational group commonly affected by musculoskeletal pain(MSP)[1-5]. It has been shown that MSP may affect nursing students and nursing professionals at reasonably high rates[1]. Although musculoskeletal pain(MSP) disorders are well-known to affect nurses in many countries, no epidemiological investigations have been undertaken on MSP among nurses and nursing students in India. Self-reported surveys represent one of the most cost-effective methods for MSP data collection among large groups, and their validity and accuracy has been demonstrated in various studies[12-14]. Considering these factors, we decided to investigate MSP among a complete cross-section of Indian nursing students using a questionnaire adapted from previous studies. Findings were then compared with similar international studies.

Material and methods

The study design was reviewed and aproved by the Institutional Ethical Committee of Rohilkhand Medical College. The project involved an epidemiological analysis of nursing student's MSP. We included all female nursing students from all three years of two nursing colleges, associated with our hospital, in this study. A total of 317 nursing students participated, representing an overall response rate of 88 percent. Data was gathered by a self-reporting questionnaire, which was administered to all students of both nursing schools. Questionnaires were distributed separately to each of the three student grades during an appropriate lecture period, and collected at the end of each session. Informed consent was implied when students completed and returned their questionnaires.

The survey instrument comprised a simple, three-page anonymous form divided into three main parts. The first section focused on demographic items such as age, weight, height, marital status, year of study, tobacco smoking, alcohol consumption, dietry habits, whether they undertook any regular exercise every week, and if so, how long was the usual duration of exercise. The second section of our questionnaire sought information on musculoskeletal pain by means of a clearly-labelled anatomical diagram divided into separate body sites based on the original Nordic Questionnaire by Kuorinka et al[14]. The validity and reliability of the Nordic Questionnaire has been previously addressed by Baron et al[17]. Who found it to be acceptable in this regard. For our investigation, we defined MSP as an ache, pain, or discomfort occurring within the specified body site during the previous 12-month period, similar to that used during other studies. A 12-month recall period was used throughout, as this has been shown to be an appropriate time-scale in previous Asian studies[3,4,4,8,9,11]. Third part contained additional questions about the duration of MSP symptoms, whether they affected the nurse's daily life and whether any medical treatment was needed.

Analysis of data

Collected data was entered into a common spreadsheet program and analysed by statistical software - OpenEpi, Version 2. For each of these parameters, we calculated percentages, means and standard deviations for each nursing class. Logistic regression was then performed to determine possible risk factors for MSS, with results expressed as adjusted Odds Ratios (OR), 95% Confidence Intervals (95%CI) and Probability (P) values. Probability values below. 05 were regarded as statistically significant throughout all analyses.

Results

Each year of students represented roughly one-third of the total: 1st year (35.3%), 2nd year (33.1%) and 3rd year (31.6%). Their mean age was 22.5 years (SD=9.3) The survey revealed that a high percentage of students (70.5-81 percent) reported some type of body pain (Fig. 1). Although the percentage of people reporting pain in general appeared to increase with number of years in nursing school, we found no statistically significant difference based on years in nursing school. The

prevalence of MSP at any body site varied from 70.5 percent in the first-year students, to 81 percent in the third-year students, with an overall prevalence of 74.5 percent across all three years of study. Low back pain was the most common condition (58.7%), followed by MSP of the neck (31.6.4%), shoulder (29.0%), upper back (25.6%) (Table 1). Headache was also reported by 9.7%. The highest proportion of MSP cases lasting longer than 1-week was reported at the lower back (49.0%) and shoulders (40.7%). Statistically significant differences in MSP prevalence by year of study were identified at the lower back [Extended Mantel-Haenszel ÷2 for linear trend=5.98, P= 0.01447] (Table 1). The mean duration of pain ranged from one to three hours per day to four to eight hours per day (Fig. 2). The mean frequency of pain ranged from more than 10 percent of the days to more than 25 percent of the days in pain (Fig.3). However, both frequency and duration of the most symptomatic pain were significantly higher for year three compared with year one of nursing school (Bonferroni test, P = .017 and P = .002, respectively). Medical treatment was most commonly sought for MSP of the lower back (38.7%) and shoulder (20.4%). Nursing students who were married had an increased risk of overall MSP by a factor of 6.001 (Odds ratio =6.001, 95% Confidence interval 2.312-19.85, P=0.000004578). Conversely, we found no significant association between any pain characteristics such as intensity, duration, frequency and level of regular physical exercise.

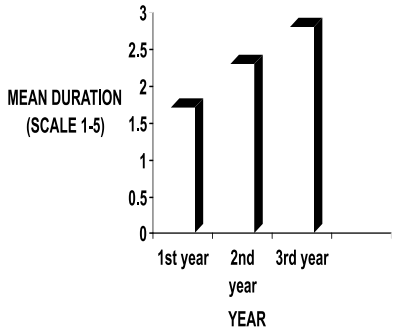
Table 1: Prevalence of Musculoskeletal Pain Among Indian Nursing Students

Body region	1st year (n=112) %	2ndyear (n=105) %	3rd year (n=100) %	All students (n=317) %
Neck	32.1	25.7	37	31.6
Shoulders	26.8	31.4	29	29.0
Elbow	3.6	4.8	8	5.4
Wrists& hand	7.1	2.6	6	5.4
Upper back	25.9	24.8	27	25.6
Lower back	50.0	60.0	67	58.7*
Hips&thigh	11.6	14.3	17	14.2
Knee	26.8	23.8	24	24.9
Ankle&feet	12.5	16.2	13	13.9
Any Body Site#	70.5	72.4	81	74.5*

n = number, % = percent

=Musculoskeletal pain reported at any body site and statistically significant differences in musculoskeletal pain by year of study were investigated using the chi-square test [*P < 0.05]

Fig. 1: Mean duration of the most symptomatic body pain by Nursing school class. Scale: 1 = less than one hour a day, 2 = one to three hours a day, 3 = four to eight hours a day, 4 = nine to 16 hours a day, 5 = 17 to 24 hours a day.



Discussion

The results show that a high percentage of nursing students in India report some type of musculoskeletal pain. The prevalence of any MSP among our nursing students was higher than similar studies conducted in other countries (summarised in Table 2). By specific body site, low back pain (LBP) was more common than previous research among student cohorts in other countries (Table 2). The least prevalent types of pain in student population we studied were elbow/wrist/hand pain. This excess of MSP in our nursing students is attributable to a variety of factors intrinsic to life pattern in India, such as almost lack of any form of physical exercise in our students, dietary habbits, a high proportion of married students, most of the students belonging to rural background where more strenuous manual activity is required at home. Other explanations may relate to methodological issues, such as differences in survey design, sample size and statistical

Fig. 2: Mean frequency of the most symptomatic body pain by Nursing school class. Scale: 1 = 10 percent of all the days, 2 = 25 percent of all the days, 3 = 50 percent of all the days, 4 = 75 percent of all the days, 5 = almost every day.

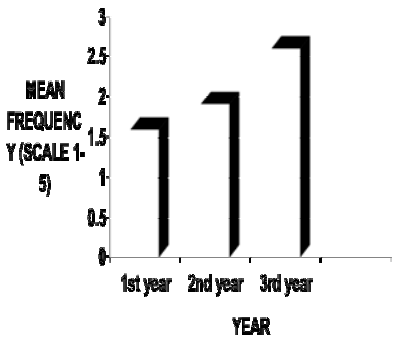


Table 2: International comparison of musculoskeletal disorders among nursing students

MSP at any body site			Low Back Pain		
Country	Prevalence%	Reference	Country	Prevalence%	Reference
Japan	21.6	3	Japan	13.5	8
Japan	32.9	4	Australia	59.2	10
Japan	36.9	8	Korea	35.8	9
China	49.1	5	China	28.1	11
Australia	80	10	England	37.0	7
India	74.5	*	India	58.7	*

*Prevalence among nursing students in the current study. MSP=musculoskeletal pain.

accuracy. In contrast to other studies, our sample population consisted exclusively of female nursing students. Female nursing students have been found to have increased risk of MSP as compared to their male counterparts in previous studies[15,16].

Interestingly, our findings also showed changes in reports of pain with number of years in nursing school. The persistence, duration and frequency of pain increased from the first to the third year of nursing school. In addition, the perception that clinical nursing training was aggravating the pain increased with each year in nursing school. Although not significant, there was a trend of an increasing percentage of students reporting pain with each year in nursing school. This is probably because of manifold increase in clinical training hours with successive years in nursing school. As we did not specifically investigate these factors, it is difficult to confirm such a hypothesis. Further research will be needed to confirm such a hypothesis. There is little information on chronic musculoskeletal pain among Indian nursing students. Therefore, there is little information as to how early pain and musculoskeletal disorders may develop within the profession. The possibility that musculoskeletal problems that develop during students clinical training could intensify later should be investigated.

Conclusions

Overall, the present study suggests that self-reported MSP is more common among Indian nursing students, when compared to their counterparts around the world. Their high rate is also comparable to that reported by hospital nurses in other countries. Future studies should investigate the effects of pain on body movements and positions involved during clinical training to better understand how the presence of chronic musculoskeletal pain may influence the body mechanics involved in learning nursing skills. Before we can develop strategies for prevention of and intervention in musculoskeletal pain conditions related to the nursing profession, we must understand the role of the various factors and their interaction in the appearance, maintenance and exacerbation of these chronic pain conditions. Further research with larger study groups and more extensive geographical coverage is now required to elucidate the contributory factors for MSP among Indian nursing students.

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A study to evaluate the effectiveness of multicomponent intervention on lifestyle practices, body fat and self esteem of obese/overweight school children in selected English medium schools of Udupi district, Karnataka

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Abstract

Background

childhood obesity has emerged as a global epidemic in children. Effective interventions need to be developed to control the epidemic at its beginning.

Objective

To evaluate the effectiveness of a school based multicomponent intervention on body fat, lifestyle practices and self esteem of obese/ overweight children.

Method

A case control study followed by randomized control trial was carried out. A survey of two English medium schools of Udupi district was conducted. A total of 269 children studying in 8th, 9th &10th standard aged between 10 &16 were enrolled. Demographic data and anthropometric assessment was carried. A structured, pretested questionnaire on risk factors was administered to obese/ overweight children and normal children and their mothers. Multicomponent intervention was administered for one month for the children enrolled for experimental group.

Result

Out of 269, 13(4.8%) were overweight, 7 (2.6%) were obese. sedentary activity after school hours, television viewing for longer duration during week days and weekend days, reduced physical activity, skipping meals, influence of media in selecting food items, parents offering food as reward, frequent consumption of fried food and junk food, and drinking carbonated drinks frequently were the important influencing factors. There was a significant reduction in the BMI of intervention group at the end of 4th week which was statistically significant ($P<0.05$)

Conclusion

Identifying the sedentary activity and unhealthy dietary habits among children should be done at the earliest. School based health promotion activities involving parents reduces the prevalence of obesity among children

Key words

childhood obesity, body mass index, multicomponent intervention, skin fold thickness, lifestyle practices, self esteem

Introduction

Over the last few decades, children worldwide have become taller, and also in some countries also significantly heavier. Ten percent of children world wide are overweight or obese (Lobstein T, Baur L, Uauy R)[1]. The problem of childhood obesity is now sweeping our nation. Studies among school children in different parts of the country have demonstrated increasing prevalence of overweight and obesity. The school based data on obesity in India shows a prevalence of 5.6 – 24% among children and adolescents (Kapil U)[2]. Childhood obesity is related to adult levels of lipids, lipoproteins, blood pressure, and insulin and to morbidity from coronary heart diseases (Venkatanarayam KM, Campagna AF)[3]. Obesity should be tackled at the beginning. Limited data is available on school based interventional strategies in India. The purpose of this pilot study was to develop a multicomponent intervention and test the feasibility of carrying out a school based multicomponent intervention.

Objectives

The objectives of the study were to:

- identify the prevalence of obesity among the children in terms of body mass index and skin fold thickness of the defined population
- identify the risk factors for obesity among children
- evaluate the effectiveness of a multicomponent intervention in terms of
  - change in the lifestyle practices
  - reduction in body fat
  - change in the self esteem of obese children

Hypotheses

All the hypotheses will be tested at 0.05 level of significance

- There will be a significant difference in the mean pre and posttest lifestyle practice scores of obese children
- There will be a significant difference in the mean pre and post test body fat measures of obese children
- There will be a significant difference in the mean pre and posttest scores on self esteem of obese children
- There will be a significant difference in the mean post test lifestyle practice score, BMI, SFT and self esteem of obese children in the intervention and control group.

Methodology

The study was carried out at two phases. In the first phase survey with case control design and second phase experimental design was used. Two English medium schools were selected on random basis. Ethical clearance was obtained from ethical committee of the university. After obtaining the administrative permission from the school authorities, anthropometric measurement such as height, weight, Skin fold thickness, waist circumference and hip circumference of 269 children from 8th, 9th, and 10th standard was carried out. Calibrated instruments were used and standard procedures were followed during assessment. BMI was calculated and interpreted based on norms (BMI $>$ 95th percentile for age and sex was considered as obese and BMI between 85th - 95th percentile for age and sex was considered as overweight). Each child filled up a questionnaire that included information about, age, gender,

Factors related to physical activity that influences childhood obesity are shown in table1.

Table1: Physical activity factors influencing childhood obesity

Variables		Obese (n = 15)	Control (n= 26)	Chi-square	Odd Ratio	P value
Way of going to school	Walk to school at least for 5 - 15 mts	10	21			
	Never walk	5	5	1.002	0.476	0.317
Activity after school hours	Sedentary	14	7			
				16.791	38.0	<0.001
	Active	1	19			
Television viewing during week days	Nil & less than 2	7	21			
	>2hrs	8	5	5.036	0.20	<0.05
Television viewing during weekend days	Nil & less than 2 hrs	4	21			
	> 2 hrs	11	5	11.701	0.087	<0.05
Vigorous physical activity	3 or more session/week	2	21	17.561	0.037	<0.001
	Less than 3 sessions/week	13	5			

The data in the table 1 shows that the most common factors influencing obesity are sedentary activity, Television viewing for more than two hours during weekdays and weekend days, and decrease in vigorous physical activity.

Factors related to dietary practices, that influences childhood obesity are shown in table 2

Table 2: Dietary practices influencing childhood obesity

Variables		Obese (n = 15)	Control (n= 26)	Chi-square	Odd Ratio	P value
Skipping meals	Yes	8	5	5.036	4.8	<0.05
	No	7	21			
Influence of media in	Yes	9	6			
				5.590	5.0	<0.05
selecting food items	No	6	20			
Preference of drinks	Water	6	18			
	Fruit juice & carbonated drinks	9	8	3.349	0.296	0.067
Parents offering	Frequently	9	6			
food as reward	Rarely	6	20	15.588	5.0	P<0.001
Frequency of consumption	Daily	6	4			
of fried food	Twice a week	4	10	4.048	-	>0.05
	Rarely	3	10			
	Never	2	2			
Frequency of consumption	Daily	13	4			
of junk food	Sometimes	2	11	24.138	-	<0.001
	Rarely	0	11			
Drinking carbonated drinks	Daily	8	4			
	Sometimes	6	12			
	Rarely	1	9	9.158	-	<0.05
	Never	0	1			

The data presented in table 2 shows that the most common dietary factors influencing childhood obesity are skipping meals frequently, influence of advertisement in selecting food, parents offering food as reward frequently, increased consumption of fried food, junk food, and drinking carbonated drinks.

Comparison between baseline data and data at the end of 4th week of intervention group is shown in table 3.

Table 3: Comparison of baseline data and data at the end of 4th week of intervention group

Variables	PRETEST		POST TEST		'z' value	p-value
	MEAN	SD	MEAN	SD		
Lifestyle Practice score	73	21.7	78	18.5	2.316	.021
Self esteem	62.7	11.6	60.6	10.5	1.402	.161
BMI	24.8	3.26	24.49	3.34	2.521	.012
Triceps skin fold thickness	21.7	3.9	19.87	3.27	1.342	.180
Biceps skin fold thickness	18.37	2.97	17.5	3.33	1.841	.066

Data in table 3 shows the Wilcoxon Signed Ranks Test computed showed a significant difference in the post test in the area of lifestyle practice score and BMI, ($p<0.05$).

Table 4: Comparison between intervention and control group at the end of 4th week (n = 8 + 8)

Variables	Intervention group (n = 8)		Control Group(n = 8)		'z' value	p-value
	Mean	SD	Mean	SD		
Lifestyle Practice score	78	18.5	75.8	14.5	0.630	0.5
Self esteem	60.6	10.5	52.5	12.3	1.578	0.11
BMI	24.49	3.34	27.41	2.97	2.104	0.03
Triceps skin fold thickness	19.87	3.27	19.6	4.1	0.874	0.8
Biceps skin fold thickness	17.5	3.33	18	3.4	0.486	0.62

The data in the table 4 shows the Mann Whitney 'U' between intervention and control group at the end of fourth week showed a significant difference in the BMI of intervention group and control group which was statistically significant ($P<0.05$)

and type of family, number of members in the family, religion and area of residence. Pretested risk factor questionnaire was administered to 15 overweight/obese children and 26 normal children. The questionnaire elicited the information on physical activity which includes way of going to school, type of activity after school hours, duration spent in front of television and participation in the sports activities. The questionnaire also contained items on dietary practices of children. Questionnaire was sent to mothers of overweight/ obese children and normal children. The questionnaire included information on socioeconomic status of the family, history of obesity in the family, type of diet, and number of siblings. Fifteen mothers of obese children and twenty six mothers of nonobese children responded to the questionnaire.

In the second phase one school was randomly selected for intervention and other school as control. Parents consent was obtained by sending the consent form through children. Eight children enrolled for intervention and equal numbers of children from control group were selected randomly. Preintervention measurements such as Body Mass Index (BMI) and Skin fold thickness (SFT) were assessed. A validated, reliable questionnaire on lifestyle practices and self esteem was administered to the children. For the intervention group, awareness programme on childhood obesity and lifestyle modification was given to the parents in the school. Written quiz, games and group discussion on physical activity, diet and lifestyle modification was carried out for the children. DVD/ VCD were developed on aerobics and were given to physical teacher of the school. With the help of VCD/DVD children performed aerobics under the supervision of physical teacher of the school for 30 minutes daily after the school hours for one month. Control group did not receive any intervention. However regular activity was not controlled in both the groups. At the end of 4th week, BMI, SFT, was assessed and lifestyle practice questionnaire and self esteem questionnaire was administered. Analysis of the data was done based on SPSS package version 11.5.

Results

Demographic characteristics

A total of 269 children were studied. Among them 32.7% were in the age group of 14 years, 50.2% were males, 52.1% had one sibling, 55.4% of them were first born, and 73.6% of them were belonging to nuclear family. 93.7% of them were from rural area, 73.6% were from nuclear family. Out of 269, 4.8% were overweight, and 2.6% were obese and 58.7% were normal weight children.

Analyses of factors influencing childhood obesity

- Analysis of the responses of the mothers showed that there was no significant association between childhood obesity and family history of obesity ($X^2 = 0.741$, $p > 0.05$), type of diet ($X^2 = 0.157$, $p > 0.05$) and number of siblings($X^2 = 2.039$, $p > 0.05$). 'Z' value computed between socioeconomic status of obese and nonobese children showed no significant difference between two groups.

Effectiveness of multicomponent intervention

Comparison between intervention and control group

Comparison of baseline data showed no significant difference in the BMI of intervention and control group. Comparison of data between intervention and control group at the end of fourth week is presented in table 4

Discussion

The present study reports the prevalence of pediatric obesity in two English medium schools. Attempt was made to test the feasibility of school based multicomponent intervention aiming to implement at large scale. Prevalence of obesity and overweight among school children in the present study is low compared to the other prevalent studies conducted at metropolitan cities of India[4,5,7]. Among factors influencing obesity studied, sedentary activity after school hours, television viewing for longer duration during week days and weekend days, reduced physical activity, skipping meals, influence of media in selecting food items, parents offering food as reward, frequent consumption of fried food and junk food, and drinking carbonated drinks frequently were the important influencing factors, which is similar to the findings of other studies[4 - 7].

The study also reports that intervention was effective in reducing the BMI of obese and overweight children. Yeravdekar et. al observed significant reduction in the BMI after school based intervention [8].

Limitations

This study being a pilot study with small sample size, intervention provided only for four weeks limits the findings. However this study provided the foundation to carryout a study at large scale.

Conclusion

Identifying the sedentary activity and unhealthy dietary habits among children should be identified at the earliest. School based health promotion activities involving parents reduces the prevalence of obesity among children

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Perception and attitude towards work-life balance among allied and nursing health care professionals

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Abstract

One of the greatest challenges to balancing work and home life is job demands. Job demands include time pressures and deadlines, long hours, unclear or conflicting duties, having too much responsibility, or work that is too tiring or boring. When employees are out of balance, they experience more stress and fatigue and tend to be absent from work more often due to these reasons. They have less focus while at work because they are worried about issues at home and they are also more distracted at home because work matters weigh on their minds. The end result is that neither the situation is healthy nor productive; in short, it's a lose/lose situation for employees, their families and their employer. Hence the researcher out of much curiosity conducted a descriptive survey to investigate the balance between work and life among the nursing and allied health personnel. The findings showed that majority, 65 (95.59%) has moderately balanced work-life and 2 (2.94 %) had well balanced work-life and only 1 (1.47%) had poor work-life balance and majority are satisfied with their job. The findings also showed that there was correlation between work-life balance and job satisfaction as obtained value was (.237) which is higher than the table value (.232) which indicates that higher the job satisfaction, better the work-life balance. Chi- Square test also revealed that there was no significant association between Work-life balance and the selected variables.

