Cloud Publications
International Journal of Advanced Nursing Science and Practice
2012, Volume 1, Issue 1, pp. 1-13, Article ID Med-09
ISSN 2320 - 0278

Research Article | Open Access

Predictors of Nutritional Status of Children Visiting Health Facilities in Jimma Zone, South West Ethiopia

Teklebrhan Tema Beyene

Department of Nursing, Jimma University, Ethiopia

Correspondence should be addressed to Teklebrhan Tema Beyene, tekletema@yahoo.com

Publication Date: 16 September 2012

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-09

Abstract Malnutrition is a major public health problem in the developing countries. It contributes to child morbidity and mortality, poor intellectual and physical development of children, and lowered resistance to diseases. The overall objective of the study was to determine prevalence and predictors of nutritional status of children age 6 to 36 months visiting health facilities in the study area. A cross-sectional descriptive study to determine nutritional status of children visiting health facilities in Jimma Zone was conducted from March (15^{th}– 30^{th}) 2010. The study was conducted in six randomly selected teaching health facilities (Jimma, Agaro, Asendabo, Yebu, Serbo health centers) and Limu district hospital within 5-50 km radius from Jimma University. All children aged 6-36 months and their mothers/care givers visited the above mentioned health facilities during the study period were included in the study. Out of 322 sampled mothers/care givers with children age between 6 to 36 months, 313 responded to the questionnaire making the response rate 97.2%. The mean age of mothers was 26 years with standard deviation $\pm$ 5.27 while the mean age of children found to be 17 months with standard deviation $\pm$ 8.75. Concerning nutritional status of children the analysis showed that 14.4% were underweight 33.9% were stunted and 19.2% were wasted. With regard to factors determining nutritional status of children breast feeding, increasing age of child, increasing age of mothers, large family size and sex of child found to be important predictors of the nutritional status of children ($p < 0.05$). Despite the fact that the method of sampling used in this study has its own limitation, the prevalence of wasting in this study is slightly higher according to the classification established by the WHO to indicate the level of child malnutrition. Therefore, use of proper feeding method and supplementation of breast milk at appropriate age according to child feeding recommendation and family centered care should be encouraged for young children.
Keywords *Nutritional Status, Children, Jimma Zone*

1. Introduction

Malnutrition contributes to child mortality, poor intellectual and physical development of children, and lowered resistance to diseases, and consequently stifles development. Ethiopia has now the highest prevalence of chronic under-nutrition (stunting) manifested in the first years of life (1-3). There are

many and complex factors including unfavorable health environment caused by inadequate water and sanitation which increase the probability of infectious diseases and indirectly form certain types of malnutrition (4-7). In addition, cultural beliefs luck of parental education especially that of mothers, are all cited to affect children's nutritional status (4-9). Ill health and death are highest in this group, largely from preventable causes (10), related to malnutrition. Malnutrition emanates from the poor infant feeding practices in combination with socio-economic underdevelopment results in high infant and child morbidity and mortality in Ethiopia (11-13). Several pocket studies in Ethiopia reported that malnutrition is a common problem (14-18).

In Ethiopia, although different studies indicated a decline in the prevalence of child malnutrition (9, 16, 20-22) still the prevalence of malnutrition is the highest compared to other east African countries. However, very little is known about predictors of nutritional status of infants and young children in the study area. The objective of this study is to determine predictors of nutritional status of children visiting health facilities in the study area.

2. Methods

The study was conducted in Jimma zone which is one of the 12 zones under the administration of Oromia regional state in southwest Ethiopia. Jimma town, the capital city of Jimma zone is located at 353 kms away from Addis Ababa the capital city of Federal Democratic Republic of Ethiopia. According to the 1994 population and housing census survey report, the total population of the zone projected to be 2,247,760 in the year 2000, and the average household size is 4.5 people. According to the administrative division, the zone is divided in to 13 weredas.

The health care system is depicted from the national health care system consisting of health posts, health center, and district and referral hospitals. Recently the zone has 137 health posts, mainly engaged in expanded program of immunization (EPI) and family planning (FP) activities, more than 36 actively functioning health centers, 1 district hospital and 1 referral hospital each provide integrated curative and preventive health services. A cross-sectional descriptive study to determine nutritional status of children in Jimma zone was conducted from March (15^{th} – 30^{th}) 2010. All children aged 6-36 months and their mothers/care givers in the zone during the study period were considered. Mother/ care giver child pairs visiting five randomly selected teaching health centers and one district hospital during the study period were included in the study.