Key words

Work life balance, Attitude, perception, nursing personnel, allied health personnel.

Introduction

The role of work has changed throughout the world due to economic conditions and social demands. Originally, work was a matter of necessity and survival. Throughout the years, the role of "work" has evolved and the composition of the workforce has changed. Today, work still is a necessity but it should be a source of personal satisfaction as well. One of the vehicles to help provide attainment of personal and professional goals is work-life benefits and programs. Are work-life balance programs in existence as a result of a social responsibility to employees or to provide a competitive advantage to employers? Before we can answer this question, we need to define what work-life balance is. Many people think of work-life balance only in the framework of what the company or institution does for the individual. However, work-life balance is a two prong approach. The other prong of work-life balance, which many individuals overlook, relates to what individuals do for themselves. According to Jim Bird, CEO of Worklifebalance.com, "Work-life balance is meaningful achievement and enjoyment in everyday life." The primary way companies can help facilitate work-life balance for their employee is through work-life programs and training. Achievement and enjoyment at work is a critical part of anyone's work-life balance. Hence when there is imbalance between work and personal life, one gets burnout which may in turn lower the quality of care given by the health care professionals.

Research methodology

A descriptive survey design was adopted as it determines the Attitude and Perception of Work-life balance of people and their relationship with Job satisfaction.The study was conducted in Manipal College of Nursing, Manipal college of Allied Health Sciences and Kasturba Hospital Manipal. The reason for selecting these settings was due to the investigator's interest and also the nature of work that the particular health care professionals carry out. A total of 68 sample, of which 18 subjects from MCON, 15 from MCOAHS and 35 from Kasturba hospital were randomly selected. The study utilized the following tools to get the required data: Demographic proforma, Structured questionnaire on "Attitude and perception towards work-life balance, Job satisfaction questionnaire and Initiatives to improve work life balance.

Findings and discussion

Out of the 68 samples, majority 31 (45.59 %) are between the age group of 31-40 years and majority 59 (86.76%) are females. Further it was observed that majority 49 (72.06%) are married, 35 (51.47%) are staff nurses, many 33 (48.53%) earn an income of 5,000-10,000 rupees per month and many 35 (51.470%) had experience ranging from1-5 years. The over all picture of the sample characteristics show that majority are young professionals although many are married with low income and yet aspiring for more experience.

The data presented in table 1 shows that majority 65 (95.59%) has moderately balanced work-life and 2 (2.94 %) had well balanced work-life and only 1 (1.47%) had poor work-life balance. The data clearly shows that majority had moderately balanced work-life.

Data presented in fig:1 show that majority 46 (67.65%) had moderate job satisfaction and 21 (30.88%) had high job satisfaction and only 1 (1.47%) had poor job satisfaction. This clearly shows that majority are satisfied with their job.

The data presented in table 2 shows that there is correlation between work-life balance and job satisfaction as obtained value (.237) is higher than the table value (.232) which indicates that higher the job satisfaction, better the work-life balance. Chi- Square computed on work-life balance and selected variables also shows no significant association between Work-life balance and selected variables.

The data presented in Table:3 shows that the majority of the samples ranked paternal leave as one of the most important initiative for balancing ones own work and life back at home and then followed by social clubs, co-curricular activities, Life

Table 1: Level of work-life balance (N=68)

Work Life Balance	Range of scores	Total	
		f	%
Well balance WL	151-180	2	2.94
Moderately balanced WL	81-150	65	95.59
Poorly balanced WL	1- 80	1	1.47

*WL= work-life

Table 2: Correlation between WLB and job description (N=68)

Variables	r
Work life balance and Job satisfaction	.237

Correlation is significant at 0.05 levels $r_{(67)} = .232$, $p>0.05$

Table 3: Opinion on initiatives towards Work-Life Balance (N=68)

	Initiative	Rank
1.	More mone	5.20
2.	Counseling	13
3.	Social clubs	2
4.	More time to think and frame the work	13
5.	Additional staff	5.20
6.	Child care facilities	13
7.	More fulfilling work	9.50
8.	Life skills	4
9.	Third party support	13
10.	Flexible hours	5.20
11.	Disclosing institutionl goals	9.50
12.	Health care facilities	13
13.	Timely Promotion	5.20
14.	Co-curricular activities	3
15.	Paternal leave	1

Fig.1: Job satisfaction of nursing and allied health professionals

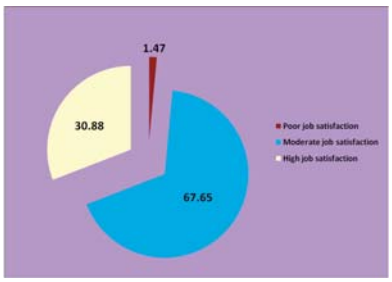

Fig.1: Job satisfaction (N=68)

skills , additional staff, flexible hours, timely promotion, more money, more fulfilling work, institutional goals, child care services etc. The institution although has various aspects of care for its employees, yet one need to closely look at the paternal leave which would be a new beginning for the spouse to get involved in care aspects and family management to improve the work –life balance for him as well as for his partner as a working person. Although cost of living is high and salary were within the limited view, money was not prioritized as first initiative and it ranked only 5.20 which means to say that it is required but other initiatives like timely promotion, health care services and flexible hours of work were placed much more importance. This clearly shows that adjustment between flexible hours can really improve one's accommodation between one's work and family and hence can improve the quality of work, commitments and will help to achieve personal and institutional goals at large. Few of the suggestions opined by 5 of the employees are as follows:

- Rest facilities at work place.
- Equal opportunities to be given to all workers irrespective of its cadre.
- Faculty or staff's parents' need for separate health care facilities.
- Promotion a priority.

Conclusion

Employees' positive perception and attitude towards work-life balance and job satisfaction is central in productivity for an institution. Educational institution where both international and national students are its main customers as well as patients from various corners of the world requires well educated, well mannered and highly approachable teaching faculty and clinical staff to meet the demands of its customers. The actual quality of both education and care is based on the job satisfaction and well balanced life an individual working for its customer. When a happy professional treats its customer one can expect 100% satisfaction. Hence, if optimum productivity is its goal then the institution needs to check from time to time the overall feelings of its teachers and clinical staff who are the pillars of any health care institution.

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Preparing primigravid women for childbirth: Behavioral responses to labour pain and outcome of labour

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Abstract

Objective

To determine the effectiveness of childbirth preparation class in terms of behavioural responses during first stage of labour and outcome of labour in terms of maternal and neonatal outcome, among primigravid women in selected hospitals of Udupi district**,** Karnataka.

Methods

An evaluative approach using a quasi experimental non equivalent group post test only design was used. The test group consisted of 60 healthy primigravidas of whom 30 participated in the childbirth preparation class and another 30 made up the control group. The effectiveness was assessed by means of Student's 't' test and Chi-square test.

Keywords

Childbirth preparation class, primigravid women, behavioural responses in labour, outcome of labour.

Results

Statistically significant differences between the groups were found in behavioural responses in first stage of labour, nature of delivery and neonatal outcome. Statistically significant differences in duration of labour were not observed.

Conclusion

Childbirth preparation class for pregnant women focuses on preventive and promotive care and creates a childbirth experience that is safer, positive and satisfying for the childbearing women.

Introduction

Childbirth is a normal life event, yet women are exposed to a significant amount of stress. Many mothers may also experience unnecessary distress and anxiety simply because they did not anticipate or did not know about the normal physical and psychological upheavals that are integral to the childbearing process. Many maternity providers, including public health departments, hospitals, private agencies and charities, and some obstetricians' and midwives' practices, are reported to provide antenatal education.

In India, antenatal preparation is still less of a formality and knowledge of the birth experience and care of children is passed from mothers to daughters or from traditional birth attendants to those in their care. Living arrangements in which several generations share common space also lend themselves to active participation in the experience of birth and consequently there may be no defined need for structured antenatal education. The existence of structured education in preparation for childbirth and parenthood has come about as traditional methods of information sharing have declined. Pregnant women in general, and first-time mothers in particular require a vast amount of information. Many women, especially first-time mothers, attend antenatal classes which prepare them for labour and delivery. Antenatal education aims to help prospective mothers prepare for childbirth and parenthood. Prospective mothers often look to antenatal education to provide important information on issues such as decision making about and during labour, skills for labour, pain relief, infant and postnatal care, breastfeeding and parenting skills.

There are general beliefs in health care practice that childbirth preparation classes help in better fetal and maternal outcome. But there is no empirical evidence available with the researcher for the effectiveness of childbirth preparation classes on behavioural responses in labor. This observation has made the researcher interested in exploring further and determining the effectiveness of childbirth preparation class on behavioral responses in labor and the outcome of labor.

The aim of this study was to determine the effectiveness of childbirth preparation class in terms of behavioural responses during first stage of labour and outcome of labour in terms of maternal and neonatal outcome among primigravid women.

Methods

An evaluative research using a quasi experimental non equivalent group post test only design was used. The study was conducted in Government Hospital, Udupi and Dr. TMA Pai Hospital, Udupi. The population in this study comprised of primigravid women who met the inclusion criteria who were in the first stage of labour. Sample consisted of 30 primigravid women each in experimental and control groups. The sampling technique selected for the study was purposive sampling method. Selection of subjects were done according to the sample criteria.

Data collection tools consisted of Baseline Proforma, Behavioural Response Observation Checklist and Outcome of Labour Record. The tools were given to seven experts for content validity.

Reliability of behavioural response observation checklist and outcome of labour record was obtained by inter rater reliability. The tools were tested on 20 primigravid women in the first stage of labour. The reliability coefficient was 0.94 and 1 for behavioural response observation checklist and outcome of labour record respectively.

Pilot study was conducted by taking five primigravid women each in the experimental and the control group. The purpose was to find out the feasibility of the study especially to determine the availability of primigravid women and their cooperation in attending the childbirth preparation class.

Childbirth preparation class included content on parts of a female reproductive systems, signs of beginning of labour,

stages of labor, indications for progress of labor, procedures to be undergone after admission in the labour room, nature of contractions, labor positions, breathing techniques to cope with labor pain, premature labor and its signs and symptoms and indications for inducing labor. Primigravid women in the experimental group were given childbirth preparation class in the OPD and antenatal wards. The primigravid women were observed for their behavioural responses for any two hours during first stage of labour with the cervical dilatation ranging between 3-7 cm. Behavioural responses was recorded on a basis of five observations in a period of two hours with a gap of 30 minutes between each observation. The investigator motivated and emphasized the mothers in the experimental group, to implement the breathing and relaxation techniques they learned in the childbirth preparation class. Outcome of labour record was completed by referring the patient case record and the parturition register maintained in the labour theatre.

Data were analyzed by using descriptive and inferential statistics. Sample characteristics, nature of delivery and neonatal outcome are presented in frequency and percentage of occurrence. The data on behavioural responses score and duration of labour (in hours) are summarized in mean standard deviation.

In order to find out the significance of difference for behavioural response scores and total duration of labour between experimental and control groups, independent 't'test was used. Chi-square statistics was used to compare the groups against nature of delivery and neonatal outcome.

Results

Sample characteristics

The study observed that majority of the women in the experimental group were aged between 26-30 years (60%) and in the control group majority were aged 21-25 (46.7%) and 26-30 (46.7%). Majority of women both in experimental (43.3%) and control groups (53.3%) had completed primary education. Majority of the women both in experimental (86.7%) and control groups (83.3%) were housewives. Majority of the women both in experimental (90%) and control groups (90%) belonged to Hindu religion. Majority of the women in the experimental group (40%) were at 38 weeks of gestation and in control group majority of the women (36.7%) were at 39 weeks of gestation. Majority of the primigravid women in the experimental group (43%) had contractions lasting for 31-35 seconds and majority of the primigravid women in control group (49%) had contractions lasting for 36-40 seconds. Majority of the primigravid women in both experimental group (63.30%) and control group (83.35%) had a cervical dilatation of 5-6 cm.

Behavioral responses during first stage of labour

The mean behavioural response scores in experimental group (31.882) were higher than that of the control group (18.82). The standard deviation in the experimental group was 4.765 while in the control group was 3.7. The 't' value computed for behavioural responses of the experimental and control group was significantly higher. [$t_{(58)} = 11.858$, $p < 0.05$]. Hence, there was a significant difference in the occurrence of behavioural responses between the experimental and control groups at 0.05 level of significance. (Table 1)

Thus, it implied that more women in the experimental group who had attended childbirth perparation class exhibited positive responses during first stage of labour, than the mothers who had not attended childbirth preparation class.

Duration of labour

The mean duration of labour in experimental group (i.e 7.5446 hours) was lower than that of the control group (i.e 9.0043 hours). The mean difference was 1.2597. The't' value computed for duration of labour (in hours) of the experimental and control group was not significant. [$t_{(49)} = 1.566$, $p > 0.05$]. Hence, the study found no significant difference in the mean duration of labour (in hours) between the experimental and control groups at 0.05 level of significance.(Table 2) Thus, it implied that childbirth preparation class did not have any effect on the duration of labour of the women.

Nature of delivery

Out of 30 women, 26 (86.7%) of experimental group had normal vaginal delivery with episiotomy while 19 (63.3%) in control group had the same. One woman in the control group (3.3%) had normal vaginal delivery with episiotomy with first degree perennial tear, whereas 2 women in the experimental group (6.7%) had the same. In the experimental group none of the women had forceps delivery, whereas in the control group (10%) 3 of them underwent forceps delivery. None of the women had vacuum delivery in both the groups. In experimental group 6.7% had caesarean section whereas 23.3% in control group had caesarean section. Thus it was observed that out of 30 women in the experimental group, 26 had normal delivery whereas only 19 had normal delivery in the control group.(Table 3) Chi square was computed to test the association and the value was found to be highly significant. $c^2_{1df} = 4.356$ $P < 0.05$. Thus, the study found an association between nature of delivery and childbirth preparation class. (Table 3).

Neonatal outcome

With regard to neonatal outcome, 93.3% in the experimental group did not have caput succedaneum or birth abnormalities while 73.3% did not have birth trauma in the control group. Chi square computed was found to be significant. $c^2_{1df} = 4.320$ $P < 0.05$. Hence, HO_4 was rejected ie., there is association between neonatal outcome and childbirth preparation class. (Table 4).

Conclusion

Childbirth preparation classes prepare the primigravid women for the process of labour and conditions the primigravid women to breathe and relax during contraction to cope with labour pain. As observed from the findings of the study, more women in the experimental group who had attended childbirth preparation class exhibited more of positive responses during first stage of labour, than the mothers who had not attended childbirth preparation class.

Practice of breathing and relaxation techniques taught during the childbirth preparation class and knowledge regarding the physiological changes in labour shortens the duration of labour when compared with primigravid women who did not attend childbirth preparation class.

The need for operative interferences and perineal trauma is much more reduced in the women who are prepared for the process of labour during their antenatal period. Deep breathing and relaxation techniques practiced during labour and bearing down at the right time aids in the progress of labour.

Table 1: Comparison of mean behaviour responses of women in experimental and control groups

	N	Mean	Mean differ ence	't' value	df	P value
Experimental	30	31.882	13.062	11.858*	58	0.001
Control	30	18.82				

*Significant at 0.05 level

Table 2: Comparison of mean duration of labour (in hours) of women in experimental and control groups

	N	Mean	Mean differ ence	't' value	df	P value
Experimental	28	7.7446	1.2597	1.566	49	0.124
Control	23	9.0043				

Table 3: Frequency and percentage distribution of subjects with regard to nature of delivery in the experimental and control groups.

Nature of delivery	Experimental (N= 30)		Control (N=30)	
	F	%	F	%
Normal				
-Normal vaginal delivery with episiotomy	26	86.7	19	63.3
Abnormal				
-Normal vaginal delivery with episiotomy with perinea tear	2	6.7	1	3.3
- Forceps delivery	0	0	3	10
- Vaccum delivery	0	0	0	0
- Caesearean section	2	6.7	7	23.3

Table 4: Chi-square test in the neonatal outcome both in the experimental and control group.

N= (30+30)=60

Neonatal outcome	Experi mental		Control		df	χ^2	Pvalue
	F	%	F	%			
Normal	28	93.3	22	73.3	1	4.320	0.038*
Abnormal	2	6.7	8	26.7			

* Significant at 0.05 level

Occurrence of caput succedaneum can be avoided by early bearing down which is aided by deep breathing and relaxation techniques.

Therefore, regular childbirth preparation classes in the antenatal wards and clinics are effective in bringing about positive behavioural responses and helps the parturients to cope up with labour pains. The information provided also reduces women's fear of unknown and they are able to participate positively in the process of labour.

Limitations

The study used non probability purposive sampling method and so the generalizability of the study is limited to the sample. The observation and recording of behavioural responses were limited to certain time period. Outcome of labour was based on recorded information so it was limited to what was documented, there was no control over the authenticity of information.

Acknowledgement

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A pilot study on effectiveness of information education and communication (IEC) package on quality of life among patients with COPD in selected hospitals of Dakshina Kannada, Karnataka

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Chronic obstructive pulmonary disease (COPD) is an irreversible and destructive lung disease that can seriously reduce people's physical capacity, social functioning and subjective wellbeing. Chronic Obstructive Pulmonary Disease (COPD) is a major cause of chronic morbidity and mortality throughout the world. The the goal of clinical management is to improve patients' health-related quality of life (HRQoL) by relieving symptoms and enhancing functionality[2] by various means. Structured and validated HRQoL instruments offer the potential of providing an objective framework for the longitudinal evaluation of these important health status measures, which are fundamental to the management of this chronic disease.

Quality of Life has become an important measurable outcome in patients with Chronic Obstructive Pulmonary Disease (COPD). It is known to predict mortality, hospitalization, health care resource utilization and response to different treatment options[1,2,3], The subjective measurement of quality of life will help in knowing the condition better than the lung functions tests. In 1998, in an effort to bring more attention to COPD, its management, and its prevention, a committed group of scientists encouraged the US National Heart, Lung, and Blood Institute and the World Health Organization to form the Global Initiative for Chronic Obstructive Lung Disease (GOLD). Among the important objectives of GOLD are to increase awareness of COPD and to help the millions of people who suffer from this disease and die prematurely from it or its complications. Measuring and improving the health-related quality of life for people with chronic obstructive pulmonary disease (COPD) may help them live better and longer even if traditional breath test results don't indicate improvement, according to a researcher at the Medical College of Wisconsin[4].

Limited knowledge is available on the effect of patient education on health-related quality of life (HRQoL). It was[5] found after patient education in a randomized study in 84 patients with moderate asthma better quality of life as measured by the Asthma Quality of Life Questionnaire. In the paper on "COPD the disease and it burden to society" concluded that reducing the burden of COPD requires better evaluation and diagnosis, as well as improved management of chronic symptoms. A high priority should be given to interventions aimed at delaying the progression of disease[6]. Dr. Labrecque said It's well known in asthma that increase quality of life can be increased and of use health resources can be decreased with patient education, but it is less known with COPD[7]

People's awareness to live with chronic illness with modified lifestyle is very essential for the improved quality of life. As nurses are important team member of health team who are in close contact with all types of patients including COPD patients. It is their responsibility to help the patients to improve their quality of life by educating them. As chronically ill patients usually return to their home setting early the learning package will be helpful to them.

Statement of the problem

To evaluate the effectiveness of Information Education and Communication (IEC) package on quality of life among patients with COPD in selected hospitals of Dakshina kannada

Objectives of the study

1. To determine the existing quality of life among patients with COPD
2. To determine the quality of life among patients with COPD after administering IEC package.
3. To compare the quality of life between experimental and control group of patients.
4. To associate post test quality of life scores among experimental group patients with selected demographic variables.
5. To determine the inter correlation between quality of life subscale scores.
6 To determine the impact of demographic and clinical factors on quality of life of patients.

Setting

The study was conducted in four multispeciality hospitals. These hospitals have the bed strength of 1050, 550, 225 and 1175 respectively. The average out patients statistics in the medicine department is 150-450 and among them patients with respiratory diseases accounts for 25-40%.

Sample and sampling technique

Consecutive patients with specified criteria using probability sampling technique will be selected from in patient and out patient department of hospitals.

- Experimental group - COPD patients – 20 – Group I
- Control group - COPD patients - 20 – Group II

Sampling criteria

Research approach and design

Fig. 1: Research Design

Evaluative approach, with quasi experimental design was used.

Groups	Pre- test	Inter vention	Post test I	Post test II	Post test III
G_I	O_{11}	X	O_{12}	O_{13}	O_{14}
G_2	O_{21}	—-	O_{22}	O_{23}	O_{24}

G_I : Group of COPD patients receiving intervention.

G_2 : Control group of COPD patients NOT receiving intervention.

$O_{11, 12, 13,\& 14}$: Observation of group before intervention and after 7 days, 1 month and 3 months of intervention in the experimental group.

$O_{21, 22, 23,\& 24}$: Observation of group before intervention and after 7 days, 1 month and 3 months of intervention in the control group.