In the decision of sample size, a study conducted by Hofvander and Eksmyer (16), which reported the prevalence of severe PEM 3% among young children in the slums of Addis Ababa was used. Hence the sample size was calculated by using the following formula taking the expected prevalence of malnutrition in the study area to be 3%, margin of error 5% at 95% confidence level. Sample sizes of 322 children aged 6-36 months with their mothers/care givers were included in the study. Systematic random sampling technique using lists of children visiting the facilities within the above age was used in all the study units. Data was collected using both structured and semi-structured interviewer administered questionnaire from mothers and the anthropometric measurement data was collected using weight for age, height for age and weight for height. The weight measurements were obtained using Salter weighing scale and the average calculated and recorded to the nearest 0.1kg. Each child was weighed with minimal clothing and without shoe. For measuring height, two types of wooden scales were used –one for recording recumbent length of children under two years of age and the other for taking standing height of the older children. In any case two measurements were recorded and the average was calculated and written to the nearest 0.1cm.

The anthropometric data was analyzed in terms of weight-for age, height for age, and weight-for-height and by use of anthro-package, Z-scores was generated and the numbers of malnourished and

well-nourished children were determined among the total children in the study area. The weight for age (WFA) index was used to classify the children in the categories of malnourished or well-nourished. Data on breast-feeding, complementary feeding practice and type of supplementary foods was collected through inter-viewing of mother or person feeding the index child, using preplanned structured questionnaire as the data collection tool.

The questionnaire was pre-tested on subjects with the same socio-demographic characteristics in another similar health facilities before being applied on the study subjects and the necessary modifications was made before the main study. To ensure the validity of the information gathered, ten BSc nurses who are well experienced with data collection and taking accurate weight of children were recruited and training was given on techniques of data collection. The data validity and reliability was achieved through the close supervision of data collectors by the principal investigator. Immunization card was used to ascertain the age of the child. When reliable documentary evidence is not available the interviewer used a local event calendar to determine the month and year of child's birth. At the end of each day, the completed questionnaires were checked to ascertain that all questions had been answered correctly and consistently. A two kilogram iron bar was used to regularly check scale accuracy and make sure measurements are correct.

The entire data collected using structured questionnaire was validated, edited, coded and doubly interred into a computer before analysis. The analysis was done by an experienced statistician using SPSS for windows version 16.0. Frequency tables were made to see the distribution of variables. In addition, cross-tabulations and statistical tests like X2 test, logistic regression analysis was made to look for association between nutritional status of children and variables of interest.

To get permission from authorities in the respective institutions, a letter duly signed by research and publication office of Jimma University was submitted and explanation was given to responsible authorities on the purpose and benefits of the survey. To get full cooperation of the participants training was given to interviewers on the way how to assure the anonymity and confidentiality of the responses obtained from the target groups. The respondents were explained about their right to take part in the study or to terminate at any time if they want to terminate and informed verbal consent was obtained from caretakers/mothers of children.

Since the study is only institution based it may not represent the source population. The study did not included other family members such as fathers and grand mothers who are decision makers in the family and can influence the mother's way of child feeding practice or mothers may not give correct response to the question.

3. Results

Out of 322 sampled mothers care givers with children age between 6-36 months, 313 mothers responded to the questionnaire making the response rate 97.2%.The socio-demographic characteristics of mothers studied revealed that the majority 129 (41.2%) were found in the age group between 22-26, followed by age groups 27-31, 69 (22.0%). The mean age of mothers was 26 years with standard deviation $\pm$ 5.27 while the mean age of children found to be 17 months with standard deviation $\pm$ 8.75. The pre-dominant religion of the study population was found to be Muslim 242 (77.3%) followed by others which included orthodox Christian and protestants 71 (22.7%).

Analysis of the educational level of mothers showed that the majority 160 (51.1%) had no formal education while the rest 153 (48.9%) had elementary and above educational levels. Among subjects studied majority 248 (79.2%) were Oromo by ethnicity, 256 (81.8%) were house wives by Occupation, 304 (97.1%) were married, while 168 (53.7%) were rural duelers (Table 1).

Table 1: *Socio-demographic Characteristics of Mother, Jimma Zone,* South West Ethiopia, *2010*

Variables	No	%
Age of Mothers		
17-21	65	20.8
22-26	129	41.2
27-31	69	22.0
32-36	38	12.1
≥ 37	12	3.9
Religion		
Muslim	242	77.3
Others	71	22.7
Education		
Illiterate	160	51.1
Literate	153	48.9
Marital status		
Married	304	97.1
Others	9	2.9
Ethnicity		
Oromo	248	79.2
Others	65	20.8
Occupation		
House wives	256	81.8
Others	57	18.2
Residence		
Urban	145	46.3
Rural	168	53.7

Concerning the distribution of mothers by their child feeding practice the majority 298 (95.2%) offered colostrums to their babies while 53 (17.0%) offered prelacteal feeding. Regarding feeding in the first six months the majority 188 (60.1%) responded giving breast milk alone while the rest 125 (39.9%) offered breast milk with other feedings which included water, caw milk and others like “Muk or Abish” in addition to breast milk. Regarding the pattern of breast feeding the majority 251 (80.2%) responded

that they are still on breast feeding, 289 (92.3%) had intention to continue breast feeding at least for 2 years while 274 (87.5%) offered breast milk on demand to their babies.

Table 2: *Distribution of Mothers by Their Feeding Practice, Jimma Zone,* South West Ethiopia. *2010*

Variables	Frequency	Percent
Feed Colostrum		
Yes	298	95.2
No	15	4.8
Prelacteal Feeding		
Yes	53	17.0
No	260	83.0
Feeding in the 1st 6 Months		
Breast milk alone	188	60.1
Breast milk & other feedings	125	39.9
Still Breast Feeding		
Yes	251	80.2
No	62	19.8
Breast Milk at Least 2 Years		
Yes	289	92.3
No	24	7.7
Giving Breast Milk		
On demand	274	87.5
On Schedule	39	12.5
Age of Complementary Feeding		
At 6 month	155	49.5
Before & after 6 month	158	50.5
Feeding Method Used		
Cup & spoon	125	39.9
Others	188	60.1
Frequency of Supp. Feeding		
1-2 times	69	22.0
3-4 times	172	55.0
> times	72	23.0

With regard to supplementary feeding 155 (45.5%) of mothers initiated additional feeding at six months of age while the rest 158 (50.5%) supplemented before or after the recommended age. Regarding the method of feeding used 125 (39.9%) used cup and spoon while the rest 188 (60.1%) used bottle, hand and other feeding methods. Concerning the frequency of supplementary feeding, the majority 172 (55.0%) offered three to four times while the remaining 141 (45.0%) offered less than three and more than four times (Table 2).

To determine the nutritional status of children age 6 -36 months weight for age, height for age and weight for height indices were used. As can be seen in table 3 the analysis using different indices showed the overall prevalence of underweight 45 (14.4%), stunting 106 (33.9%) and wasting 60 (19.2%) among the subjects studied (Table 3).

Table 3: *Prevalence of Malnutrition Using Different Indices, Jimma Zone,* South West Ethiopia.*2010*

Nutritional Status	Frequency	Percent
Weight for Age		
Normal	268	85.6
Underweight	45	14.4
Height for Age		
Normal	207	66.1
Stunted	106	33.9
Weight for Height		
Normal	251	80.2
Wasted	60	19.2

Parameter estimates from multivariate logistic regression model predicting the probability of malnutrition using weight for height, the analysis showed that those still on breast feeding and increased age of the child found to have statistically significant association when compared with those who stopped breast feeding and younger children ($p < 0.05$), while the other variables such as mother's age, religion, education, residence, occupation, frequency of supplementary feeding, method of feeding used, child's sex, and birth order of the child had no statistically significant association ($P > 0.05$). The Odds of literacy status of mothers showed that children born to literate mothers are 1.4 times more likely to be wasted compared to children of illiterate mothers. Children of those mothers who stopped breast feeding at the time of survey were 2.7 times at higher risk of being wasted compared to children of those mothers still breast feeding. The Odds of wasting among children of other religions was more than 1.4 times higher compared with children of Muslim mothers, but being

urban dweller, having family size > 4 and the higher the age of the child had (17%, 49%, 10%) less likely to be wasted respectively (Table 4)

***Table 4**: Parameter Estimates from Multivariable Logistic Regression Model Predicting the Probability of Malnutrition among Children, Jimma Zone, South West Ethiopia, 2010*