Inclusion criteria

- Individuals diagnosed to have chronic COPD
- Aged above 30 years
- Individuals who can read and write English or kannada.
- ndividuals who are willing to participate in the study

Exclusion criteria

- Patients who are in critical condition or terminal stage of illness
- Individuals who suffering with any other multiple diseases which is life threatening

Apparatus and /or instruments

Flanagan Quality of Life Scale (Appendix – 1) was used. It was developed by American psychologist John Flanagan (deceased); modified for use in chronic illness by Carol S. Burckhardt. It has been used in many chronic illnesses like rheumatic diseases, osteoarthritis, heart diseases etc. It has also been used in studies with COPD patients. It is a 16 item, 7 point rating scale with six domains

Scoring

The QOLS is scored by adding up the score on each item to yield a total score for the instrument. Scores can range from 16 to 112.

The QOLS is copyrighted by Carol Burckhardt. However, it is considered to be in the public domain. So it can by used by the researcher without any written permission.(http://www.hqlo.com/content/1/1/59)

Demographic and clinical proforma

The demographic and clinical proforma (Appendix – 2) is used to measure the characteristics like age, sex, marital status, and occupation, and education, duration of illness, smoking status and comorbiditis. It is prepared by the investigator herself.

Validity of the tool

Concurrent validity of the Kannada tool was calculated by computing co-relation between Kannada and English version of Flanagan QOL scale tool. Co-relation coefficient 'r' between English and Kannada version was 0.761

Reliability of thetool

The tools (Kannada and back translated English) were administered to 15 COPD patients admitted to private hospital with the specified sample criteria.

SPSS 11.5 Version was used for statistical analysis. Cronbach Alpha method was used to estimate the reliability of both the tools. The reliability coefficients of the English QOL tool is; œ =0.8520 and the reliability of the subscales ranged from 0.713 to .0.845. The reliability coefficients of the Kannada QOL tool is; œ =0.7865 and the reliability of the subscales ranged from 0.723 to .0.800.

Intervention: Administration of IEC Package (Information Education & Communication) prepared for the purpose of the research study.

Preparation of iec package

The package contains information on COPD, its management, control, exercise, Life style changes, management of exacerbations and home management to be communicated to the COPD patients.

The language and the terminologies used will be simple as it caters to the lay public. It was administered by a disturbing a booklet on COPD after teaching by use of multimedia and demonstration.

Content validity of the iec package

The Package will be given to 9 experts in the field of nursing, pulmonary medicine, and general medicine. Experts were asked to evaluate the package based on the criteria checklist and render their valuable suggestions for improvising the package.

Data collection procedure

Formal administrative permission to conduct the study in the selected hospitals was obtained from Director/Medical Superintendents of respective hospitals. An informed consent was also obtained form the subjects indicating their voluntary participation.

Major findings

Description of sample characteristics

A total of 20 sample were selected by non-probability purposive sampling technique from three different Hospitals for the study. The background of these COPD patients was obtained by using demographic and clinical Performa. They are summarized in frequencies and percentage in Table 78 & 9.

Demographic and clinical characteristics

Age, sex, marital status, education, type of family, occupation smoking time since diagnosis, and other diseases are the characteristics included in the study. The data are presented group wise in table 1 and 2.

Data in table 1 shows that majority of subjects in experimental (40%) and control group (35%) belonged to age group of 70d" and 50-59 and 60-69 respectively. Males were in majority in both experimental (90%) and control group of patients (85%). Highest no. of patients in the experimental group (65 ^) and in control group (45%) were married. But majority of patients had only primary education in both the groups. Majority of COPD patients of both the groups (55% - exp, 45% - cont) were currently not working. To find the difference in the groups Chi Square and Fishers Exact test was used as per the sample distribution. There was no significance difference between the experimental and control group with regard to any demographic characteristics.

Data in table 2 show that there were total of 17 out of 20 and 16 out of 20 smokers in the experimental and control group respectively. All the smokers of both the groups were beedi smokers. Majority were smokers for more than 15 years in both the groups, i.e., 94.1% in the experimental group and 81.3% in the control group. Majority in experimental (47.1%) and control group (62.5%) had stopped smoking only since 1 year. Highest no of subjects (exp 75%; control 85%) were diagnosed more than 1 year back. Equal proportion of the patients (45%) had co morbidities and among them majority had DM (20%) in both the group.

Quality of Life of COPD Patients

Data related to the quality of life of COPD patients are generated through the use of Flanagan Quality of Life Scale. Subject's quality of life scores are analyzed and is shown in table 3 and figure 1 & 2.

Table 1: Percentage and Frequency Distribution of Sample According to Demographic Characteristics

	Characteristics		Experimental Group (n=20)		Control Group (n=20)		X_2	P value
			f	%	f	%		
1	Age (in years)							
	1.1	30-39	-	-	-	-		
	1.2	40-49	3	15	1	5		
	1.3	50-59	4	20	7	35	2.844	0.416
	1.4	60.69	5	25	7	35		
	1.5	70<_	8	40	5	25		
2	Sex							
	2.1	Male	18	90	16	85		
	2.2	Female	2	10	4	15	0.784	0.376
3	Marital Status							
	3.1	Single	7	35	11	55		
	3.2	Married	13	65	9	45		
	3.3	Widower/Widow	-				1.616	0.204
	3.4	Divorcee/Separate						
4	Education							
	4.1	Primary	17	85	11	55		
	4.2	High School	3	15	6	30		
	4.3	Graduation	-	-	3	15	5.286	0.071
	4.4	Professional						
5	Type of Family							
	5.1	Nuclear	12	60	9	45		
	5.2	Joint	8	40	11	35	0.902	0.42
6	Occupation							
	6.1	Unemployed	11	55	9	45		
	6.2	Unskilled	7	35	8	40		
	6.3	Skilled	2	10	3	15	0.467	0.792
	6.5	Professional	-	-				

Data in the table 3 show that in the experimental group maximum no of subjects (35%) had QOL scores in the range of 50-54 as against the control group where majority (25%) scored in the range of 45 – 59 and 50 – 54 it the pre intervention period.

But in the post intervention period I majority of patients scored in the range of 55 – 59 and 60-64 and 50 – 54 respectively.

In the experimental group in the post test II majority (6 out of 20) of subjects' QOL scores was in the range of 65-69 and in the control group in ranged between 55 – 59 only.

Data in both the polygon (Fig.1A) and ogives (Fig 2) clearly show that the post intervention I and II QOL scores lie above the pre intervention QOL scores. In the ogives it is seen that the 25th 50th and 75th percentiles all lie to the left of each other except in the 25th 50th and 75th percentile of the experimental group in pre, post I and II is 45.5, 54, 59 respectively. And the 50th percentile is 49.5, 59.2, and 63.5 respectively. The 75th percentile is 57. 65.5, 60 respectively.

It is further observed in data in table 4 that in the experimental group mean QOL score was higher than the control group in all the three time periods. In the experimental group the mean post test I (64.90) and II (70.10) scores were higher than the mean pre test period scores (55.45).

In order to find the true differences between these observed means in the experimental group HO_1 was formulated.

HO_1: There is no significant difference between the pre test and post test quality of life scores of experimental group of COPD patients at 0.01 level of significance.

Fig.1: Frequency polygon of QOL scores of experimental group in different intervention periods.

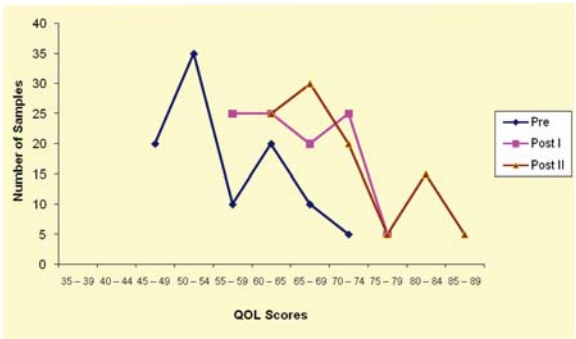

Fig. 2: Ogives of Experimental and Control Groups QOL Scores

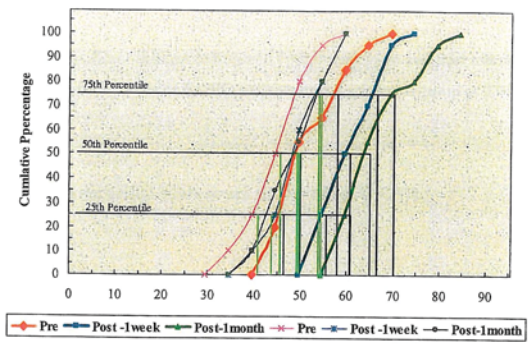

Table 2: Percentage and Frequency Distribution of Sample According to Demographic Characteristics

Characteristics		Experimental Group (n=20)		Control Group (n=20)		X_2	P value
		f	%	f	%		
1 1.1 Smoking							
	Perday	3	18.5	12	75		
	2 pkts	14	87.5	4	25	0.267	0.606
	2-3 pkts	—	—	—	—	—	—
	3-5 pkts	—	—	—	—		
1.2 Since how many years							
	6 - 10	1	5.9	3	18.8		
	11 – 15	16	94.1	13	81.3	1.281	0.258
	15						
1.3 When stopped?							
	15 days – 6 mts	2	11.8	6	37.5		
	7mts – 1 year	8	47.1	10	62.5		
	1 year-10 yrs	7	41.2	-	-	9.2	0.01
	10 yrs						hs
1.4 Smoking index*		1	5.9	-	-		
	251 – 500						
	501 – 750	10	58.3	6	37.5		
	751	6	35.3	16	62.5	2.978	0.226
2. Time since diagnosis							
2.1	Les sthan a month	-	-	-	-		
2.2	1 month – 3 month	2	10	-	-		
2.3	3 month – 1 year	3	15	3	15		
2.4	1 year	15	75	17	85	2.125	0.346
3. Presence of co morbidities							
3.1	Yes	9	45	9	45	0.12	
3.2	No	11	55	11	55		
4. If yes, what are they?							
4.1	Diabetes	4	20	4	20		
4.2	Hypertension	3	13.33	4	20		
4.3	CAD (Coronary	2	10	-1	-		
4.4	Artery Disease)						
4.5	Any other, specify	-	-	(renal)	5		

Table 3: Percentage Distribution of COPD Patients according to their Quality of life Scores in Different Intervention Periods.

Quality of life scores	Intervention Period											
	Experimental Group (n=20)						Control Group (n=20)					
	Pre		Post (after 1 week)		Post (after 1 month)		Pre		Post (after 1 week)		Post (after1 month)	
	f	%	f	%	f	%	f		f		f	
35–39	-	-	-	-	-	-	2	10	-	-	-	-
40-44	-	-	-	-	-	-	3	15	2	10	2	10
45-49	7	20	-	-	-	-	5	25	3	15	5	25
50-54	7	35	-	-	-	-	5	25	7	35	4	20
55-59	2	10	5	25	-	-	4	20	4	20	5	25
60-65	4	20	5	25	5	25	1	5	4	20	4	20
65-69	2	10	4	20	6	30	-	-	-	-	-	-
70-74	1	5	5	25	4	20	-	-	-	-	-	-
75-79	-	-	1	5	1	5	-	-	-	-	-	-
80-84	-	-	-	-	3	15	-	-	-	-	-	-
85-89	-	-	-	-	1	5	-	-	-	-	-	-

Table 4: Mean, Median, Range and S.D of Quality of Life Scores of COPD Patients in Experimental and Control Groups.

	Experimental (n=20)				Control (n=20)			
	Range	Mean	Median	S.D	Range	Mean	Median	S.D
Pre test	40 – 73	55.45	53.50	7.409	38-83	49.10	49.50	6.520
Post Test I	55 – 83	64.90	63.50	7.085	21 – 67	53.15	53.00	6.098
Post Test II	58 – 86	70.10	68.50	7.340	44 – 79	53.35	53.50	6.099

The ANOVA showed (table 5) no significant difference between quality of life scores of the three different intervention periods in experimental group, ($F_{2,57)}$= 7.881, p<0.01), hence the researcher failed to reject the null hypothesis (HO_1).

Significance of Difference in Quality of life experimental Group with regard to Demographic variable

The difference in the mean QOL scores of the subjects with regard to the influence of demographic variables was determined by Kruskall Wallis test and Mann Whitney U test. Then 'Kruskull Walis Test' is computed to find the significance of difference between means of subscale scores. This test was used as there is great variation in the scores.

As the samples were small and the distribution is highly unequal f or some of the variables like sex, marital status, type family, smoking status, education Mann- Whitney U- test was used. The data in table 6 show that there was no significant different in QOL with regard to occupation, smoking index, and stopped since, but a significant difference was found with regard to age (p=0.045) suggesting that according to QOL scores also varied.

Date in table 7 show that according to Mann Whitney U test it was found that only in thr variable duration of smoking, significant difference was sees(p=0.017). Significant difference between the mean subscale quality of life scores of experimental group also estimated and it is presented in table -8

Table 5: Comparison of Mean Quality of Life scores in Three Treatment Periods in experimental groups.

Group		N	Mean	S.D	'F ratio'	P value
Experi	Pre	20	55.45	7.409	7.881	0.252
mental	Post I	20	64.90	7.085		
	Post II	20	70.10	7.341		

Table 6: Post intervention I QOL scores Vs demographic variables.

QOL Demographic Variables scores	N	Mean	S.D	H	P value
Age 40 – 49	3	63.33	4.9333		
50 – 59	4	65.50	8.583		
60 – 69	5		9.149		
70d"	8		5.701	6.219	0.045 sig
Occupation					
Unemployed	11	65.000	7.950		
Unskilled	7	65.142	5.962	2.64	0.267
Skilled	2	67.000	4.243		
Smoking Index					
Less than 250	-	-	-		
251 – 500	2	64.50	6.363		
501 – 750	8	68.25	8.598		
751 d"	7	64.00	4.933	3.12	0.21
Stopped Sinc					
6mts – 1 yr	2	64.50	6.363		
1yr – 10 yrs	8	68.25	8.598		
More than 10 yrs	7	64.00	4.932	1.463	0.484

Table 7: Post intervention I QOL Scores Vs demographic variables

QOL / Demographic Variables scores	N	Mean	S.D	H	P value
Education					
Primary	17	65.588	6.956	1.114	0.265
High School	3	61.000	7.937		
Graduate	-				
marital Status					
				0.437	0.662
unmarried	7	65.286	7.867		
married	13	64.692	6.957		
Type of family					
				0.387	0.699
Nuclear	12	65.667	7.607		
Joint	8	63.750	6.541		
Smoking					
				1.91	0.056
Yes	17	66.059	6.968		
no	3	58.333	3.511		
Duration of smoking					
				2.382	0.017 sig
11-15 years	4	59.250	3.500		
15 years	13	68.153	6.440		

Table 8: Significant difference between the mean subscale quality of life scores of experimental group

Subscale		N	Mean	S.D	F	P value
Physical	Pre	20	3.20	0.909	5.366	0.007
	Post I	20	3.80	0.834		hs
	Post II	20	4.08	0.847		
Relation	Pre	20	3.175	0.717		
	Post I	20	3.80	0.781	7.277	0.002
	Post II	20	4.10	0.844		hs
Social	Pre	20	3.15	0.780		0.036
	Post I	20	3.675	0.693	3.512	sig
	Post II	20	3.675	0.693		
Personal	Pre	20	3.425	0.679		
	Post I	20	3.963	0.546	8.492	0.001
	Post II	20	4.175	0.544		vhs
Recreation	pre	20	4.00	0.802		
	Post I	20	4.683	0.745	10.624	0.001
	Post II	20	5.033	0.601		Vhs
Independence	pre	20	4.350	1.04		
	Post I	20	4.850	0.875	3.084	0.053
	Post II	20	5.050	0.826		Sig

Table 9: Mean and "t" value between the experimental group and control group at different periods

	Group	N	Mean	S. D	"T"
Pre test	Experimental control	2020	55.4549.10	7.4096.520	2.877P= 0.107 ns
Post test I	ExperimentalControl	2020	64.9053.15	7.0986.098	P= 0.001 Hs7.891
Post test II	Experimental Control	2020	70.1053.35	7.3406.02	P=0.001 hs

Table 11: Correlation between the mean subscale quality of life score in experiments group.

Subscaless		Physical	Relation	Social	Personal	Recreation	Independence
Physical	r	1	-0.09	-0.133	0.0015	0.603	0.388
	P		0.706	0.575	0.950	0.005	0.91
Relation	r		1	0.199	0.628	0.088	0.278
	P			0.400	0.003	0.713	0.236
Social	r			1	0.048	0.063	0.474
	P				0.841	0.791	0.035
Persona	r				1	0.007	0.20
	P					0.977	0.398
Recreation	r					1	0.153
	p						0.519

Table 10: Association between the demographic factors and pre intervention quality of life score in the experimental group.

Variables	Chi square value	Level of significance
Age	3.133	0.372
Sex	-	-.474
Marital Status	0.000	1.00
Education	0.392	0.531
Type of family	3.377	0.185
Occupational	3.377	0.185
Smoking	-	0.211
Time since diagnosis	2.4	0.301
Co morbidites	1.818	0.178

Date in table 8 shows that there was significant difference between mean quality of life scores of all the subscales of COPD patients in the experimental group.

To find the significance of difference between he experimental group and control group mean quality of life scores HO_2 was formulated.

HO_2: There is no significant difference between the post test quality of life scores of
experimental groups and control group of COPD patients.

Data in table 9 show that both in post test I and post test II there was significant difference in quality of life scores and hence HO2 was rejected.

Association between the demographic factors and pre intervention quality of life score in the experimental group.

To find out the association between the demographic factors and mean pre test quality of life scores following null hypothesis was formulated.

HO_3 : There is no significant association between the pre test quality of life scores of COPD patients of experimental group and selected demographic variable.

To test this null hypothesis chi square fishes test was computed. Quality of life scores were divided into two categorized based on the median value 53.50, above and below median. As for the variables sex and smoking, the samples were very unequally distributed and hence fishes exact test was computed.

The data in the table 10 show that all the obtained valued are

Table 12: Regression analysis equation showing the significant predictors of quality of life scores in the experimental group

Predictors	B	â(Beta)	T	P	R^2	Adj R^2
(Constant)	60.438		5.490	0.000		
Age	1.063	0.168	0.627	0.542		
Smoking per day	3.830	0.304	0.842	0.415		
Duration		1.363	2.161	0.050		
Stopped since		-0.848	-0.1450	0.171		
Smoking index		-0.398	-0.757	0.462		0.232
Time since diagnosis		-0.158	-0.629	0.540	0.475	

not significant at 0.05 or 0.01 level of significant. Therefore the investigator accepted the null hypothesis HO3 and concluded that demographic variables are no associated with quality of life score.

Inter correlation between different sub scales of quality of life scores of Experimental group

Subscale correlation of the experimental group in pre intervention period was determined by the spearman who and is presented in the table 11.

Data in table 11 shows that there is inverse relationship between physical and relation subscale, social and relation subscale; independence and physical subscale; social and personal subscale suggesting that variation in one subscale will alter the other one negatively. Significant correlation was found between physical and recreation, p=0.005; relation and personal, p=0.003' and social and independence, p=0.035.

Impact of demographic factors on QOL of experimental group

To find out the impact of continuous demographic variables like age, smoking pera day. Duration of smoking, stopped since, smoking Index, and time since diagnosis multiple regression was computed. To test this null hypothesis was stated as follows;

HO_{3-} There is no significant impact of selected demographic variable on the variance of quality of life scores in post intervention I times in the experimental group.

Data in table 12 show that for the total quality of life variance is by all these variables is 47.5% and the rest by other variables which are not included in the equation.

Implications

Nursing Practice

- The findings of this study raise significant implications within the context of the expanded role of the nurse within Chronic Disease Management, and the paradigmatic shift towards self management as a right, necessity, and obligation.
- It is not only necessary that planned individual or small group based communication of information should be integral part of educating the patient and following them up periodically also has to be emphasised.

Nursing education

- The education material prepared for the patients can be used in regular basis for the patients admitted to the hospital to improve their quality of life. Evidences suggested that better self management skills will enable the patient to have better coping skill even in situations of exacerbations.
- Orientation programme or CNE can be conducted to update knowledge regarding the importance of communication, channels of communication, communication barriers, and appropriate communicative aids, modes and recent advancements in communication strategies available for the mechanically ventilated clients.

Nursing research

1. Compared to the western countries where there are quiet a no. of research studies conducted with regard to effectiveness of various types of interventions, like pulmonary rehabilitation, 6 min walking exercise, counseling, and even various means of communication and education on quality of life , in India it very scanty. Hence it is necessary to find out that COPD patients who are mostly from middle or lower middle income category, how well they respond to interventions that are focused on improving quality of life.

Conclusion

It can be concluded that quality of life which is less in COPD patient can be improved significantly by introducing them to the IEC package. Compliance with the IEC package is the one that needs to be implemented structurally so that the impact is long lasting and beneficial.

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To assess the effectiveness of video assisted teaching (VAT) on needle stick injury regarding knowledge and attitude of staff nurses working in selected hospitals of Karnataka

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Abstract

Background & objectives

Two million injuries from needle stick and other sharp objects occur to the world's 35 million health care workers each year. In which needle stick injuries are main cause of disabilities among health care workers. The nurses suffer the most needle stick injuries of all health care workers, an average of 1-4 needle stick injuries per year exposing them to over 20 different blood borne pathogens. The most common blood borne pathogens are HIV, hepatitis B and hepatitis C. In November 2002, the world health report published data demonstrating that 2.5% of HIV infections among health care workers and 40% of hepatitis B and C infections are the result of needle stick injuries.