Predictors of Malnutrition Using Weight for Height	Crude OR	P. Value	Adjusted OR	95% CI	
				Lower	Upper
Age	0.00	.99	1.00	(0.93,	1.07)
Education					
Illiterate			1		
Literate	0.39	.29	1.48	(0.71,	3.06)
Residence					
Rural			1		
Urban	-0.19	.62	0.83	(0.40,	1.74)
Occupation					
House wives			1		
Others	0.09	.85	1.09	(0.44,	2.72)
Still Breast Feeding					
Yes			1		
No	1.00	.03*	2.71	(1.09,	6.73)
Child's Sex					
Male			1		
Female	0.07	.82	1.07	(0.58,	1.98)
Family Size					
2-3			1		
1-2	0.08	.83	1.09	(0.50,	2.38)
≥ 4	-0.67	.25	0.51	(0.16,	1.60)
Age of Child	-0.11	.00**	0.90	(0.85,	0.95)
Birth Order of Child	0.12	.43	1.13	(0.84,	1.52)
Feeding Method					
Cup & Spoon			1		
Others	0.08	.80	1.08	(0.59,	2.00)
Religion					
Muslim			1		
Others	0.38	.35	1.46	(0.66,	3.23)

A parameter estimates from multivariate logistic regression model predicting the probability of malnutrition using weight for age indices identified statistically significant association with increasing age of mothers and family size when compared with the younger mothers and small family size ($p < 0.05$),while the other variables such as mother's religion, education, residence, occupation, still breast feeding, frequency of supplementary feeding, method of feeding used, child's sex, age and birth order of the child had no statistically significant association ($P > 0.05$). The Odds of underweight among children's of mothers not breast feeding was 2 times higher when compared with children of mothers still beast feeding during the survey. An odd of being under weight among female children was 1.4 times higher when compared with male children. The risk of being under weight was 50%

less for children of mothers with other occupation when compared with house wives and for those children from family size 1-2, 64%, and those with family size > 4 was 75% less likely to be under weight when compared with family size between 2-3 (Table 5).

Table 5: *Parameter Estimates from Multivariable Logistic Regression Model Predicting the Probability of Malnutrition among Children, Jimma Zone,* South West Ethiopia, *2010*

Predictors of Malnutrition Using Weight for Age	Crude OR	P. Value	Adjusted OR	95% CI	
				Lower	Upper
Age	.101	.00**	1.106	(1.025,	1.193)
Residence					
Rural			1		
Urban	.090	.82	1.094	(.514,	2.332)
Occupation					
House wife			1		
Others	-.693	.20	.500	(.173,	1.442)
Still Breast Feeding					
Yes			1		
No	.708	.13	2.031	(.803,	5.133)
Sex of Child					
Male			1		
Female	.366	.30	1.443	(.721,	2.886)
Family Size					
2-3			1		
1-2	-1.023	.02*	.360	(.155,	.835)
≥ 4	-1.407	.023*	.245	(.071,	.845)
Age of Child	-.046	.07	.955	(.910,	1.003)
Birth Order	.025	.88	1.025	(.737,	1.426)
Feeding Method					
Cup & Spoon			1		
Others	-.023	.95	.977	(.491,	1.943)
Religion					
Muslim			1		
Others	.199	.67	1.221	(.483,	3.086)

Parameter estimates from multivariate logistic regression model predicting the probability of malnutrition using height for age among subjects studied showed statistically significant association with sex of child ($p < 0.05$), while the other variables such as mother's religion, education, residence, occupation, still breast feeding, frequency of supplementary feeding, method of feeding used, age and birth order of the child had no statistically significant association ($P > 0.05$). The Odds of stunting was 1.3 times higher for children of 1-2 family size when compared with children of 2-3 family size. The Odds of being female child was 40% less likely to be stunted compared to male children (Table 6).

Table 6: *Parameter Estimates from Multivariable Logistic Regression Model Predicting the Probability of Malnutrition among Children, Jimma Zone,* South west Ethiopia, *2010*