Methods

An evaluative research approach with quasi- experimental Pretest and Posttest control group design adopted. The study includes 60 staff nurses who were selected as sample by non probability purposive sampling technique. The study was conducted in selected hospitals of Hassan. Demographic data, structured knowledge, attitude questionnaire and video assisted teaching (VAT) were implemented for data collection procedure. The tool was finalized by consulting seven experts in the field of nursing. Pilot study was done for its clarity, unambiguity & feasibility on similar subject. To analyze the experimental data, statistical analysis was used. Demographic data of the staff nurses were presented in graphs. Association of variables was tested by Chi-square with Yates correction and Fisher exact test.

Results

It was observed that the over all post-test mean percentage of knowledge and attitude was higher (88% and 83.2%) in experimental group than in control group (37.86% and 54.6%) respectively, where't' value were knowledge ($t=26.67$ at $p<0.001$) and attitude ($t=16.32$ at $p<0.001$). The finding signifies that the video assisted teaching was effective to enhance the knowledge and to mould attitude of staff nurses.

Interpretation & conclusion

Both descriptive and inferential statistics were employed to analyze the data. The data analysis was carried out on the basis of objectives and hypothesis of the study and has been presented on the sample characteristics. Overall mean knowledge scores (pre test=13.53, post test= 26.66) and mean attitude scores are (pre test= 43.39, post test= 74.92).

Knowledge (43.90%) and attitude (54.60%) scores of staff nurses were less before administration of VAT. After administration of VAT the scores of knowledge (88%) and attitude (83.20%) increased significantly. There was no association between knowledge and attitude level with selected demographic variables. The Independent't' value (knowledge= 26.67, attitude= 16.32) was greater than table value at $p<0.001$ level of significance. This indicates that VAT was significantly effective in increasing the knowledge and attitude level of staff nurses.

Keywords

Needle stick injury, video assisted teaching, knowledge, attitude, Effectiveness, staff nurses

Introduction

A needle stick injury is the result of an accident with a needle which punctures the skin. These injuries can occur at any time when people use, disassemble or dispose of needles, if not disposed properly, needles can conceal in linen or garbage and injure other workers who encounter them unexpectedly.

Each day thousands of health worker around the world, suffer accidental occupational exposures during the course of their role of caring for patients. These injuries can result in a variety of serious and distressing consequence ranging form extreme anxiety to chronic illness and premature death. The health care workforce, 35 million people worldwide, represents 12% of the working population. The misconception exists that health care industry is without hazards, but in fact blood borne exposures encountered can be career and life-ending. It is found that 30 to 50% of all needle stick injuries occur during clinical procedures. The determinants of NSIs includes; over use of injections, lack of supplies; disposal syringes, safer needle devices and disposal containers, lack of access to and failure to use sharp containers immediately after injection, inadequate or short staffing, recapping of needles after use, lack of engineering controls such as safer needle devices, passing instruments from hand to hand in the operating suite, lack of awareness of hazards and lack of training[2].

According to world Health report (2004) health care workers get 2 million needle stick injuries per year that result in infections with 40% of hepatitis B, 40% of hepatitis C, and 2% of HIV infection. Everyday while caring for patients, nurses are at risk to exposure blood borne pathogens potentially resulting in infections such as HIV, Hepatitis B and Hepatitis C. Needle stick injuries transmit infectious disease viruses, and each of these viruses poses a different risk if a health care worker is exposed. More than 20 other infections can be transmitted through needle stick injuries, including syphilis, malaria, diphtheria, tuberculosis, toxoplasmosis etc[3].

Needle stick injuries cause a high burden of death and disability among health care workers. Available statistics underestimate the severity of problem because many cases go unreported as nurses do not report their injuries. The risk of contracting HIV is approximately 3 in 1000 (0.3%). There are 800 new cases of HBV in UK each year. The prevalence of HBV is much higher in certain populations such as prisoners and IV drug users. The risk of seroconversion following a needle stick injury from

source is at least 30%. There is of course a highly effective vaccine available for HBV which provides protection in up to 90% of recipients. Despite the availability of such a vaccine there are still 800 cases of HBV infection reported in the USA each year following needle stick injuries. There have been 300 deaths in the US related to HBV contracted through a needle stick injury. The risk of HCV seroconversion following a needle stick injury is about 1.8% but many cases go unreported if a needle stick injury incurs. This makes it more difficult to know severity of problem and how well prevention is possible. Needle stick injury also has indirect consequences on health care delivery system, particularly in region where the qualified workforce is small. These injuries have not only the potential health consequences but also have emotional distress on health care workers which result in missed work days and directly affecting the health care services and resources.

To prevent needle stick injuries an effective exposure control program should have a responsible person assigned to head the program and a committee that includes representatives from frontline patient care providers to evaluate the hazards, injury data and make recommendations for prevention. The committee should assure appropriate follow up and post exposure prophylaxis as determined by the nature of the injury and source patient. The most effective means of preventing the transmission of blood borne pathogens is to prevent exposure to needle stick injuries. The primary prevention of needle stick injuries is achieved through the elimination of unnecessary injections and needles. The implementations of education, universal precautions, elimination of needle recapping and use of sharp containers have reduced needle stick injuries by 80%[2].

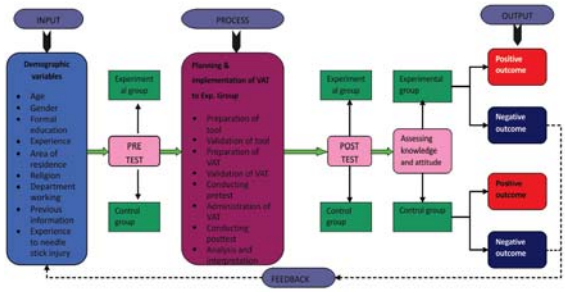
There is comprehensive program to prevent needle stick injuries which includes; employee training, controlled work practice, implementing engineering control, surveillance programs, safe recapping procedures, effective disposal systems. As nurses are the largest work force of the health care industry and at high risk to incur needle stick injuries, it is important to have adequate knowledge about hazards, prevalence and controlling measures of needle stick injury[4].

Need for the study

According to WHO report (2001) the needle stick injuries are most common form of occupational exposures in health care settings and most likely to result infection. Health care workers incur 2 million needle stick injuries per year that result in infections. While 90% of the occupational exposures occur in the developing world, 90% of the reported infection occurs in the United States and Europe. 57 confirmed and 137 suspected cases of occupational HIV transmission in United States had been reported. It estimates of up to 35 new cases of HIV and at least 1000 cases of serious infections are transmitted annually to health care workers. Data shows 4 needle stick injuries per worker per year in Africa, Eastern Mediterranean and Asia populations. In Vietnam 66% of nurses reported sustaining a needle stick injury in previous nine months[2].

CDC (centre for disease control 2002) estimated that more than 380,000 percutaneous injuries from contaminated needles occur annually among health care workers in the United States. It also estimates that 600,000 to 800,000 works related needle stick injuries occur annually in the USA in which 40-75% goes unreported. At least 1,000 health care workers are estimated to contract serious infections annually from

Fig. 1: modified conceptual frame work based on "j.w kenny's open system model



- - - - - - Feedback -not included in the study

needle stick and sharps injuries. An average hospital worker incurs approximately 30 reported needle stick injuries/100 beds/year. Most reported needle stick injuries involve nursing staff. It is extremely important that health care workers are aware of how these injuries occur, how to prevent and what to do in case of injury Needle stick injuries are preventable. Over 80% of needle stick injuries could be prevented with the use of safer needle devices. Less than 15% of U.S. hospitals use safer needle devices and systems[7].

Each year in China more than 1.5 million needle stick injuries happen among health care workers, an average of 4410 needle stick injuries per day. Near 80% of health workers have experience of needle stick injury. About 17.9% have more than 5 times needle stick injuries. The device involved in needle stick injury are; disposal syringes and phlebotomy needles[8]. Ministry of health report (2004) emphasizes that two third of injections are unsafe in India. The prevalence of needle stick injuries is 23.6% in south India, which is extremely high. The country may looking at 20, 00000 new hepatitis B cases 4, 00000 hepatitis C and 30, 000 HIV positive cases in a year[9]. According KSPCB (Karnataka state pollution control board) 2007 "The disposal of needles and other sharps are not proper in Karnataka. At the top of the list are hospitals from Hassan and Bangalore North zone. Of 373 establishments in Hassan, 265 units dump their waste into open areas. Bijapur and Mysore hospitals are the best performers"[10].

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A study on the awareness of utilization of reproductive and child health (RCH) services in the selected villages of Udupi District, Karnataka

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Abstract

Objectives

To assess the knowledge of the women on Reproductive and Child Health, practices on family planning and the utilization of health services and to find the association between knowledge on RCH with selected variables.

Method

Descriptive cross sectional study was conducted among married women of reproductive age group in the selected villages of Udupi district. The study subjects were interviewed through a questionnaire.

Result

Out of 120 women majority (84.2%) had a good knowledge on RCH, and are belonged to the age group of 25-30 years (38.3%). Ninety four percent of women had obtained information from health personnel and 77% of women were practicing different kind of family planning methods.

Conclusion

The population covered for the study had good knowledge and found 100% utilization of health services during antenatal, natal, postnatal periods and during immunization of children.

Key words

RCH, knowledge, practice, utilization and family planning.

Introduction

In India, women belonging to 15-45 years of age and children below 15 years of age together constitute nearly 65 percent of the total population of the country and are considered to be a vulnerable group. In order to achieve health of the mother and children, the RCH programme was launched on October 15, 1997. The focus of the programme was to reduce maternal and child morbidity and mortality with emphasis on rural health care1. The RCH approach places special emphasis on client oriented need based and high quality integrated services2. India is the second most populous country in the world. India's population is projected to reach 1.53 billion by the year 2050. In India, a baby is born every 1.25 second. Couple protection rate is still only 41%. At least 20,000 women are dying annually due to abortion related complications and most of these deaths are preventable3. The Millennium Development Goals (MDG) has set the target of achieving only 200 maternal deaths per lakh of live births by 2007 and 109 per lakh of live births by 2015. With increasing age, women experiences more sexual life, pregnancies, gynecological surgery and deliveries etc, which make the women vulnerable for RTI. Through adult education and social education, the awareness and importance of utilization of MCH care aspect may be imparted to the adults as well as to the couple in the reproductive age to promote the health of the mother and child.10. The impact of such programmes on the knowledge levels of the women must be monitored closely and can be measured. Keeping this in mind, a study was conducted to assess the knowledge on RCH, practice of family planning and utilization of health services of married women in Udupi district of Karnataka State.

Materials and methods

A community based cross sectional descriptive survey study was carried out during December 2007 to January 2008 in Hirebettu village of Udupi District. A non probability purposive sampling was used to select 120 married women by using structured and validated questionnaire on knowledge, practice and utilization of health services.

The Inclusion criteria were the married women with children between the age group of 18-45 years, residing in the villages, willing to participate and present at home during the time of study. The exclusion criteria were unmarried women and who cannot read Kannada.

Demographic Proforma consisted of age, education, income, age at marriage, married life, and total number of children, religion, and source of information. A structured questionnaire consisting of Multiple Choice Questions (MCQ) was developed to assess the knowledge of women regarding RCH with maximum score of 49 and minimum score of zero. Knowledge scores were arbitrarily classified as low (0-16), average (17-32) and good (33-49) level. Family planning practices and utilization of health services questionnaires were developed to gather the information regarding family planning practices and service utilization.

The reliability of the tools were determined by test retest method. The reliability co-efficient was r=0.90. Administrative permission was obtained to collect the data from the concerned authorities. A written consent was also obtained from the eligible participants for this study and the data was collected between December 2007 and January 2008. The data was analyzed using descriptive (frequency and percentage) and inferential statistics (t-test). The analysis was done based on objectives and hypothesis.

Results

Among120 women, 38.3% belonged to the age group of 25-30 years, 50% of women and 47% of their husbands had education up to high school. Thirty seven percent of women had a monthly income above Rs.5000. Eighty eight percent of women got married after 20 years. Fifty five percent belonged to 1-8 years of duration of married life and 56.7% of women were having two children norm (Table 1). The study showed that the majority (94.2%) of women obtained information on RCH from health personnel and 4.2% by internet (Fig. 2).

Study also revealed that 84.2% of women had good knowledge and 15.8% had average level of knowledge on RCH. The difference between mean of the total knowledge score across the selected variables such as age of the women ($t_{(118)}$ =0.043 P<0.05), education of husband ($t_{(118)}$ =0.044 P<0.05) and source of information by friends ($t_{(118)}$ =0.005 P<0.05) were found statistically significant at 0.05 level of significance. The null hypothesis was rejected on regard to these variables and alternative hypothesis was accepted. Other variables such as education of women, income, type of family, age at marriage and source of information such as newspaper, magazines, television, radio, internet, health personnel, family members and neighbourers were not found statistically significant (Table 3).

With regard to family planning, 77% of women were practicing different kind of family planning methods and 23% of women were not practicing any kind of family planning method. Out of 77% of women, 45% were practicing permanent method and 32.5% were practicing temporary method of family planning. Majority (38.46%) of the couples was practicing condom as family planning and only 5% of women were using oral contraceptive pills for family planning. Data show that the reason for not practicing family planning methods (n=27) were, 48% of women expressed that their husbands were living away from them and 4% of women underwent hysterectomy (Fig 1). Regarding the problems faced by the women (n=9) after practicing family planning, 45% of women complained of backache, 11% had weakness, 33% had problem of heavy menstrual flow and 11% had gastritis problem. Most of the (83%) of women reported that both husband and wife were jointly taking decision for family planning whereas, 7.14% of women took decision for family planning by themselves (Table 2).

The analysis revealed that there was 100% utilization of health services during antenatal, natal, postnatal periods and also during immunization for children at the age of 12-23 months. The study also revealed that, out of 120 women, only 6 women delivered at home with the help of ANM and the rest delivered in government as well as in private hospitals

Discussion and conclusion

In the present study out of 120 women, 64.2% belonged to an age group of 30 years and above, 70% had education till SSLC and 93% had 1 to 2 children. Regarding source of information, 87.5% of women got the information on RCH by television and 68.3% by family members. This support the study findings by Fernandes J, who reported that 52% of the women belonged to 31-40 years and 80% had education up to SSLC, 68.3% belonged to middle socioeconomic status and 95% had 1 to 2 children4. Haldar A reported in their study that, 56.69% of women had two child family norms and 32.05% of women got the knowledge on reproductive health from television5.

Knowledge on RCH

The findings of present study showed that 84.2% of women had good knowledge and 15.8% had average knowledge on RCH. Similar findings were reported in a study conducted by Reena S. who found that 82.2% of women were aware of permanent method of family planning for females6. Grover VL found in their study that, 71.1% of respondents had good knowledge about breast feeding7. Rasanla SK found in their study that 69.8% of the mothers had knowledge regarding the role of Oral Rehydration Solution (ORS) during diarrhea8 and Ray SK found in their study that, the knowledge regarding need for maternal care during pregnancy was 81%9. Dawn found in their study that there is association between knowledge on RTI with their age ($c2_{(2)}$=12.25, p<0.01)10 and Nandan found in their study that, the association between prevalence of RTI/STDs and age group was found to be statistically significant($c2_{(2)}$=13.43, p<0.01)[11].

On Family planning practice

Seventy seven percent of women were practicing different kind of family planning methods and 23% were not practicing any kind of family planning method. The 11% of the women reported that their desire to have more children was the reason for not practicing any kind of family planning methods. Eighty three percent of women reported that both husband and wife were jointly taking decision for family planning. This supports the study by Uthup MJ who found that 59% of rural women were practicing permanent method[12]. Reena S reported in their study that, 34.5% of couples practiced condom followed by the natural methods (26.2%) and oral contraceptive pills (18.9%)6. Haldar revealed in their study that, 46.79% did not favor any family planning method and decision making regarding child birth by both husband and wife was favored by 41.67%[5]. Shah NJ found in their study that the desire to have (69.7%) a child is the reason for not practicing family planning methods[13].

Utilization of health services

Data found in the present study revealed that, there was 100% utilization of health services by the women during pregnancy as well as child birth. Out of 120 women only six delivered at home with the help of trained Dai. This study supports the findings by Manjunath U who reported that 50% of children were fully immunized, and in the pulse polio programme two doses of vaccine were received by 165 children out of 16614, Venkatesh RR found in their study that, 35.9% of the women had utilized all the three services i.e. antenatal, intranatal and postnatal completely[15]. A study done by Agrawal who found that 94% females delivered at home with the help of traditional dai and that 93% had received tetanus toxoid injections during antenatal period[16]. Talwar R in their study in New Delhi reported that 54.6% of women had received two doses of T.T during pregnancy[17].

This study can conclude that rural mothers of selected area had the awareness on RCH and their utilization of health services. Community health nurses can play a vital role in health care delivery system especially in rural areas. Implication for nursing education would be greater emphasized on motivation to have reduced mortality and morbidity among mother and children. Community health nurses should encourage the involvement of families, communities and adolescents in taking their health problem in the primary health concept of 'people's health in a people's hand'.

Recommendation

- Replication of same study on a large sample may help to draw conclusions that are more definite and can be generalized to a larger population.
- Replication of similar study may be conducted by selection of samples by random sampling method.

Table1: Frequency & Percentage of distribution of samples characteristics. n=120

Sample Characteristics	f	%
1. Age of the women		
1.1 Below 25	08	6.7
1.1 25-30	46	38.3
1.1 31-35	34	28.3
1.4 36-40	23	19.2
1.5 Above 40	09	7.5
2. Women's education		
2.1 Primary education	24	20.0
2.2 High School	60	50
2.3 PriUniversity	21	17.5
2.4 Graduate	14	11.7
2.5 Post graduate	01	0.8
3. Education of husband		
3.1 Primary education	33	27.5
3.2 High School	47	39.2
3.3 PriUniversity	32	26.7
3.4 Graduate	07	5.8
3.5 Post graduate	01	0.8
4. Monthly income in rupees		
4.1 1001-2000	24	20
4.2 2001-3000	19	15.8
4.3 3001-4000	17	14.2
4.4 4001-5000	15	12.5
4.5 Above 5000	45	37.5
5. Age at marriage		
5.1 Below 20yrs	14	11.7
5.2 Above 20 years	106	88.3
6. Duration of married life		
6.1 1-8yrs	67	55.8
6.2 9-16yrs	40	33.3
6.3 17-25yrs	13	10.8
7. Total number of children		
7.1 One child	43	35.8
7.2 Two children	68	56.7
7.3 Three children	08	6.7
7.4 Four children and above	01	0.8
8.Type of family		
8.1 Joint family	75	62.5
8.2 Nuclear family	45	37.5
9. Religion		
9.1 Hindu	120	100.0

Table 2: Frequency and percentage distribution on family planning practice

Types (n=120)	**f**	**%**
Permanent	54	45.00
Temporary	39	32.50
Not practicing any methods	27	22.5
Temporary methods (n=39)	f	%
Male Condom	15	38.46
Copper T	11	28.20
Safe period	11	28.20
Pills	2	5.12
Complications after practice (n=9)		
Back ache	4	44.44
Heavy menstrual flow	3	33.33
Gastric problem	1	11.11
Weakness	1	11.11

Fig. 1: Frequency and Percentages of reasons for not practicing family planning methods

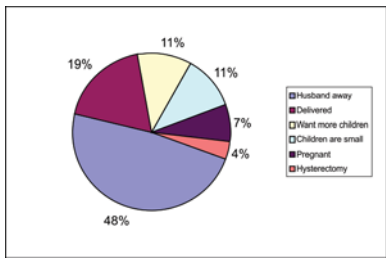

Fig. 2: Bar diagram showing frequency distribution of source of information from various sources.

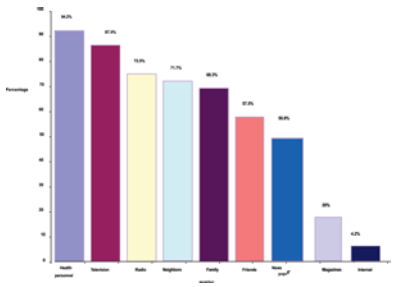

Table 3: Independent t- test computed between knowledge score of married women and selected variables

		Knowledge score			t-value(df)**	
Variables	Category	N	Mean	SD		P value
Age	Below 30	43	37.46	6.64	2.06(68.17)	0.043*
	Above 30	77	39.85	4.92		
	Below SSLC	84	38.38	5.77		
Education of women	Above SSLC	36	40.44	5.28	1.838(118)	0.069
	Below SSLC	80	38.26	5.90		
Education of husband	Above SSLC	40	40.47	4.98	2.033(118)	0.044*
Information by friends	No	51	37.25	6.26	2.98(118)	0.005*
	Yes	69	40.28	4.88		

SD- Standard Deviation.

* Significant at 0.05 level of significance. $t_{(118)}$ =P<0.05, **df corrected for unequal variance wherever necessary

- A comparative study may be undertaken between urban and rural areas to determine the utilization of health services especially on immunization coverage on children below five years of age and women during pregnancy.
- An evaluative study can be conducted to evaluate the effectiveness/coverage of RCH programme.

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Negligence in nursing care

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Introduction

Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well & in all settings. Nursing includes the promotion of health, prevention of illness, and care of ill disabled and dying people[1].

Advocacy promotion of safe environment, research, participation in the shaping health policy and in patient & health system management, and education are also key nursing roles as per royal college of nursing U.K.