Predictors of Malnutrition Using Height For Age	Crude OR	P. Value	Adjusted OR	95% CI Lower	95% CI Upper
Age	0.00	.96	1.00	(0.94,	1.06)
Education					
Illiterate			1		
Literate	0.14	.62	1.15	(0.66,	2.03)
Residence					
Rural			1		
Urban	0.00	.990	1.00	(0.56,	1.76)
Occupation					
House Wife			1		
Others	-0.09	.80	0.91	(0.44,	1.87)
Still Breast Feeding					
Yes			1		
No	-0.48	.18	0.62	(0.31,	1.24)
Sex of Child					
Male			1		
Female	-0.62	.02*	0.54	(0.32 ,	0.89)
Family Size					
2-3			1		
1-2	0.33	.30	1.39	(0.75 ,	2.58)
≥ 4	-0.22	.62	0.80	(0.34 ,	1.90)
Age of Child	0.02	.23	1.02	(0.99,	1.05)
Birth Order of Child	0.07	.58	1.07	(0.84,	1.37)
Feeding Method Used			1		
			0.98	(0.59,	1.60)

	Cup & spoon					
	Others	-0.02	.92			
	Religion					
	Muslim			1		
	Others	0.05	.90	1.05	(0.54,	2.04)

4. Discussion

A review of previous nutritional survey in 1983 and 1992, in Ethiopia showed level of stunting in children 6-23 months was between 59% to 68%, and wasting from (6-13) % (2). Another study undertaken to demonstrate child feeding practice as predictors of nutritional status of children in a slum area in Addis Ababa revealed that slightly over a third (34.7%) of the children were under weight (low weight-for–age) nearly half (48.4%) were stunted (low height-for-age), and a small number (3.4%) were wasted (low weight-for-height) (13).

A nutritional survey examined anthropometric nutritional status of eighty-seven randomly chosen children (46 males and 41 females) under five years of age based on weight for age revealed, 43.6% children were found to be normal or suffering from mild protein-energy malnutrition (PEM), 34.5% children were suffering from moderate PEM, and 21.8% children were suffering from severe PEM. The overall prevalence of underweight 14.4% (low weight-for –age), stunting 33.9% (low height-for-age) observed in this study was relatively lower than previous study findings. The level of wasting 19.2% (low weight-for-height) is slightly higher when compared with previous study findings.

The possible explanation for the improvement in weight and height for age may be related to improved health intervention than previous days including the impact of health extension workers at the community level. The level of wasting observed in this study is very high according to the classification established by the WHO to indicate the level of child malnutrition (17), which may be related to the sampling technique or the sample size used in this study and need further investigation in larger scale to validate this study finding.

The parameter estimates from multivariate logistic regression model predicting the probability of malnutrition using weight for height among subjects studied showed that children still on breast feeding and age of the child showed statistically significant association ($p < 0.05$) when compared with those who stopped breast feeding and younger children which can be explained by the protective effect of breast milk and adaptation of older child to family diet.

In this study the Odds of literacy status of mothers showed that children born to literate mothers 1.4 times more likely to be wasted compared to children of illiterate mothers which is in contrary to other study findings which may be related to the time spent to care for the baby by the literate mothers. Also children of those mothers who stopped breast feeding at the time of survey were 2.7 times at higher risk of being wasted compared to children of those mothers still breast feeding which may be related to the increased chance of being exposed to infections specially gastroenteritis by those stopped breast feeding, but the interesting finding of this study is that having family size > 4 found less likely to be wasted which may be related to family centered care which is supported by other study finding (23), while odds of being under weight among female children was 1.4 times higher when compared with male children which may be related to less attention given to female child by the family.

5. Conclusion

The prevalence of wasting in this study is slightly higher according to the classification established by the WHO to indicate the level of child malnutrition which may be related to feeding method used or early and late supplementation of breast milk. Children of those mothers who stopped breast feeding at the time of survey found to be at higher risk of being wasted compared to children of those mothers still breast feeding. Also this study revealed that being under weight among female children was higher when compared with male children which may be related to less attention given to female children.

Recommendations

1. Use of proper feeding method and supplementation of breast milk at appropriate age according to child feeding recommendation should be given priority attention to prevent malnutrition among young children.
2. Exclusive breast feeding for the first six months and continuing breast feeding at least for two years should be encouraged and supported.
3. Family centered care should be encouraged for young children when mothers are engaged in work or away from her home.

Acknowledgements

I am highly indebted to research and publication office of Jimma University for financing the project.
I would like to extend my thanks to authorities and staff of the six health institutions for allowing me to carry out this project work.

My special thanks go to Professor Teheran Bleached for his constructive comment, support and encouragement during this project work.

Also I would like to extend my heartfelt thanks to my study subjects and those who helped me in data collection and analysis.

Finally, I would like to thank W/ro Tizita Godo for secretarial service.