Nursing is the protection, promotion and optimization of health and abilities, prevention of illness and injury, alleviation of sufferings through the diagnosis and treatment of human responses and advocacy in health care for individuals, families, communities and populations[2].

Negligence

Negligence in general is an act or omission that falls below a standard of care owed. For example, all drivers share a duty to avoid causing forcible injuries to other drivers and pedestrians. Medical malpractice is a type of negligence that is performed by a medical professional during the course of their work. Nonprofessionals cannot be held to the standards of the medical professionals, but the people who have been specially trained, educated and licensed are accountable for performance that deviates from the custom of their field.

The field of nursing is a time –honored position that requires not only educational training but also compassion, dedication and loyalty to patients and work-place, which means adhering to all approved standards of care. However there are times when a nurse may be accused of negligence. Understanding now negligence is defined in nursing helps you to understand the expected role and standards, as well as what may be construed as negligence[3].

A nurse's actions constitute negligence when they breach a duty of care owed to the patient and the action are the legal cause of their demonstrable injury.

There is a general duty for all people to always exercise reasonable prudent care to avoid foreseeable risks to others. Negligence refer to the act of doing something or refraining from doing something that any other reasonable nursing professional would do or refrain from doing in a similar situation. It goes without saying that every situation is different and that is where the later becomes somewhat cloudy. However when reviewing a nursing negligence case, assumption and circumstantial evidence are taken into account to determine if there was any negligence.

Examples

Common examples of nursing negligence include malnutrition, inadequate hydration, physical abuse, medication errors and mental and emotional abuse. In nursing homes or other places of long term care, there are also often injuries due to bedsores, infections and falls. Malnutrition and dehydration cases come from leaving a patient unattended for too long, ignoring his needs, or simply refusing to feed and provide water. Abuse comes in a variety of forms and, in many cases nurses do not feel that they will be reported, especially if the patient is mentally handicapped.

Medication errors, bedsores, infections and falls are most frequently the result of carelessness and lack of paying attention to their patients as necessary.

Proof

The legal review of a nursing negligence case requires proof that injury was done, and that it was the result of the nurse's care or lack thereof. There are five main elements in a nursing negligence case, and all elements must be proven in order for a case to be valid. If one or more of the elements is not present, the case may be difficult to pursue.

1. The nurse had a duty to perform.
2. The appropriate care was apparent in the situation.
3. There was a breech or violation of care.
4. There was an injury proven to result from the nurse's c arenegligence and,
5. There is proof that damage occurred as a result of the situation.

Avoiding negligence

It is important for nurses to document their actions very closely and accurately at the time because sometime negligence cases come about later when details are difficult to remember.

Charting everything makes it easy to determine the details surrounding each action or inaction and to find a logical reason as to why it was done. This in combination with a nurse, who follows the proper scope of practice, will likely to keep a nurse from being prosecuted for nursing negligence. Migration of trained nurses from resource-poor countries to wealthier countries experiencing nursing shortage may exacerbate global health care inequities and this migration causes significant drain of Indian nursing labor force.

With its high literacy rates and progressive education programmes, the state of Kerala trains a nursing workforce that is highly sought after in the global labor market[7].

Most of the India's nurses intended to emigrate due to dissatisfaction with working conditions, and social attitude towards nurse's act as motivating factors. Most common impetus for emigration is better income prospects overseas.

The nurses' density in India is (7.9 nurses per 10,000 population) as compared to world 33/10,000. It is well below international standards and inadequate to meet current domestic health services needs.

Medical Council of India has recommended following norms for 150 bedded hospital[6].

Current position

According to press information bureau Government of India, New Delhi[5].

In India current ratio of nurses is one nurse to 2250 people while in Developed country ratio is 1:150-200.

National rural health mission requires 2 lacks nurses personnel to provide comprehensive care.

- **Nurse's population ratio of different countries is-**
  - i. Europe-1:100-150
  - ii. Africa-1.01388/1000populations
  - iii. Sri Lanka -0.805555/1000 populations
  - iv. Thailand -0.63194/1000 populations
  - v. India -1.6041/1000 populations
- **Nurse's physician's ratio of different countries is-**

i. International norm is- 2-3:1
ii. India- 1.4:1
iii. America-2:1
iv. Europe- 2:1

Negligence due to nurse understaffing

Nurses often do not have enough time to properly care of their patients due to a shortage of nursing staff. Nurses and medical facilities are often charged with negligence for inferior nursing care due to understaffing[4].

Hospital with inadequate nursing staff tends to have higher rates of pneumonia shock, cardiac arrest and urinary tract infections.

Nurses are on the frontline of monitoring patients conditions, but it's easy for them to miss the early signs of a medical problem if they are spread too thinly. It is common for overworked nurses to overlook signs of stress in patients and to commit errors when administering medications. They may use an improper dose, give the wrong drug, or give the right drug by wrong method such as intramuscularly instead of intravenously.

Nursing shortage has the following effects[8].

1. Increase nurses' patients load
2. Increases the risk of error.
3. Increase risk of spreading infection to the patients and staffs.
4. Increase risk for occupation injury.
5. Increased death.
6. Increase in nursing turnover.
7. Increase perception of unsafe working conditions, contributing to increase shortage, and hindering local or national recruitment efforts.
8. Increase the nurses' chance of getting psychiatric help because of massive amount of stress.

Precautions/ suggestions

1. Nurses should maintain open, honest, respectful relationship and communication with patients and family members.

Recommended norms for hospital nursing service

Staffing	Staff (for minimum of 150 beds)	Teaching hospital
1	Nursing superintendent	1
2	Deputy Nursing superintendent	1
3	Asstt. Nursing superintendent (ANS)	1

(For every additional 50 beds one more Assistant Nursing Superintendent)

	Staff Nurse	Sister	Department sister/Assistant Nursing Superintendent
Medical ward	1:3	1:25	Each shift 1 for 3-4 wards
Surgical ward	1:3	1:25	„ do
Orthopedic ward	1:3	1:25	„ do
Pediatric ward	1:3	1:25	„ do
Gynaecology ward	1:3	1:25	„ do
Maternity ward	1:3	1:25	„ do
Intensive care unit Coronary care unit	1:1(24hrs.) 1:1	1each shift 1each shift	1 Department sister/ANS for 3-4 units
Special ward Eye, ENTetc. Operation theatre	1:1(24hrs.) 3 for 24 hrs. per table	1each shift 1each shift	1 Department sister/Assistant Nursing Superintendent for 4-5 operation theatres
Casualty & Emergency unit	2-3 S.N. depending on the no. of beds	1 each shift	1Department sister/ANSFor emergency, casualty etc.

Out patient department- base on actual observation

No.	Department	Staff Nurse
1.	Minor Operation Theatre	1 Staff Nurse for every 13 Patients
2.	Injection Room	1 Staff Nurse for every 86 patients
3.	Surgical	1 Staff Nurse for every 120 patients
4.	Medical	1 Staff Nurse for every 140 patient
5.	Gynae.	1 Staff Nurse for every 35 patients
6.	Children	1 Staff Nurse for every 85 patients
7.	Orthopedic	1 Staff Nurse for every 120 patients
8.	Dental	1 Staff Nurse for every 120 patients
9.	ENT	1 Staff Nurse for every 120 patients
10.	Eye	1 Staff Nurse for every 86 patients
11.	Skin	1 Staff Nurse for every 100 patients

2. Patients are less likely to make negligence charges if they feel that the nurse has been caring and professional.
3. Don't offer opinion when a patient asks what you think is wrong with him. You may be accused of making a medical diagnosis.
4. Don't make a statement that a patient may interpret as an adminission of fault or guilt.
5. Don't criticize health care providers or their actions when you are with patients.
6. Maintain confidentiality in health care setting.
7. Maintain competence in your specialty area of practice.
8. Attend relevant continuing education classes.
9. Attend relevant hospital in service programmes.
10. Expand your knowledge and technical skills.
11. Know legal principles and incorporate them into everyday practice.
12. Keep up to date on hospital policies and procedures
13. Perform only the nursing skills allowed with in your scope of practice and that you are competent to perform.
14. Know your strength and weaknesses. Don't accept a clinical assignment which you don't feel competent to perform
15. Document all nursing care accurately.
16. If care is documented, court assumes it was not rendered.

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Efficacy of an interactive session on nursing students' perception of assertiveness in clinical milieu

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Keywords

Assertiveness, Nursing students, Interactive session, Perception of students, Clinical milieu, role playing.

Abstract

Assertiveness is an important behaviour for today's professional nurse. As nurses move away from traditional subservient roles and perceived stereotypes it is increasingly being recognized that a nurse needs to behave in an assertive manner. Assertiveness is necessary for effective nurse/patient communication, and it is suggested that its development may also aid the confidence of the profession as it develops. Assertive behaviour may be encouraged through educational methods. It is preferable that nurses receive this educational preparation during undergraduate programmes. Nurse educators have an important role in the development and implementation of assertiveness training/education programmes for undergraduate nursing students. In spite of all the developments, helping nurses develop a correct attitude towards assertiveness is a knotty task. The present study revealed that interactive session on Assertiveness was found to be effective as the mean post-test Assertiveness score (27.64) was higher than mean pre-test Assertiveness scores (19.72). The mean differences between pre-test and post-test were found to be statistically significant at $p < 0.01$ level of significance. (Mean difference 7.920, standard error of difference 1.25, 95% confidence interval 6.95 to 8.88, $t = 16.31$, $p < 0.01$). Significant association was found only in the areas of self perception of one's participation in extracurricular activities and marks obtained in second year. Majority, 81.33% of the students strongly agreed that the session had a good mix of activities and strongly agreed that the role plays done provided a useful experience and 41.33% stated they had passive- aggressive type of response pattern and session was found to be positively sensitizing the students towards Assertiveness in clinical milieu.

Introduction

Nurses form the invisible majority of the healthcare settings. Either they don't respond to their distorted image or become too emotional and aggressive while handling such issues. The main reason for this is lack of Assertiveness.

Nurses need to learn how to present their viewpoint in an acceptable manner, in other words they need to "Say it with a back bone..... And not bite".

In the past, their traditional education taught nurses and midwives to be acquiescent and submissive helpers of doctors[1], but in the present scenario trends need to change.

Assertiveness training programme on nursing and medical students has been found to improve their self esteem and interpersonal communication skills[2]. A previous study among undergraduate nursing students, which used a three hour session on Assertivenes, opined the session as positive and enlightening, and has strongly advocated the use of such sessions for undergraduate students[3]. They recommended that Assertive behaviour should be encouraged through learning methods and that Nurses should preferably obtain this training throughout their studies. Hence investigator was curious to investigate the level of assertiveness among undergraduate nursing students, and to see whether an assertive training program using interactive session and role playing would influence their perception of assertiveness in clinical milieu. The study had three objectives ie, to determine the efficacy of an interactive session on nursing students' perception of Assertiveness in clinical milieu, find the association between pre-test perception on Assertiveness in clinical milieu and selected demographic variables and to obtain students' opinion on the interactive session on Assertiveness in clinical milieu.

Research methodology

The investigator utilized an evaluative approach to find the answers for the research questions. A total of 75 third year B.Sc. Nursing students were selected using convenient sampling technique. Self prepared three tools such as Demographic proforma, Assertiveness Opinionnaire and clinical scenario based tool were utilized to achieve the objectives of the study. The maximum score that could be obtained by a student was 40 and minimum possible score was 0. These scores in consultation with experts and the statistician were used to divide the students into 3 categories, based on Benner's stages of clinical competence i.e. advanced beginner, competent and proficient.

Findings and discussions

Study findings revealed that majority 67 (89.3% were females, in the age group 20-22 years. Majority, 71% of all subjects studied in private schools and during first year B.Sc nursing, 79% of the subjects had obtained first division, while during second year B.Sc nursing 85% of them had marks greater than 60%. Regarding perception about self, 37% of them said that they are good at extracurricular activities, while 40% could not decide. At the same time 23% of the participants perceived that they were bad at extracurricular activities. Astonishingly, 27% of them said that people had been rude to them because of the way they look. It was evident that around seven percent of them have had a previous teaching on Assertiveness and none of them had a previous teaching on Assertiveness in clinical milieu.

Findings related to effectiveness of interactive session on Assertiveness

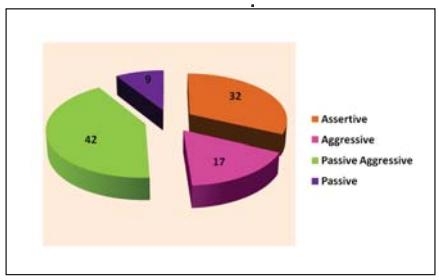
- The mean post-test assertiveness score (27.64) was higher than mean pre-test assertiveness scores (19.72). The mean differences between pre-test and post-test were found to be statistically significant at $p < 0.01$ level of significance. (Mean difference 7.920, standard error of difference 1.25, 95% confidence interval 6.95 to 8.88, $t = 16.31$, $p < 0.01$)

Table 1: Mean, Mean difference, S.D, S.E, Paired't' value of overall pre-test, Post test scores of the students' on Assertiveness in clinical milieu. (n= 75)

Area	Mean	Mean difference	S.D	S.E mean	't' value	Significance
Pre-test score	19.72					
		7.92	4.203	0.485	16.317	<0.01*
Post-test score	27.64					

* Significant at $P < 0.01$

Fig. 2: Pie diagram depicting the self rated behavioural pattern of students at the end of the interactive session.



Based on the data presented above it is inferred that in the present study there is a significant change in the perception of students regarding assertiveness in clinical milieu after attending an interactive session on the same.

Post test results reveals that most of the students increased in their assertive category based scores from competent(score 14 – 26) to proficient(score > 27) which is a good sign.

Findings related to association between pre-test and demographic variables

There was no significant association between the pre-test score and selected variables such as age, sex, birth order, number of siblings, type of family, family milieu, type of schooling, accommodation during schooling, place of upbringing, languages one can read and write well, percentage at school, first year college and self perception of the way one appears. Hence null hypothesis was accepted and it was inferred that students' score on the pre-test was independent of these variables. Where as in the areas of self perception of extracurricular activities and second year marks there was a significant association between the variables and the pre-test scores. Here the null hypothesis was rejected and research hypothesis accepted.

Findings related to students' opinion about the interactive session

In the feedback, 81.33% of the students strongly agreed that the session had a good mix of activities. Majority, 81.33% strongly agreed that the role plays done provided a useful experience. In a revealing truth 9.33% of the participants said that they had passive response pattern, 32% said they have an assertive personality, while a significant 17.33% said they were aggressive in nature. The majority 41.33% however had passive- aggressive type of behavioural pattern.

When asked about what the participants liked best regarding the session, 98% of them mentioned that they liked the role play and presentation. When asked how this session can be improved, 11% participants suggested a full day workshop pattern, for the same. Most participants wrote it was good and needs no change. All the participants recommended this session for other nursing students also.

In the present study the mean pre test score of the students' was 19.72, while the maximum score they could have got was 40, which is not a very good score. Most of the students were not able to pick the correct assertive response from the passive and aggressive responses given for the clinically challenging situations. The results of this study reveals that the mean post test Assertiveness overall scores (27.64) was significantly higher then mean pre test Assertiveness score (19.72). A Similar study done by Catherine Mc Cabe and Fiona Timmins in Trinity College, Ireland, also shows similar results. They also recommended that Assertive behaviour should be encouraged through learning methods. Nurses should preferably obtain this training throughout their studies. Hence very few students develop a correct perception about Assertiveness in clinical milieu by the end of their three years of regular nursing curriculum. It was also observed that half a day interactive session on Assertiveness was found to be effective in giving some basic understanding of Assertiveness in clinical milieu and the students' enthusiastic participation and feedback showed that they liked the role playing method of teaching Assertiveness and wanted to have more of such sessions.

Conclusion

The present study strongly advocates the inclusion of assertiveness training programmes for the nurses during their regular studies as it is very difficult to mould them to a new pattern, when they are so accustomed to being passive in the clinical milieu. Thus assertive behavior can be taught in their initial entry into nursing for a better therapeutic communication and IPR among nurses for the patient as well as among the health care team members for better care outcome.

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Rhabdomyolysis in an obese patient leading to renal failure: A case report

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Summary

Rhabdomyolysis is one of the dreaded complications following prolonged surgery in a morbidly obese patient commonly caused by muscle ischemia/ reperfusion or crush injuries and if not recognized well in time leads to increased morbidity and mortality. We report a case of morbidly obese patient who developed rhadomyolysis with acute renal failure after surgery for lumbar canal decompression and spinal fusion.

Key words

Morbid obesity, spinal surgery, rhabdomyolysis, acute renal failure.

Introduction

Rhabdomyolysis is an acute disease of skeletal muscle leading to release of intracellular constituents such as myoglobin, creatinine, creatinine kinase and electrolytes in the circulatory system. Obesity is an independent risk factor for rhabdomyolysis[1]. There is an incidence of 22.7% for rhadomyolysis in obese patients undergoing laparoscopic bariatric surgery; risk factors identified were massive obesity & surgery of long duration[2,3]. Other frequent causes of rhadomyolysis are crush injuries, prolonged immobilization, seizures, severe infection, extensive burn, electric shock and drug toxicity. Factors contributing to the development of severe symptoms are hypovolaemia, hyperthermia, electrolyte and congenital muscle disorders[4]. Clinically significant rhadomyolysis is poorly characterized biochemically and difficult to diagnose[5]. Diagnosis is established by measurement of elevated serum muscle enzymes and muscle constituents. Plasma myoglobin might be more specific prognostic marker[6].

Case report

A 30 year old male was scheduled for lumber canal decompression and spinal fusion. On general examination, he was well built (162cm) and morbidly obese (110 kg). There was no history suggestive of sleep apnea. There was a history of operation under general anesthesia few months back and post operative period was uneventful. His pulse and blood pressure (NIBP) were with in normal limit. Airway examination revealed adequate mouth opening (Mallampatti grade ll), short thick neck (33cm), and slightly limited neck extension with thyromental distance of 5cm. Routine hematological investigations including coagulation profile were normal. Renal function tests, electrocardiography (ECG), chest radiograph were normal. Patient was accepted for surgery in A.S.A. grade ll.

In the operating room, routine monitoring was established (ECG, pulse oxymeter, NIBP). Intravenous line was secured in left hand with 18 G canula. Premedication was done by inj. Glycopyrolate 0.2mg and inj. Fentanyl 100 microgram. Preoxygenation was done for three minutes. Anesthesia was induced with inj.Thiopentone 500mg and ability to mask ventilation was confirmed. Airway was secured with the help of muscle relaxation achieved by succinylcholine 125mg. Patient was catheterized and positioned in knee chest position. Temperature monitoring probe was inserted in nasopharynx. Anesthesia was maintained with 0_2, N_20 and isoflurane. Muscle relaxation was achieved with vecuronium and intermittent fentanyl was used for analgesia. Hypotensive anesthesia was administerd using nitroglycerine infusion (keeping MABP 90-110 mm of Hg). Intra-operatively all the vitals were stable. Surgery lasted for about 6 hours. Approximated blood loss was 800 ml. Adequate replacement of fluid and blood loss was done, which included 6.0 liter of crystalloids (7 RL, 2DNS, 2NS) & 3 units of blood. Urine output monitored during Intraoperative period was 150-200 ml / hour. No untoward event such as hyperthermia, hypoxia or significant hypotension occurred during surgery. At the end of surgery, patient was repositioned to supine and neuromuscular paralysis was reversed with Neostigmine and atropine. Extubation and recovery was smooth. After two hours of observation in recovery room patient was shifted to ward.

On 2nd post operative day patient complained of pain in his left leg, swelling was not appreciated because of obesity. On local examination, temperature of left leg was slightly elevated, and urine output (UOP) was only 500ml (while on 1st post operative day UOP was 2.2 liters). Urgent referral for Nephrologist and Cardiologist was sent along with serum creatinine, CPK, urine for myoglobin (facility to measure serum myoglobin is not available in our hospital), liver function tests & serum electrolytes. Report showed serum creatinine 2.5mg% (0.6-1.4mg%), CPK6809u/l (21-232u/l), urine myoglobin positive, ultrasound abdomen revealed bilateral slight increase in renal cortical echogenicity & doppler study of leg vessels was normal. Mild rise in SGOT 627u/l(15-37u/l) and SGPT 251u/l(30-65u/l) was seen. ECG, CPK-MB ratio was normal, cardiac specific troponin was negative.

Despite diuretic therapy serum creatinine further increased to 4.5, 7.4 and 8.4 mg% on 3rd, 4thand 5th post operative day. Serum CPK also increased and reached to 21696u/l and 26669u/l (21-232u/l) on 3rd and 5th post op day respectively. Patient was haemodialysed on 5th post operative day, and then daily for three more days. Biochemical parameter improved. Urine output restored on 8th post operative day. Diuretic therapy was continued and slowly tapered. Patient was discharged from hospital on 12th post operative day with serum creatinine 2.2mg%, CPK 1075u/l and normal electrolytes. Follow up after two weeks revealed all biochemical parameters to be with in normal limits.