References

1. Carol Bellamy, 1998: The State of the World's Children- Focus on Nutrition, The State of the World's Children Reports, 132, United Nations Children's Fund.

2. 1993: Report on the National Rural Nutrition Survey, Core Module, March 1992: National Nutritional Surveillance System, 190, the Authority (Addis Ababa).

3. 1998: *Southern Nations, Nationalities, and People's Region Community and Family Survey.* Demographic Training and Research Center, Addis Ababa University Population Studies and Training Center, Brown University. Addis Ababa University, Ethiopia.

4. *Strategy for Improved Nutrition of Children and Women in Developing Countries.* United Nations Children's Fund. Indian Journal of Pediatrics. 1991. 58 (1) 13-24.

5. Engle P. *Care and Child Nutrition.* Theme Paper for the International Conference on Nutrition (ICN) Paper Prepared For Nutrition Section. *United Nations Children's Fund.* 1992, 5-8, 13-17.

6. Michael C. Latham, 1977: *Human Nutrition in the Developing World,* Food and Nutrition Series – No. 29, Food & Agriculture Org., 522.

7. Gopaldas T. *Selected Socio-Economic, Environmental, Maternal, and Child Factors Associated With the Nutritional Status of Infants and Toddlers.* Food and Nutrition Bulletin (UNU), 1988, 10(4), 29-34.

8. Robert Mazur et al. *Socioeconomic Factors Associated with Child Health and Nutrition in Peri-Urban Zimbabwe*. Ecology of Food and Nutrition. 1988. 22 (1) 19-34.

9. Getaneh T. *Protein-Energy Malnutrition in Urban Children: Prevalence and Determinants*. Ethiopian Medical Journal. 1998. 36 (3) 153-66

10. Ethiopia. Office of the Population and Housing Census Commission. Population and Housing Census 1984. Office of the Population and Housing Census Commission, 1987.Kefa Region. Addis Ababa: Central Statistical Authority. 1987-1991.

11. Grütte F.K., Contemporary Patterns of Breast-feeding. Report on the WHO Collaborative Study on Breast-feeding. Food / Nahrung. 1983. 27 (8) 734.

12. Tadesse E. *National Breast-Feeding Survey in Ethiopia. Knowledge, Attitude and Practice among Mothers and Health Professionals, History of Health and UNICEF.* 1993. Addis Ababa, Ethiopia.

13. Abate G. *Child Feeding Practices as Predictors of Nutritional Status of Children in a Slum Area in Addis Ababa, Ethiopia*. Ethiopian Journal of Health Development 1999. 13 (3) 229–42.

14. S. Kebede et al. *Epidemiologic Health Survey of a Rural Peasant Association in Southwestern Ethiopia*. McGill Journal of Medicine.1995. 1 (2) 91-101.

15. Charlees H. *Levels and Determinants of Malnutrition in Adolescents and Adult Women in Southern Ethiopia*. Ethiopian Journal of Health Development. 2000. 14 (1) 57-66.

16. Hofvander Y. et al. Anthropometry of Children in Typical Rural District and an Urban Slum in Ethiopia: A Cross-Sectional Survey of 1093 Children.1970. Xxi (1) 1-4.

17. Lindsay H. Allen et al., 2001: *What Works? A Review of the Efficacy and Effectiveness of Nutrition Interventions.* ACC/SCN: Geneva in Collaboration with the Asian Development Bank, Manila. 144.

18. ACC/SCN, 2000: 4th Report on the World Nutrition Situation - Nutrition throughout the Life Cycle. Geneva: ACC/SCN in Collaboration with IFPRI.

19. Zewditu G. *Review the Status of Malnutrition and Trend in Ethiopia*. Ethiopian Journal of Health Development 2001. 15 (2) 55-74.

20. Getaneh T. *Protein Energy Malnutrition in Urban Children: Prevalence and Determinants.* Ethiopian Medical Journal. 1998. 36 (3) 153- 66.

21. Genebo T. *The Association of Children's Nutritional Status to Maternal Education in Ziggbaboto, Gurage Zone South Ethiopia*. Ethiopian Journal of Health Development. 1999. 13; 55-61.

22. Yimer G. *Malnutrition among Children in Southern Ethiopia: Levels and Risk Factors*. Ethiopian Journal of Health Development. 2000. 14 (3) 283-292.

23. Raghav G. et al. *Anthropometric Failure and Persistence of Poverty in Rural India.* International Review of Applied Economics. 2005. 19 (2) 179-197.