Discussion

Rhabdomyolysis is a clinical and biochemical syndrome characterized by skeletal muscle necrosis and release of intracellular muscle contents such as myoglobin, creatinine,

creatinine kinase & electrolytes in to the circulation. As it is frequently accompanied by myoglobinuria, the term myoglobinuria is often used interchangeably with the term rhadomyolysis. Severity of illness ranges from asymptomatic elevation of muscle enzyme levels in serum to life threatening enzyme elevation, compartment syndrome and acute renal failure. CPK is a sensitive marker when elevated 5 fold while heart and brain ischemia ruled out. Plasma myoglobin might be more specific prognostic marker of renal function but most of the laboratories do not offer routine measurement of plasma myoglobin[6]. In our case, patient was fully conscious & ECG was normal. CPK rose up to 26669u/l (21-232u/l). Facility to measure Plasma myoglobin is not present in our laboratory.

The incidence of acute renal failure with rhadomyolysis ranges from 17-33% & patients requires haemodialysis in up to 28%[7]. In our patient haemodialysis was done daily for three days. Anesthesia is believed to augument this complication by preventing patient from spontaneously shifting their weight to relieve pressure on dependent areas, obese patient with prolonged surgery causes gluteal muscle compression or muscle necrosis leading to rhadomyolysis & compartment syndrome[8]. The weight of our patient was 110 kg & surgery lasted around 6 hours.

Rhabdomyolysis has been reported in patients placed in exaggerated lithotomy, lateral decubitus, and knee chest position, even in routine supine position, in nonobese patients when surgery is markedly prolonged (>7 hours)[9]. Our patient was in knee chest position for more than 6 hours. Drugs and toxins are responsible for up to 80% cases of rhabdomyolysis in adults, like excessive alcohol consumption, drug abuse, HMG- CoA reductase inhibitors and long term sedation with propofol[10]. Our patient developed acute renal failure and required haemodialysis and loop diuretics to restore urine out put. No potential nephrotoxic drugs such as NSAID, gentamycin or long term sedation were administered to our patient. Elevated Liver enzymes as concomitant phenomenon of Rhabdomyolysis are a sign of reversible hepatic dysfunction; occurs in 25%of cases[11]. Mild rise in SGOT & SGPT was seen in our patient[11].

The differential diagnosis of malignant hyperthermia should be considered in obese patients, as depolarizing neuromuscular blocking agents are frequently used for rapid sequence induction, our patient received general anesthesia few months back with uneventful recovery and there was no family history suggestive of malignant hyperthermia.

Conclusion

Rhabdomyolysis can develop in any circumstance where an energy demand in muscles exceeds the supply. The operation room provides favourable conditions for development of Rhabdomyolysis. Prevention may be achieved by attention to Intra-operative padding, optimal positioning, limiting the duration of surgery, maintenance of normal or high intravascular volume and adequate urinary output. High index of suspicion is required to make an early diagnosis of this potential fatal complication. Early diagnosis and treatment is the cornerstone of the successful management of this potentially serious problem.

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Professional nurse autonomy

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Introduction

Autonomy, a complex, multidimensional phenomenon, is derived from the Greek words 'autos' and 'nomos', meaning self and to rule or hold sway[1, 2]. Autonomy consistent with the scope of professional nursing practice will maximize the effectiveness of the nurse. Autonomy is not an absolute, but occurs in degrees. Innovations by nurses, increased productivity, higher nurse retention and greater client satisfaction are results of autonomy in nursing practice[3]. Autonomy is an essential element of professional nursing. Autonomy means that a person is reasonably independent and self- governing in decision making and practice. A professiona nurse actively collaborates with health professionals to pursue the best treatment plan for a client. Nurses can attain increased autonomy through higher level of education[4].

Concept of professional nurse autonomy

The concept of 'professional autonomy' applies to nurses both as profession and as individuals. The notion of professional autonomy has to do with the ability of particular nurses to make at least some decisions that are not subject to authoritative review by those outside the profession. Professional autonomy implies the right to exercise professional judgment – in adherence to professional standards - in face of countervailing pressures from institutional authorities, disagreement with members of other professions or inappropriate demands on the part of clients or the general public[5].

Hall's classification of professional nurse autonomy [6] is as follows:

- Structural or work autonomy is the worker's freedom to make decisions based on job requirements
- Attitudinal autonomy is the belief in one's freedom to exercise judgment in decision making, reflects the way individuals feel and view the work of profession
- Aggregate autonomy which encompasses attitudinal and structural dimensions, is the socially and legally granted freedom of self governance and control of profession without influence from external sources

Definition of professional nurse autonomy

Pankratz and Pankratz (1974) defined professional nurse autonomy as the nurse's perceived latitude or willingness to act as a responsible professional, emphasizes the dependence and independence between nurses and patients[7].

Batey and Lewis (1982) defined autonomy as the 'freedom to make discretionary and binding decisions consistent with one's scope of practice and freedom to act on those decisions'. This could be applied to any profession[8].

Gonzalez (1989) augments Batey and Lewis's definition by including the freedom to act within the context of responsibility and caring for others.[9]

Wade. G.H (1999) defined professional nurse autonomy as belief in the centrality of the client when making responsible discretionary decisions, both independently and interdependently, that reflect advocacy for the client[10].

Theoretical underpinnings of autonomy

Autonomy has been explored from a philosophical, moral, ethical, social and feminist perspective. Ballon identified several recurring themes in her conceptual analysis of autonomy. These were related to self-governance within a system of principles, competence or capacity, decision making, critical reflection, freedom and self- control. Autonomy is contingent upon personal factors: inherent intellectual capacity; morality; exposure to a system of beliefs, laws, standards and principles; knowledge sufficient to develop competence; knowledge of personal values and beliefs; ability to reason and ability to control self[11].

Assumptions, antecedents and consequences of professional nurse autonomy

The educational circumstances and personal attributes preceding professional nurse autonomy are based on the following assumptions

- Professional nurse autonomy is associated with attitudes that are learned during baccalaureate education
- A relationship between attitude and behavior exists
- One can display autonomy despite organizational constraints

The antecedents related to education include:

- Competence based on a strong knowledge base
- A clear understanding of the scope of nursing practice
- A baccalaureate or high degree in nursing

The primary consequence of autonomy is accountability. Professional nurse autonomy leads to empowerment of self and may influence the individual's ability to change the work environment. The linkage between the work autonomy and professional nurse autonomy is reflected in satisfaction with one's professionalization of nursing[12].

Strategies for enhancing autonomy

1. Clarify expectations about clinical autonomy:

a) **Describe expected behaviors:** Professionally and organizationally sanctioning and supporting the application of nursing knowledge expertise in the care of the patients has been associated with enhancing autonomous nursing practice. Nurses can enhance autonomy by clearly communicating and organizing their work to ensure that they have the freedom to act on nursing decisions using sound clinical judgment. Describing expected behaviors involves communicating that nurses are expected and encouraged to make

decisions about patient care that are based on science and art of nursing. This involves setting an expectation of independent nursing action and supporting decision making within the scope of nursing practice. Moreover, because nursing practice involves both independent and interdependent actions, clearly identifying acceptable responses to situations that are at the edge of nurses' commonly accepted scope of practice.

b) **Embed nursing knowledge into clinical practice:** Incorporation of nursing knowledge and expertise into clinical practice embeds autonomous practice into patient care. Including nurses in clinical rounds maximizes the valuable contribution of their unique perspective and information in the care of patients. With nursing input, more diverse solutions can be explored, patient care planning is more robust, interdisciplinary communication is improved and care coordination can provide for more effective implementation of plans.

c) **Recognize and reward autonomous practice:** This act can reinforce verbally communicated expectations. Nursing grand rounds, poster sessions on clinical case studies and/or situations shared during staff meetings can all be used to illustrate examples of autonomous nursing practice. In addition, emphasizing expected behaviors through recognitions and rewards outlines the nurses the realm of autonomous action. Clinical ladder programs formally reward and recognize clinical practice, further delineating expected autonomous actions.

d) **Role model expected behavior:** This behavior also reinforces autonomous clinical practice. Novice nurses quickly observe the nature of clinical judgment and autonomous nurse actions demonstrated by more senior colleagues and use these observations to identify accepted levels of independent and interdependent decision making. Clinical nurse leaders can engage in behaviors reflective of autonomy and serve as an ongoing resource for role modeling, coaching and mentoring excellence in clinical practice.

e) **Coach nurse not demonstrating expected behavior:** A component of coaching for autonomous behavior includes addressing when behavior is not within the range of expected actions. For example, if nurses are not making the expected autonomous decisions, coaches can compare actual with expected actions to show how to make the expected nursing contributions and behaviors more explicit. Addressing inappropriate actions using constructive feedback can guide autonomous nursing practice.

2. Enhance competence in practice

a) **Creating a learning environment:** The establishment of the sound clinical judgment needed for autonomous practice requires a foundation of nursing expertise. Although difficult to define, nursing expertise is a combination of knowledge and skill along with extensive experience. Stewart, Stansfield and Tapp reported that autonomy can be fostered by enhancing competence and confidence through strategies such as teaching rounds, formal continuing education, and a climate of inquiry in everyday practice.

b) **Enable formal and informal educational opportunities:** Creating an environment that supports both formal and informal continuing educational opportunities and learning provides for autonomous clinical practice. Baccalaureate prepared nurses have reported a higher preference for clinical autonomy. In addition, master's prepared nurses have reported significantly higher professional autonomy in clinical nursing situations compared to nurses prepared with a diploma or associate degree[13].

Application to nursing education

Nurses begin to learn the knowledge, skills, attitudes and values associated with the professional role during the formal educational process. As primary socializers, nursing faculty play a significant role in promoting professional nurse autonomy[14]. In order to reinforce professional nurse autonomy, students must view faculty and nurses in clinical agencies as autonomous role models. To instill autonomy - related attitudes in students, a curriculum based on a nursing theoretical framework with a learner - centered design is needed. The theoretical framework provides structure for organizing the course content and the way nursing is taught. Application of a nursing theory to the curriculum helps students understand the relationship of nursing knowledge to practice, define the domain of nursing and gain control over nursing practice[15]. By incorporating concepts related to professional nurse autonomy, relevant curricular strands can be designed. The curriculum should provide opportunities for developing the values, attitudes and behaviors that reflect - professional nursing practice. Therefore, a major emphasis of the curriculum is on the processes that promote transactions between students and faculty. Involvement in decision making at all levels of the educational institution is essential. Faculty must not be viewed as distributors of knowledge, but as individuals who present various theoretical positions and interpretation for exploration.

Conclusion

Modern nursing as a concept should be both professional in attitude and dedicated to the delivery of good quality care. To do this a sound knowledge and educational base is required, linked to the concepts of autonomy, professional accountability and client advocacy. By working in partnership we as nurses can represent our own needs, provide tools to enable self empowerment of our clients and redistribute power for the benefit of society. Nurses, who successfully integrate the behaviors associated with professional nurse autonomy into their belief system, perceive that they are in control of the work environment and ultimately their profession. If professional nurse autonomy is a key element of professionalism, curric ular evaluation should encompass criteria related to the development of attitudes towards professional nurse autonomy.

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Nursing administration: Financial management and budgeting

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Introduction

Finance Management may be defined as a set of administrative activities concerned with arrangement of cash and credit for organization for enabling it to function as effectively as possible In other words it is concerned with management of money and expenditure, through raising fund, using funds profitably and ensuring it control Health care organization including nursing education and administration system need money and an efficient financial management system for carrying out client central activities for which tremendous expenditure is in valued in. since money is essential for carrying out any fulfillment of the organizational objectives. There has been improvement in the quality of health care over the year but much more needs to be done with a growing private sector. The public sector has focused on additional investment for enabling the existing health infrastructure to be more optimally utilized. Nurse administrator and nurse managers must be involved in the preparation of budgeting process and she must know how to manage the important financial matters.

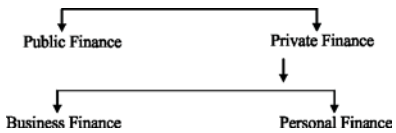
2. Finance

2.1 What is finance

To common man finance refer to cash or funds or Raising of funds. Finance refers to a process of getting targets for expenditures & Revenues Mobilization of funds both internally and externally. Efficient utilization of funds includes:

a) Distribution of income.
b) To generate more wealth.

2.1 Types of Finance



2.3 Management of Finance in Govt. Organization

In the government organization financial goal or goal of budgeting is to facilitate the achievement of the welfare of the target group by taking viable financial decision & ensuring requisite funds. To achieve the Financial goal institution calls for:-

- Periodic Budgeting
- Mobilization of funds
- Efficient utilization of Funds

3. Budgeting

Budget is an integral part of financial management. Term 'Budget' means the plan of expenditure and of revenue to balance that expenditure is usually a public authority. It is a widely use device for management control is the budget or it can be controlling device of an institution or organization as it encourages continual setting of priorities relating to allocation of resources such as personnel supplies and equipment on predetermined needs or standard for a specific period of time usually twelve month or one fiscal year. In net shell it is expressed as budget is a financial expression which includes the income and expenditure.

3.1 Definition

"Budget is a financial plan of government for a definite period"(According to Taylor). Budget is a concrete precise picture of the total operation of an enterprise in monotony terms." (According to H.M. Donovan). We can also define as:

"Budget is a structured plan for managing income and expenses."

"Budget is a standard with which to measure the actual achievement of people, Department and organization etc."

"Budget is a detailed plan of operations for some specified future period followed by system of record which will serve as a check upon the plan."

or

Budget recognized as device for controlling, become a major part of the planning process in any organization.

or

Budgeting is nothing but a plan expressed in quantitative terms.

- More specifically it specifies the estimated expenditure and revenues for a given period of time.
- -Generally in Govt. Depot's budgets are prepared for one fiscal year.

3.2 Purpose of budgeting

- Budget provides an estimated figure of funds required to carry out different programs.
- It act as medium to achieve organizational goals, objectives and mission.
- It provides quantitative expression of the plans of hospital or the institution.
- It evaluates financial performance in accordance with the plans.
- Ensure greater degree of accountability.
- To priorities expenditure.

3.3 Importance of budget

Budget reserve a central position in the successful management of any organization health care organizations feed money and efficient financial management system for carrying out client centered activities for which tremendous expenditure is involved in completing these activities.

- Budget is needed for planning of future course of action and to have s control over all activities in the organization.
- Budget facilities co-coordinating operation of various departments and sections for realized organizational objectives.
- Budget serves as a guide for action in the organization.
- Budget helps one to weigh the values and to make decision when necessary on whether one is of a greater

value in the programme than the other.
- It supplies the mechanisms for translating fiscal objective into projected monthly spending pattern.
- Budget enhances fiscal planning and decision making.
- It clearly recognizes controllable and uncontrollable cost areas.
- It offers a useful format for communicating fiscal objectives.
- It allows feedback of utilization of Budget.
- It helps to identify problem areas and facilities an effective solution.
- Budget expenditure is involve in Building and marinating the infra structure.
- Procuring drugs, supplies and equipment and invasive procedure, blood banking services, dietary services, Pharmacy services, Laundry services, Centralized sterile supply services and so no.
- It provides means for measuring and recording fiscal success with objectives of the organization.

3.4 Principle of budget making

Nurses at Managerial level of the organization need to learn skills in the development management and evaluation of the budget so that successful assistance may be given to the organization for its survival, prosperity and reputation. While preparing budget nurse Management must keep in mind the following principles.

- Budget must be balanced. It must not exceed the estimated income. The amount of expenditure and revenue in a budget.
- Budget Estimates should be on cash based: It means that its estimation of expenditure and income should relate to what is expected to be actually spent or received during the year and not liability demands. Which incurred or which demands within the year but on to be realized in some other year.
- Budget Revenue and capital portions should be kept distinct. The distinction between recurring expenditure and income on the one hand and capital payment on the other hand should be maintained and the two should shown in two separate parts of the budget known as the current or revenue and the capital budget. If they are not separate it leads confusion in the financial picture.
- Budget should be gross it means that all the transactions both of receipt and expenditure should be shown and not merely the resultant position. If this rule is not followed it could result in laxity of financial control and incomplete account.
- Estimation should be as closed as possible over estimation would lead to heavy taxation and under estimation is achieved by taking post three years figures. It is one aid to close budgeting.
- The form of estimates should correspond to the form of accounts. It means the budgetary head should be the same as those of accounts. This helps in preparation of budget.
- It should provide sound financial management by focusing on requirement of the organization.
- Budget should ensure the most effective use of scarce financial and non financial resources.
- Budget is prepared under the direction and supervision of the administrator or financial officer.
- It should be flexible while developing a budget; the provision should be made for its flexibility.
- It should be synthesis of past present and future.
- It should be in the form of statistical standard laid down in specific numerical term.
- It should have support of top management throughout the period of its planning and supplementation.

3.5 Essentials of effective budgeting

- Zero base budgets should be used rather than incremental budgeting as it avoids wastages. It allows priorities of expenditures and it provides flexibility.
- Budget should be based on institutional strategy & long range plan. Strategy must includes:-

i. Basic objectives
ii. Fundamental policies
iii. Long range plan- includes Major programs

- Ensures greater Degree of Accountability

It is involvement of people concerning different activities. Institutional budget divides into different head's responsibilities or group of activities are assigned to the different heads that are made accountable.

- Formation of Budget Committee. Committee to decide:-

i. Proper Communication
ii. Prioritization of expenditures.
iii. Identification of Expenditures
iv. Review performance

- Mobilization of Funds to meet the targeted expenditure. by Govt./ Semi Govt. Deptt..

iv. Fail to innovate new sources.
v. Better Realizations
vi. Control wasteful expenditures.

- Internal Sources

i. Better Realization
ii. Innovate new Sources
iii. Rationalization of existing sources

- External Sources

i. More funding from sponsor/donor
ii. Funding from various agencies
iii. Create services/ products
iv. Collaboration & sponsorships from industry.
v. Efficient utilization of funds
vi. Govt. Institutions also fail on the utilization front.
vii. Efficient utilization is an important pillar of the management of finance. so call for:

- Avoiding Miss-appropriation of funds
- Avoiding wastages of funds
- What need to be done to ensure efficient utilization:-

i. Proper accounting system with greater degree of transparency.
ii. Well defined & transparent rules
iii. Internal and External Audit Mechanisms
iv. Periodic reporting of financial statement.

3.6 Types of budgeting

There are many types of budgets.

3.6.1 Operative or revenue and expense budget

Institution by projecting the planned operations usually for the upcoming year Revenue budget includes the revenue received after providing services during the year. Expense budget includes personnel cost (Salaries) Medical Surgical Supplier, Office Supplier, repair and maintenance, fee, travel and education etc.

3.6.2 Manpower budget
It includes wages and other benefit provided for regular and temporary workers.

3.6.3 Capital expenditure budget
It is specifically includes expenditure for purchase of land building, plant, machinery equipment inventories and other items. Whether for short or long terms. These budgets require care for spending the funds of and institution. These items are usually major investments and reduce flexibility in budgeting because it takes long time to recover the cost. The basic component of capital equipment budgets are as under:-

- Equipment that does not generate direct revenue by charge.
- Equipment that substantially changes the facility's services.
- Equipment that has an estimated life of more than one year.

Approval is requiring prior to purchasing through (1) Departmental head (2) Purchase (3) Maintenance (4) Financial department and administration.

3.6.4 Incremental budget
It is one of the budget head based on estimated charges in present operation plus a percentage increase for inflation all of which is added to previous year budget.

3.6.5 Open ended budget
It is financial plan in which each operating manager presents as single cost estimate for what is considered optimal activity level for each program in the unit indicating how the budget should be scaled down if less funding is available

3.6.6 Cash budget
Cash budget are to make adequate funds available as needed and to use any extra funds profitably. This ensures that agency has enough, but not too much, cash on hand during budgetary period. This is necessary because income does not always coincide with expenditure.

3.6.7 Fixed ceiling budget
It is a financial plan in which the upper most spending limit is set by the top executive before the unit and divisional managers develop budget proposals for their areas of responsibility.

3.6.8 Flexible budget
It consists of several financial plans, each for different level of programme activity. It is based on the fact that operating conditions rarely conform to expectations.

3.6.9 Roll over budget
It is one that forecasts and expenses for a period greater than a year, to accommodate programme that are longer than annual budget cycle.

3.6.10 Functional budget
Functional budget is the budget of income or expenditure appropriate for 9 particular functions. Functional budget is also known as cooperating budget. This budget consists of two part programme budget and responsibility budget.

Other types of budgets
It deal with the travel anticipated equipment and supplies to the budget.

3.6.11 Programme budget
The cost related of the each department of services, the scope and activities undertaken and identifiable and measurable unit of worth. For example in community health Nursing, prevention of diarrhea through demonstration.

3.6.12 Performance budget
This is the further reinforcement programme budget the term used to describe the inventory of function and cost of each unit of worth e.g. immunization.

3.6.13 Zero base budget
All budget start of zero and no one get any budget that cannot specially justify on a year to year basis. Require the nurse manager to examine and justify each cost of every programme both old and new in every annual budget programme.

3.6.14 Sunset budget
It is designed to self instruction budget within a prescribed time period to ensure the cessation of spend in by a predetermined date.

3.6.15 Sale budget
It is the starting paint in a budgetary programme, since sales are basic activities which give shape to all other activities. Sale budget are compiled in term of quantity as well as of value.

3.6.16 Production budget
It is budget that aims at securing the economical manufacture of products and maximizing the utilization of production facilities.

3.7 Advantages of budget
(i) Budget is plan for detailed programme activities.
(ii) Budget helps to fix accountability by assignment of responsibility and authority.
(iii) Budget state goal for all units, after a standard of performance and stress the continuous nature of planning and control process.
(iv) Budget encourages manager to make a careful analysis of operations and to base decisions on careful consideration.
(v) Weakness in the organization can be revealed where there are no facilities available.
(vi) Budget helps just measurement of performance.
(vii) Budget helps the new people and lower level managers to see what the organization is gaining and where they fit in the organization.
(viii) Budget act as controlling device to correct if the expenditure for given activity exceeds the allotted budget at any point of time; this will show signal a deviation from the prescribed course, requiring attention and action by the management.
(ix) Staffing equipment and supply needs can be protected and waste minimized.
(x) Financial matter can be handled in an orderly fashion.
(xi) Agency activities can be co-coordinated and balanced.
(xii) Budget helps managers in integrating personnel efforts within the organization toward common goal.
(xiii) The budgeting process helps management learn from post experience. The management can critically look the success or failure or the past budgets and isolate error and analyze their causes and establish step to be taken to avoid repetition of such errors
(xiv) Budget help in improving communications. Budget are blue prints of the Institution's plan and can only be co-coordinated through proper communication, at all levels, especially those who are assigned to implement the budgets plans.

3.8 Disadvantages of budget

(i) Budget converts all aspect of organizational performance into monetary values for a single comparable unit of measurement.
(ii) Budget planning is time consuming and expensive. Aspects that are easy to measure may be considered, and equally important factors such as organizational development and research efforts are ignored.
(iii) There is a danger of over budgeting the over budget becomes meaning less and expensive.
(iv) The budget may become an end in itself instead of the means of an end.
(v) Budgetary goal may suppress agency goals and gain autocratic control of the organization.
(vi) Forecasting is required but uncertain because budgetary control is subject to human judgment, interpretation and evaluation.

3.9 Limitations of budgeting process

- Budget is often too rigid and restrictive. Supervisors are given little free hand in managing their resources. The budgets may either be changed too often or not at all, making it difficult for employees to meet performance levels.
- Budgets are used to evaluate the performance and results, but causes and the successes are not thoroughly investigated.
- Budget may be used punitively. The employees may regards budgets simply a device for catching their mistake. This will lower their morale and dilute their sense of dedication.
- Budget goal may be conceived as too high. In their efforts to keep within budget forget that budgets are only means to institutional goals.
- Budget Process to be most effective if budgeting is integrated functions within the organization and all departments should participate.

3.10 Strategy plan

Strategic plans are top level plans which define the types of activities and goals an entity will pursue. They are by definition long term plans from which all other plans will flow.

The Strategic plan outlines the programmes and services to be provided for the upcoming year including priorities. Unfortunately, this process of strategic planning often does not include the manager who needs to understand the budget process. Nurse manager may not have seen the strategic plan or may not have involve in setting those priorities that specifically deal with the nurse manager's areas of responsibilities when this happened, the resultant budget will not be as accurate as it might be e.g. those developing the budget may not aware about the changes in the operational technology and change in the old technique.
If finance department personnel are unaware of such changes both the revenue budget and the spending budget may end the year with major differences (called variance) between budget and actual.

Budgeting process begins at a specified time, perhaps six months before the new financial year. The finance department generate a budget for the next year based on actual spending during the current year Major differences between the current budget and actual spending are investigated. e.g. The Nurse manager's cost centre might be experiencing fall census when the current budget reflects 80% occupancy. Although budget figures divided by 12 (or 13) cost will not flow evenly through the year and the nurse manager should be prepared to explain short term variations.

3.10.1 Each unit submits a budget to help achieve the strategic plan

The budget process starts at the top with strategic plan, but once that is set, it moves back to the branches and the budget is generally built from the bottom up. As each unit submits the costs associated with achieving its portion of the mission. The cost and budget department aggregates these cost into on overall, unit wise budget.

Ascertain whether any changes are contemplated such as opening new facilities for patients or changes in other department, additional facilities in Nursing College and hostel. Etc.

3.10.2 Steps of budget planning of nursing unit

Prepare the programme which the new budget have to cover in term of nursing hours to be given to patients, divided into how many staffs, group of personnel's involve, ratio of supervisor, tutors and head Nurses to patient care department/ unit wise.

- Determined the salaries of personnel for Nursing services and teaching services on the basis of time devoted by each.
- Estimate the requirement for the coming year from the information supplies as the expenditure for supplies, equipments and repairs.
- Prepare a summary of new needs both personnel and material with data to support the request.
- Budget should be submitted to the Administrator of the Institution/ College/ Hospital for review and decision to incorporate into the master budget required for College/ hospital. In case of any change made by either the administrator or the committee on budget, report should be furnished to her to be used in the control of expenditure.
- Copy of the nursing department is send to the director after adaptation of budget. This is proved for the period and difference between the budget appropriation and actual expenditure. These reports should be kept review of associates. If expenditure exceeds the appropriation the cause should be determined.
- Thus, the budget request with the supporting data is presented to the administrator for a view of taking decision and finally incorporated in to master budget.

3.10.3 Preparation of nursing budget depends on the following factors

- Needs of the Nursing department/Nursing school or college.
- Types of patients for whom services are rendered e.g. Hospital like Pediatric, Maternity hospital, Casualty and orthopedic Hospital etc.

4. Budget allocation for nursing

There is a separate budget provision for Nursing except salaries as other health care departments but it is seen that if there is any cut in the hospital budget it is at the cost of Nursing. e.g. Nursing School/ Colleges are grossly deficient in their facilities where as Therefore Medical services, Medical education

Medical research has definite budgetary provision same provision should be made for Nursing services, Nursing education and nursing research also. Such budget should be controlled by nursing personnel themselves.

Principal Nursing College/School is responsible for preparation of annual budget with other budgetary unit heads. Budget is prepared according to the estimated income of the year. It is the responsibility of the chief finance officer to finalize the expenditure accordingly.

The expenditure involved toward nursing staff development programme during the year under reference the amount of money spend toward nurses welfare activities, pension, provident fund and gratuity if any per annum. The expenditure towards extra curricular activities organized by the organization during the period under reference provision need to be made before hand while preparing college budget.

5. Cost analysis

While dealing with finance one has to come across the term costs and cost analysis.

i. Cost:- mean the price attached to a commodity. This is arrived at by taking into consideration the value of economic resources used for producing the particular commodity.
ii. Cost of services:- Refer to the value of economic resources used to carry out a particular activity or activities in that service.
iii. Depreciation Cost:- Refer to the lowered cost of a commodity owing to wear and tear of life of this particular commodity during its use.

On the other hand cost is involved with analysis of the relationship between fixed and variable costs.

6. Auditing

Auditing is another term that requires to be under stood in relation to financial management. Audit or auditing is a measure of control which is under taken to check, ascertain and investigate that all phases of accounting for financial matters have been conducted in accordance with the established procedures, practices, norm and guidance.

7. Role of nurse manager or administrators

Nurse administration need to play their role in financial management in these Institutions adequately especially she should be conscious of her role in improving the cost effectiveness of patient care because a substantial portion in the hospital budget goes toward Nursing costs.

(i) Nurse should have basic knowledge about budget and budgetary process so that, they can participate in reducing cost in the hospital. She needs to be aware of appropriate justification for budgetary allocation in the interest of patient care services improvement and need base expenditure.
(ii) Budget clarity: The Dean/Principal will provide departments with comprehensive information on University and College state and non state funding as well as information concerning their individual departmental budgets. Reason for change in department allocation will be made explicit to department.
(iii) Budget flexibility: The College need to seek to provide departments and other units with the financial flexibility to:

i. Pursue the unit's strategic goal
ii. respond to routine internal budget needs
iii. Help address department start up and matching responsibilities.

(iv) Authorized Budget: The college and apartment and other unite are requiring operating within their respective authorized budget.
(v) Baseline budgeting Principles: The College's first budget priority will be to provide sufficient resources to department to allow them to meet core educational responsibilities. Peer bench marks and other data will be used to establish department specific baseline budget.
(vi) Budget Expansion, Reallocation and reduction Principals.

i. Budget expansions and reallocation will be directed towards accomplishing the college's strategic goals
ii. To the extent possible, the college will be responsive to unexpected opportunities at arises.
iii. The College will implement any requirement reduction by targeting cuts that are consistent with strategic goals.

(vii) Principal of Conservation on the basis that everything will turn out as expected. Build in a safety factor by tending to under estimate your income and over estimate your expenses.
(viii) Principle of Involvement:- Budgeting requires teamwork. The task of budget should spilt and allocated among those individuals who have the best chance of knowing what expenditure is likely to be needed and what income is reasonable to expect. One person may be responsible for the compilation of the budget involved. Hence involvement by many people in budgeting might sterol the process down likely to be accurate and dependable.
(ix) Principal of Retrace ability: Budgeting is not an activity that is completed in a few hours. A good budget may be worked on for several weeks if not month adding and changing figures as new information comes to light. It is very important that the author of the budget can retrace his/her steps. It would be much less efficient if budget calculations are difficult to understand and figures impossible to find out from where they came.

8. Conclusion

A budget is composed of two segments, income and expenditure. Because income limit the expenditure. Therefore, income should be estimated prior to estimating the expenditure.

- The expenditure involves toward nursing staff development programme during the year under reference.
- The amount of money spent toward nurses' welfare activities, pension provident fund and gratuity if any per annum.
- The expenditure towards extra curricular activities organized by the organization during the period specified.

At least this much basic understanding about the financial management or budgeting is requiring for all nurse manager and Nurse Administrator. So that proper utilization of funds as per fixed procedure is used for the development of institution. This will enable nurse administrator to check miss utilization of funds substandard purchase of equipment & supply and to maintain income & expenditure in a balanced or near balanced position with the knowledge of financial matter or budgeting then only nurse administration will be able to do all around development of an institution with full

confidence. Nurse administrator must be having sound financial knowledge as she is working as an important key person in the different national health programmes so that she could able to utilize the funds according to the urgency of the situation, circumstance and need.

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A comparative analysis of the outcome of two teaching-learning approaches adopted for teaching pharmacology to undergraduate nursing students

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Key words

Drug administration, MDI, Peak flow meter, Nebulization, video, active lecture, live demonstration, comparative analysis, medication errors, compliance, pharmacology and nursing students.

Abstract

A class of undergraduate nursing students of size 80 was randomized to control and experimental group for teaching pharmacology (respiratory drugs) using Active Lecture Cum Live Demonstration (ALLD) and Active Lecture Cum Video (ALV). The controls were taught with ALLD and the experimental groups of students were taught using ALV. It was observed that the mean post-test knowledge score (50.05) of the experimental group after the competency programme on drug administration using active lecture cum video were apparently higher than the control group (45). Hence the competency programme on drug administration using Active Lecture cum Video (ALV) proved to be more effective than Active Lecture cum Live Demonstration (ALLD)

Introduction

The hard part of teaching is not getting students to learn content: the hard part is getting them to learn how to learn and generate creative solutions. (Wankat and Oreoviez -1998) Errors in medications are made whether minor or major and even to the extent of losing a person's life. Students' lack of complete knowledge is shown by result analysis which can have adverse impact on the quality of care and also threat to patient's life. The investigator in this study gazes to see to what extent the UG nursing students apply their knowledge of pharmacology to nursing practice, does the present approach to teaching pharmacology help UG students to cultivate abilities for critical thinking and clinical reasoning, so as to make correct therapeutic decisions in relation to administration of medication and which could be the best method to teach and learn pharmacology in daily practice.

Objectives

1. To compare the outcome of two teaching learning methods in terms of.
   - UG nursing students' clinical competency in drug administration.
   - Patients' understanding of the usage of the prescribed drugs.
2. To determine the influence of students' competence in drug administration on the patients' understanding to drug therapy.
3. To study the association between students' knowledge & competence in drug administration and selected variables
4. To correlate between the students' knowledge and competence in drug administration

Methodology

The researcher utilized an evaluative approach and an experimental design. Eighty second year B.Sc. students were randomized, 40 each for experimental and control group. Instruments for the study included students' profile, structured questionnaire on oral drug administration, observation checklist on oral drug administration, MDI, Nebulization, Mini Peak flow meter and an Interview schedule for patients on understanding of the drugs prescribed for them.

Result and discussion

Findings indicates that among the control group, 24 (60%) were between the age group of 20-21 years and among the experimental group majority of the students 25 (62.5%) were between the age group of 20-21. In regard to their maternal education among the control group, majority 14 (35%) were graduates, 13 (32.5%) pre degree holders, 3 (7.5) post graduates and 2 (5%) professional and none of their mothers were illiterate. Whereas in the experimental group majority, 14 (35%) were graduates, 7 (17.5%) pre degree holders, 3(7.5%) post graduates and one of their mother was illiterate too. Among the paternal control group majority, 15 (37.5%) were graduates, 7 (17.5 %) post graduates and 3 (7.5%) were professionals. Among the experimental group most, 15 (37.5%) were graduates, 7 (17.5%) graduates, and 2 (5%) were also professionals. In relation to their maternal profession majority 26(65%) are home makers, 2 (5%) clinical nurse, 1 (2.5%) nurse teacher and 11 (27.5%) were from different occupation like clerk, PA and primary school teacher. Similarly among the experimental group most of the mothers, 29 (72.5%) were homemakers, 2 (5%) clinical nurse and 9 (22.5%) belonging to primary school teachers, PA and business.

Paternal occupation among the control group showed that most 11(27.5%) are businessmen and majority, 29 (72.5%) belongs to other category such as Lawyer, Driver, polish man, PA and school teacher etc. Whereas among the experimental group most of the parents, 11 (27.5%) are businessmen, and majority, 28 (70 %) belong to the category such as school teacher, polish man, PA and agriculturist. It was also observed that 1 (2.5%) of them was a doctor.

In the control group most of the students had done their pre university education from private institute and only 17(42.5) had their education from a government institute. Looking into the experimental group most 32 (80%) of them had their pre university education from private and only 8 (20%) had their education from a government institute. Interestingly majority of the students both from control and experimental group 35 (875) and 36 (90%) respectively are from English medium institute and only 5 (12.5%) and 4 (10%) are from local medium institutes where mother tongue is the medium of instruction. Hence it is obvious that most of the students are from English speaking group of institutions.

Although the students admitted in the college are from PCMB group and also securing more than 60 % in their PUC level yet few 4 (10%) of control group and 2 (5%) from the experimental group respectively have failed in the basic sciences such as Anatomy, Physiology, Microbiology and Biochemistry which are very essential for their understanding of Pharmacology. University result of the subject pharmacology of the same batch reveals that majority of student secured second class.

Data presented in Table: 1 indicates that there is no significant difference in the mea pre-test score between the two groups (mean difference = 0.85, t=0.657, p= 0.51 and 95% CI: 1.73 to 3.43). Whereas the post-test score was significantly higher in the experimental group (mean difference=5.025, t= 4.281, p< 0.001, 95% CI: 2.95 to 7.1). Hence, using Active Lecture Cum Video (ALV) proved to be more effective than Active Lecture Cum Live Demonstration (ALLD) in teaching respiratory drugs, a unit of their pharmacology subject in second year.

Data presented in Table: 2 indicates that there is no significant difference in the pre-test mean score between the two groups (mean difference = 0.35, t=0.79, p= 0.43 and 95% CI: -0.54 to 1.26). Whereas the post-test score was significantly higher in the experimental group (mean difference=3.63, t= 8.11, p< 0.001, 95% CI: 2.73 to 4.5). Hence the competency programme on MDI practice using video proved to be more effective than live demonstration.

Mean Nebulization practice score difference was not significant in pre as well as post test between the two groups (table 3)

The data presented in table 4 shows no significant difference in the mean pre-test Peak flow meter practice score between the two groups. The mean post-test Peak flow meter practice score of the experimental group after the competency programme on Peak flow meter practice using active lecture cum video were significantly higher than the control group. Hence the competency programme on Peak flow meter practice using video proved to be effective than live demonstration.

The data presented in table 5 shows no significant difference

Table 1: Comparison of pre and post-test knowledge scores

	Group*	Mean	Std. Deviation	Mean difference	t	P-value	95% CI of diff. in mean
Pre test	Control	32.67	6.02				
	Experimental	31.83	5.53	.85	0.657	0.513	(-1.73, 3.43)
Post test	control	45.02	3.65				
	Experimental	50.05	5.48	5.025	4.821	<0.001	(2.95, 7.1)

*n=40 in each group

Table 2: Comparison of Pre-test and post-test MDI practice scores

	Group*	Mean	Std. Deviation	Mean Difference	t	P-value	95% CI of diff. in mean
Pretest	Control (40)	5.28	2.	.35	0.79	.434	(-0.54, 1.26)
	Experimental(40)	4.93	1.98	.35			
Post-test	Control (40)	9.90	2.34	3.63	8.111	<0.001	(2.74, 4.5)
	Experimental(40)	13.53	1.59	3.63			

*n=40 in each group

Table 3: Comparison of pre-test and post-test Nebulization practice scores

	Group*	Mean	Std. Deviation	Mean Difference	t	P-value	95% CI of diff. in mean
Pretest	Control	21.05	2.15	0.84	1.83	0.07	(-1.72, 0.068)
	Experimental	21.88	1.85				
Post-test	Control	28.45	2.06	0.55	1.69	0.10**	(-1.21, 0.11)
	Experimental	29.00	.000				

*n=40 in each group, ** Corrected for unequal variance

Table 4: Comparison of pre-test and post-test Peak Flow Meter practice scores

	Group*	Mean	Std. Deviation	Mean difference	t	p-value	95% CI of diff. in mean
Pretest	Control	3.58	1.57	0.3	0.82	0.41	(-1.03, 0.43)
	Experimental	3.88	1.70				
Post-test	Control	8.15	1.56	1.70	6.642	<.001	(1.18, 2.21)
	Experimental	9.85	.426				

*n=40 in each group

Table 5: Comparison of pre-test and post-test oral drug administration practice scores

	Group	Mean	Std. Deviation	Mean difference	t	p-value	95% CI of diff. in mean
Pretest	Control	8.40	2.610				
	Experimental	9.20	1.757	0.8	1.61	0.112	(-0.19, 1.79)
Post-test	Control	18.75	2.295				
	Experimental	21.60	2.251	2.85	5.61	<0.001	(1.84, 3.86)

*n=40 in each group

The data presented in table 5 shows no significant difference in the mean pre-test oral drug administration practice score between the two groups. The mean post-test oral drug administration score of the experimental group after the competency programme using Active Lecture cum Video were significantly higher than the control group. Hence the competency programme on oral drug administration using video proved to be effective than live demonstration.

The researcher had utilized a three point rating scale on strongly agree, agree and disagree for the competency items listed in table 6. Percentage of both the agree and strongly agreed items are added and disagreed points are not presented in the above table. The data presented in the above table shows that students in experimental group had higher competency level as expressed by the patient in terms of their competency than the control group. The students in the control group had areas of further improvement. All students (100%) lacked the need to explain to the patient regarding how the medication works for them, regular follow up, 97.7% failed to clear patient's doubts and also the special instructions. Another 95% botched to explain the need for complete course of antibiotics and its duration. Family members play a vital role in patient's compliance to drug therapy but 92 % of the students could not comprehend the involvement of family members. Hence there is a strong need for re-enforcement for students in terms of explanation while administering the drug for better patient compliance and also to prevent complications of incomplete treatment.

The study found no association between students' knowledge and skills in drug administration and selected variable such as age, gender, parental education and occupation, pre university marks and also the medium of instruction except for category form where they studied that is either private or government setting. It is observed that 78% of the students from private

Table 6: Influence of students' competence in drug administration on the patients' understanding to drug therapy (N= 80 Control-40, Experimental-40)

Sl.No	Items	Percentage agreed to various items			
		Control group		Experimental group	
		Pre test	Post-test	Pretest test	Post-
1.	Called me by my name and asked me to repeat my name.	62.5	100	67.5	100
2.	Checked all the medications from my locker before giving it to me.	80	100	70	100
3.	Explained to me regarding the importance of appropriate timing for taking my medications	47.5	65	10	100
4.	Explained to me how I should take the medication	65	82.5	30	100
5.	Explained to me how much medication to be taken at a time. (dosage)	65	42.5	40	100
6.	Asked me whether I have allergy with any medication or food I am taking	22.5	27.5	2.5	100
7.	Shown me the type of drugs that I am going to receive by its name	30	12.5	0	100
8.	Explained to me how the medication works for my health problems	5	0	0	100
9.	Explained to me for how long I have to continue these medicines (duration)	0	5	0	100
10.	Made me understand the possible side effects of the drug for which I have to report to my physician or nurse.	5	17.5	5	100
11.	Explained to me how to reduce the adverse effect of the drug by ways of diet, medication supplements and observing signs and symptoms that are possible due to the drug effect.	0	2.5	0	100
12.	Made me understand the importance of following strict medication regimen prescribed by my physicia	2.5	50	0	100
13.	Made me aware of the fact that some of the medicines like the steroids are not to be abruptly discontinued.	0	2.5	0	100
14.	Made me realize that antibiotics given to me has to be taken for the due course and not stop as and when my symptom are better.	0	5	0	100
15.	Made me understand the need to follow the special instructions in relation to using the drugs.	0	2.5	0	97.5
16.	Made me comfortable in assisting me to take my medications appropriately.	0	90	0	100
17.	Made me clear of all my doubts regarding the treatment and health aspects.	0	2.5	0	100
18.	Made me aware that I have to come for regular follow up as per the physician's discharge plan and also my health conditions.	2.5	7.5	0	100
19.	My family members / relatives were involved while giving me the instructions about the usage of the drugs prescribed to me.	0	7.5	0	100
20.	Explained to me regarding regular follow up as per the physician instructions.	0	0	0	100

scored above 50% in the pretest knowledge and only 52% of the students from the government set up scored more than 50% in pretest knowledge. ($\div^2_{1df} = 5.61$, P= 0.018).

No correlation is observed between post-test knowledge scores and the scores in the practice of oral drug administration, MDI and Nebulization ($0 < r^2 < 0.21$, NS).

In the present study the mean Nebulization practice score difference was not significant in pre as well as post test between the two groups presented in table 3. The reason for no difference could be due to frequent observation of Nebulization procedure more frequently than the other procedures in all units in the hospital.

Conclusion

Pharmacology education in nursing has become increasingly important as nurses' role in administering and educating patients about their medications have grown. The present study shows that video form of learning helps the students to space their learning and helps them gain confidence through repeated revision. Therefore the teachers should be trained to add various innovative methods in learning a difficult subject like pharmacology in their daily classroom as well as clinical teaching. One of the limitations of our study was that all the students stay in various hostels of the campus. So, there is possibility of contamination of what they learnt in each group.

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To assess the effectiveness of self instruction module on knowledge regarding menopausal changes and coping among pre-menopause women in selected areas of Wardha city

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Abstract

Objectives

To assess the level of knowledge of pre-menopause women regarding menopausal changes and it's coping before and after administration of self instruction module,

To evaluate effectiveness of Self Instruction Module on knowledge regarding menopausal changes and it's coping among pre menopausal women, To compare the knowledge regarding menopausal changes and it's coping with selected demographic variables [Age, education, type of family, occupation, marital status, sources of health information]

Methods

The research approach for the study was that of an evaluative one with one group pre-test post-test design. The sample size considered for the study was 50 pre menopausal women 40-45 years. The sampling technique used for the study was convenience sampling which is a type of non probability sampling. The tool used for gathering relevant data was a structured questionnaire on knowledge regarding menopausal changes and its coping

Results

Analysis of data was done on the basis of objectives and hypotheses. Data analysis of level of knowledge revealed that during the While assessing the effectiveness of the Structured Instructional Module on menopausal changes and its coping, the pretest and post-test data analysis by using Wilcoxon Signed Rank test revealed the mean pre-test score (2.84 ± 1.23) was higher than the mean post-test score (17.56 ± 1.37). Since the calculated Z value, was 6.17 and P value was 0.000, thus proving that $P < 0.05$ (data was analyzed by using SPSS Software).

Conclusion

Based on the analyses, the following inference was drawn. There was evident increase in the knowledge scores in all the areas included in the study after administration of Self instructional module. Thus it was inferred that the Self instructional module was effective and while the gain in knowledge score is commendable, there is still room for improvement.

Keywords

Pre-menopause women, Knowledge, Self instructional module, menopausal changes, coping.

Introduction

Menopause is a natural event most women experience as they enter their 5th decade. Almost all women at some point in their lives go through menopause. 60 million women in India are above the age of 55 years with women living longer than before; a majority would spend 1/3rd of their life in post menopausal stage. Menopause is something, which gains less importance though it is a word laden with emotion, stigma and dread and is a natural part of every woman's life. Menopause literally means the physiological cessation of menstrual cycles, from the Greek root meno: [month], and pausis: [a pause, a cessation] Menopause normally occurs between ages of 45 -50 yrs.

Menopause has a unique meaning in a women's life. It is accompanied by feelings of social freedom after her children have grown up and she is free of regular menstruation. Menopause releases her from the fear of getting pregnant. At the same time she also faces the setback of her departing grown up children, or may ever lose her husband. Besides the common problems like hot flush, night sweats, insomnia, mood changes and irritability, the 'betraying' of ovaries may also lead to long term life threatening diseases such as osteoporosis, arterial disease and urogenital atrophy. Thus menopause does not decrease the women's physical capacity, sexual vigour and enjoyment of 60 million women in India are above the age of 55 years with women living longer than before; a majority would spend 1/3rd of their life in post menopausal stage. It is found that 3.1% of Indian women in the 30-40 age attain menopause. The figure goes up to 8% for the age 35-39age group. The incidence soars after the age of 40yrs.

It is important therefore to address all these menopausal related diseases and apply prophylactic measures so that these women can lead an enjoyable and healthy life. The average age is 47 yrs. Symptoms of premenopausal can happen at a young age. While there are many women experiencing signs and symptoms of premenopausal, there are none that actually understand what is happening to their bodies and are not aware. Women in their early Thirties can begin expecting symptoms of premenopausal i.e. irregular period, hot flushes. As menopausal experience is a developmental transition and multi domain concept, the nurse considers what the consequences are, how the person is adapting to changes and finally how the nurse can help menopausal women cope with the experience, if indeed there is a need to do so. As alternative therapies can be wide ranging, the women may seek information from healthcare providers regarding these therapies. As nurses, we must have knowledge to counsel patients effectively.

Method

Research approach was Descriptive evaluative approach & Pre-experimental, one group pre test post test design was used.

The data was collected using close ended questionnaire and Sampling method used was convince Sampling method, which is one of the non – probability sampling method. The investigator personally contacted each selected subject and their informed written consent was obtained after explaining the purpose of the study. Pre- test was conducted followed by administration of Structured Instructional Module and post-test was conducted after 5 days.

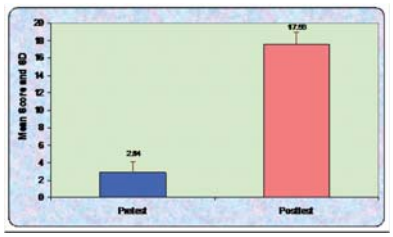
Results

The findings of the study showed that Distribution of samples in relation to demographic data showed that most 37 (74%) of the samples belonged to the age group of 40-42years.Out of 50 pre menopause 21 (42%) of them had higher secondary education. It was evident that most of 23 (46%) of pre menopause women were unemployed (housewife). Maximum 31(62%) belonged to nuclear family and 45 (90%) were married. Data revealed that 19 (38%) of pre menopause women received health information from health personnel, 16 (32%). Significance of difference between pretest and post test knowledge score regarding menopausal changes and its coping showed that there was a significant difference between the pretest and post test knowledge scores of pre menopause women regarding menopausal changes and its coping as Z value was 6.17 and p value 0.000 where $p<0.05$ Thus result showed that the Self Instruction Module was effective in enhancing the knowledge of pre menopause women regarding menopausal changes and its coping (data was analyzed by using SPSS Software). Showed that there was no significance of difference of knowledge scores in relation to selected demographic variables such as age, education, occupation, type of family, marital status and sources of health information. From the above findings it was concluded that no demographic variable had no relation with post-test knowledge score.

Discussion

The data showed that there was highly significant difference between pretest and post test knowledge scores of pre menopause women regarding menopausal changes and its coping. As the p value was 0.000 where $p<0.0001$. .Thus it is considered that the Self Instructional Module was effective to improve the knowledge scores among pre menopausal women. According to Myra Hunter (1996) stated that information about menopause and behavioral intervention for women in mid 40's can forestall negative attitudes and leads to better health. Initial results confirmed that intervention increases knowledge & moderated negative beliefs. Evaluation of intervention was positive: women reported using the information to cope with emotional & physical aspect of menopause. According to Evarts & Baldwin [1997], some participants displayed more knowledge about physical effect of menopause and other did not, many asked for more information on facts of menopause following interviews. If women do not learn about menopause from their mother prior to finishing schooling, it can be postulated that they do not learn until they are near or within the stage of menopause. Some women might farewell changes regardless of much knowledge, but others might experience confusion or frustration in response to physical and psychological changes. Eric Nagourney [Oct. 2, 2007] revealed that Alison J. Rigby on perception: "study on hormone risks fades of pass by ". Findings suggested that more education was needed so that menopause women could make informed decisions and "By & large" he said "Patients are very frustrated and

Graph 1: Significance of Difference between Pretest and Post Test Knowledge Score Regarding Menopausal Changes and it's Coping



Graph 2: Area wise comparison of mean scores of pretest and post test of knowledge scores before and after administration of Self Instruction Module

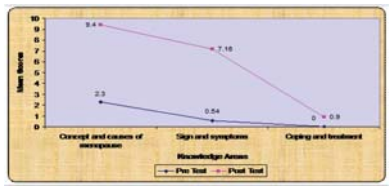


Table 1: Significance of Difference between Pretest and Post Test Knowledge Score Regarding Menopausal Changes and It's Coping.

Knowledge scores	0-9(Poor)	10-19(Good)	Mean	SD	z-test	p-value
Pretest	50	0	2.84	1.23	6.17	0.000
Posttest	0	50	17.56	1.37		HS,$p<0.05$**

Table 2: Area wise comparison of mean scores of pretest and post test knowledge score before and after administration of Self Instruction Module.

SN	Knowledge Area	Maximum possible score	Mean Scores		p-value
			Pre	Post	
1	Concept and causes of menopause	10	2.30	9.40	0.000, HS**
2	Sign and symptoms	8	0.54	7.16	0.000, HS**
3	Coping and treatment	1	0.00	0.90	0.000, HS**

disappointed by the sort of communication that they have with their physicians".

Conclusion

After the detailed analysis, this study leads to the following conclusion: Pre menopausal women do not had 100% knowledge regarding menopausal changes and its coping. There was a significant increase in the knowledge of subjects after the introduction of SIM. To find the effectiveness of SIM Wilcoxon signed Rank test was applied and Z value was calculated, post-test score was significantly higher at 0.05 level than that of pre-test score. Thus it was concluded that SIM on menopausal changes and its coping was found effective as a teaching strategy. Demographic variables do not showed a major role in influencing post-test knowledge score among pre menopausal women. Area wise, as per the blue print the comparison of mean scores of pretest and post test of samples regarding menopausal changes and it's coping was done and the result showed that the knowledge difference was highly significant in areas of concept and causes , signs and symptoms, coping and treatment of menopause. Hence it was interpreted that the Self Instructional Module was effective on various areas of menopausal changes and its coping. Hence based on the above cited findings, it was concluded undoubtedly that the written material prepared by the investigator in the form of SIM helped the pre menopausal women to improve their knowledge on menopausal changes and its coping .

Hence on the above cited findings, it could be concluded undoubtedly that the written material prepared by the investigator in the form of SIM helped the students to improve their knowledge on effect of massage therapy in reducing labour pain. They can apply their knowledge in clinical and community settings.

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Promoting faculty competence and faculty welfare

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Introduction

Faculty development is another term for professional growth. The philosophy of faculty development varies from college to college. Improvement of their competence in nursing is essential fro a number of reasons. Because, there shortage of prepared faculty selection of nursing staff, their preparation etc. Present drastic changes are taking place in nursing education, nursing service nursing research as well as in nursing administration also. It is difficult for the key to keep up with all the changes. The improvement of the faculty will as in nursing administration also. It is difficult for the key to keep up with all the changes. The improvement of the faculty will be the responsibility of the administrator and his/her assistants until among faculty have their doctorate degree and until better methods of remaining information to keep faculty in formed have been developed.

Definition

Faculty competence may be defined as "the ability of the teacher or faculty teaching in the best way'.
- Gallahar (1995)

Purposes for developing faculty competence

Developing faculty competence is vital for……..

- Improving administrative governance towards determining the goals of institutions of higher learning.
- Encouraging membership in professional organization.
- Maintaining current knowledge and skill for a specialization in area of professional nursing.
- Enhancing professional role.
- Demonstrating retention, tenure or promotion in the academic system.
- Developing leadership skills and positive relationships.
- Strengthening nurse's position through political role modeling.

Role of administrator to develop faculty competence

- The administrator stimulates faculty and facilitates action towards improvement of instruction through in-service program and through other methods.
- The administrator should become aware of faculty needs, their ambitions and value systems and then she/he promotes policies that will provide opportunities and incentives for faculty improvement.

Methods used for faculty competence development

- Systematic visitation of classes by the administrator or selected faculty members.
- Scheduled departmental faculty meetings to deal with improvement of instruction.
- Organization of a series of faculty discussions of college teaching.
- Engaging a series of visiting lectures, consultants, or other resource personnel to discuss problem related to nursing education.
- Collection of resource materials for faculty use .
- Provision of teaching aids appropriately .
- Involvement through self study and committee assignments.
- Provision of financed educational leaves.
- Research and writing.
- Attendance at workshops, seminars professional meetings and conferences.
- Visitation of other campuses.
- Teacher exchange programs.

In-service education program

In – service education is an organized educational programme which is need to trained staff during their period of employment and related to the moment of their performance. It should contain the elements of orientation, in special skills and continuing education. It should be an ongoing programe and should be accepted as an integral part of the school activities.

Orientation and introduction to new learning

Orientation is concerned with introducing the new employee to the orientation. It is the welcoming process to make the new employee feel at home generate in him a felling of association to the institution. The new faculty must be helped to get acquired and adjusted with other staff and the environment.

Orientation should be given in the following areas

The new faculty member should be oriented with the history, philosophies, organization setup and the objectives of the institution. Also oriented her/him to the policies of institution regarding promotion, transfer and training.

- Orienting him/her to the physical facilities in college, hospital and other areas of practical experience.
- Explaining about the duties and responsibilities of the teachings staff.
- Introducing a new area of learning by means of regular serried of lectures, arisits of discussions.
- Arranging for periodic lectures of demonstrations to keep the staff up to else with new knowledge and techniques.
  Eg: use of new equipment.
- Holding regular meeting of the teaching staff for the purpose of gaining and Improving knowledge and skills in special techniques.
  Eg: methods of evaluation
- Convening meeting with the staff of other nursing colleges in order to exchange information of for discussion on specific questions.
- Organizing short programmes for individual staff members according to their particular needs.

2. Formulation of policies

Conditions under which the teaching staff, has an effect on the implementation of the programme besides contributing

towards the stability of the frustrations, confects, resignations and frequent for transfer, can often be reduced when there are clearly defined policies relating to hours of work, teaching load, welfare of staff and other matters.

3. Hours of work

The policy should give direction on

- The maximum number of working hours/ week.
- The number of days of per month to which the staff is entitled.
- The procedure to be followed regarding public holidays.

4. Teaching load

The policy regarding the maximum teaching load to be carried to each tutor should allow time for preparation for classes and laboratory sessions, student guidance and counseling evaluation of student assignment, committee work, record keeping and other functions expected of four.

- The teaching load of 14-16 hours/week will permit attention to these functions.
- In cases where this is not possible, 20 hours of formal teaching/week should not be exceeded.

5. Class room visitation

The administrator should clarify the purpose of class room visitation to the faculty.

6. Faculty committee

The nursing unit may have the faculty committee specifically changed with improvement of instructions. Most schools of nursing and improvement of instruction.

The administrative person provides the following services.

- She stimulates creative leadership among faculty embers arranges working relationships between faculty from other discipline and helping nursing faculty members to formulate statements of philosophy and objectives.
- She provides facilities and time through lighted teaching loads of faculty.
- She gives guidance to faculty who seek her assistance, and support and encouragement to faculty members as they define their problems and seek methods of solving them.

7. Scheduled departmental faculty meetings

The administrator should stimulate faculty to plan meeting which deal with improvement of instruction through keeping faculty members about current developments in nursing and in allied fields.

8. Faculty discussion groups

The topics should be out of faculty interest for discussion. Since this is faculty group and scope and should be broad should cut across college disciplines.

9. Visiting lectures consultants

The administrator invites lecturer and consultants as the faculty sees need such resource personnel.

10. Resource material

Resource materials of teaching in higher education may help to inform faculty on current policies, and issues in higher education. She may promote use of such materials by stimulating faculty members to hold meetings specifically to discuss, the materials. Committee or self-study activity may also encourage the use of library resource.

11. Teaching aids

The administrator procures teaching aids to improve and facilitate to use. She must make faculty aware of the teaching aids that are available, possibly suggesting different methods for using them, and provide literature to explain the techniques of using these aids. Demonstration may encourage some faculty members to use various machines and other teaching aids.

12. Self-study and committee assignment

The administrator involved all faculty members in the curriculum committee and the recommends faculty members for participation on committees of the college.

13. Professional improvement

The administrator advocate and promotes policies that stimulate professional improvement of faculty members. Faculty members should be given an opportunity for replenishment of their ideas, advanced study, research and for association with colleagues from other campuses, as incentives for instruction.

14. Further graduate study

- Promotions for assisting faculty by financing further graduate studies vary consider among the colleges. This practice leads to improvement of the individual to receive financial assistance. It is useful in recruiting faculty and contribution towards retaining faculty members.
- The administrator encourages the faculty members with the highest potential to apply for financial assistance for further graduate study and she recommends this individual to the proper authority of the college for consideration for financial assistance.
- In institutions that do not have a program for financial assistance, the administrator encourage faculty to seek other sources of funds form fellowship, stipends, scholarships, grants and loans.

15. Promotions and transfer

- Promotion is the transfer of an employee to a job that pays more money or one that enjoys some preferred status.
- There should be a promotion policy in a college of nursing school of nursing to motivate the teachers for higher productivity.
- The cadre of promotion must be clearly established and communicated to the employees.
- The promotion policy must consider the merit, potential for advancement and seniority of the employee.
- It should not be merely on the basis of years of experience.
- Transfer involves the shifting of an employee from one job to another without special reference to changing responsibilities or compensation, placing employees to positions more appropriate to their interest or ability or gelling vacancies in a department.
- In a college / school of nursing there should be a clearly written policy about the transfer of faculty members.

16. Research and writing

Universities tend to place their emphasis upon research, while smaller colleges place emphasis on teaching. The administrator seeks funds to pay for secretarial assistance and other services pertaining to preparing the manuscript for publication.

17. Attendance at professional meetings

The administrator plans for and encourages faculty members to attend professional meetings, particularly those conferences that are related to the teacher's area of interest.
Eg: Attendance at conferences and study courses.

The college should state policies regarding the selection and deputation of the staff for further education including attendance at formal courses, refresher courses, workshops and conferences. Some of the factors are:

- The number of years of experience required before the deputation for a formal post basic educational programme.
- Specific kind of experience required be4fore deputation for study of any particular subject.
- Any training required after returning from study.
- Plan for rotation of staff to attend conferences.
- Rules regarding to holding of periodic compulsory refresher courses for particular grade to staff. All such policies should be mode known to the staff.

18. Visitation to other campuses

Different schools of nursing any be offering short-term courses, seminars or workshops. More value accures to faculty member and the school of nursing when the faculty member visits another campus.

The purpose of the sabbatical leave is to provide a period for scholarly development. A leave or absence should based on the nature of the study and the faculty of faculty member undergoing the study. The institution should provide special assistance in order that the faculty member does of have to got into debt being leave or absence.
The following factors must be considered regarding sabbatical leave.

- Time of year during which annual leave may normally be taken.
- How many leaves may be taken at one time.
- The purpose for which casual or special leave may be granted.
- The provision of maternity leave.

19. Sickness

In regard to the leave which will be given to staff members who are sick be college policy should state clearly about sick leave, medical expenses and imbursement facility.

20. Residence

There should be policy regarding the residence or staff quarters facilities.

21. Teacher exchange program

An active exchange program might relive some of the faculty shortages. A well-prepared faculty member who visits the campus for a summer session or a semester can stimulate faculty to the point where they will be interested in trying different methods of teaching.

Active participation in faculty exchange programme may broaden as instructor's understanding of the roles as a college faculty member. Exchange of whereas with colleagues on other campuses can be very stimulating to faculty.

Faculty from universities who are free during the summer or semester leave should be encouraged to participate in a teacher exchange program. Such practice may benefit the participant and at the same thing relieve some of the shortages.

22. Honours and programs

The outstanding student may provide stimulation for the faculty. In institutions that do not have honors programs, there usually are other activities in which outstanding students can participate.
The administrator guides students and faculty members in developing a program of activities that will stimulate both students and faculty.

23. Continuing education

One of the basic aspects of continuing education for teachers is that it covers all those organized and informal means whereby teacher of all ages are encouraged to learn from one another and from society around them.
Continuing education is very essential for the faculty because,

- There has been an explosion of knowledge in medical science and other allied areas.
- The growth of science and technology has mostly contributed to the development of new knowledge in the field of teaching.
- Teachers at all levels and of all ages must go no learning continuously if they want to remain effective and up to date in the profession.
- In the field of continuing education for nursing teachers is very broad and comprehensive.
- It includes all the programmes, educational and social which the teacher takes active apart, and all the extra education, which she receives at different institutions in the form of refresher professional courses.

Opportunities available for continuing education
Staff should be permitted and encouragement to enhance their education levels taking part in refresher courses, workshops and seminars. They should be encouraged to go for higher education like M.Phil, Ph.D., The availability of scholarship should be made easy. Further education is not only profitable to the individual and college but is also necessary for development of the profession as a college.

Barriers to faculty development
The barriers to faculty development found to be personal and institutions in above.
Personal barriers

- Finance
- Lack of interest
- Necessary child care
- Home management responsibilities
- Social responsibilities

Institutional barriers

- Work load
- Faculty scheduling
- Lack of release time
- Insufficient financing.

Summary

So far we have discussed about the meaning for faculty

competence, as of faculty competence development, various methods used for development of faculty, continuing education and in-service education, barriers for development etc. Staff should be permitted and encouraged to enhance their level up to date.

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