24. Central Statistical Authority, Ethiopia, and ORC Macro, Calverton, Maryland, USA, 2001: *Ethiopia 2000, Nutrition of Young Children and Mothers (English).* Africa Nutrition Chart Books. 421.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2012, Volume 1, Issue 1, pp. 14-19, Article ID Med-17
ISSN 2320 - 0278

Cloud Publications

Research Article **Open Access**

Opinion of B.Sc. Nursing Students & Their Teachers about Psychiatric Disorders & Psychiatric Nursing

Dr. Sailaxmi Gandhi[1], Dr. K. Lalitha[2], Dr. K. Thennarasu[3], Dr. Nagarajaiah[4], Dr. Ramachandra[5]

[1, 2, 4, 5] Department of Nursing, NIMHANS, Bangalore, India
[3] Department of Biostatistics, NIMHANS, Bangalore, India

Correspondence should be addressed to Dr. Sailaxmi Gandhi, sailaxmi63@yahoo.com

Publication Date: 19 November 2012

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-17

Abstract One of the key determinants of choice of specialization in nursing is opinion towards that speciality. The Psychiatric Disorders and Psychiatric Nursing Opinionnaire was administered to 162 subjects (both B.Sc. Nursing 3rd year students and undergraduate nursing teachers) selected using purposive sampling technique when they had participated in 3 workshops targeted at training in essential psychiatric nursing skills. Subjects from all three workshops had moderately humanistic, moderately professional and moderate acceptance opinions towards psychiatric disorders and psychiatric nursing. However, they also had moderate rejection opinion and were undecided about opinions that were custodial as well as punitive. This study has strong implications for nursing teachers and nurse administrators to focus on clinical experience and CNE programs to inculcate positive opinion which may impact on future career decisions and quality of patient care too.
Keywords *B.Sc. Nursing 3 Years Trainees, Nursing Teachers, Opinion, Psychiatric Disorders and Psychiatric Nursing*

1. Introduction

A persistent negative attitude and social rejection of people with mental illness has prevailed throughout history in every social and religious culture [1]. The attitudes and knowledge of the health professionals on mental illness has been argued to be a major determinant of the quality and outcome of care for mentally ill [2, 3]. The opinion of nurses about psychiatric patients and psychiatric nursing is a very important predictor of the quality and outcome of care. Emotional climate in the psychiatric wards affects the patients. Nurses opinion about mental illness and psychiatric nursing impact on the emotional climate in the wards. For the patient family members, the nurse is the role model. Their interaction with the patient is to a large extent dependent on their observation of health personnel's attitude to psychiatric illness.

1.1. Background

B.Sc. nursing trainees are exposed to psychiatric patients in their third year. Their opinion of psychiatric nursing may be important determinants of their specialty choice. Moreover, their opinion also could affect quality of care when they choose to work in psychiatric hospitals as RN. In this millennium, quality assurance has become a key word in the health sector. Nursing teachers' opinion of psychiatric patients could be transmitted to their students. For the student, their teacher is the role model. A positive attitude towards mental illness is a necessary prerequisite for the provision of holistic care to the patients [4]. Keeping this in mind, assessment of B.Sc. Nursing students and their teachers' opinion of psychiatric patients and psychiatric nursing was taken up as part of a NIMHANS funded research project.

1.2. Literature Review

Nurses with B.Sc. nursing qualification had more benevolence (4.51 ± 7.12), less stigmatization (1.64 ± 4.06) and less restrictiveness (1.81 ± 6.01) towards psychiatric patients than those with assistant nurse certificate, diploma and ANM qualification in a descriptive study conducted on 62 nurses in Bhutan [5]. Overall, findings indicated that the nurses surveyed had a positive attitude towards mental illness (mean – 134.39, SD – 17.35). The nurses with psychiatric experience of 3-4 weeks and 4 weeks respectively were found to have more positive attitude towards mental illness indicating that the clinical placement of nurses in psychiatric unit improved attitudes towards mental illness. A qualitative study by Darryl Bishop and Ines Ford-Bruins (2003) [6] exploring the perceptions of 14 mental health nurses regarding assessment in an acute adult inpatient setting in Central Auckland revealed their concern that nurses input to assessment processes was limited, despite belief that 24-hour care and the nature of mental health nursing generally suggested that a crucial role should exist for nurses. In a survey conducted to assess attitude to mental illness among 66 students mental health nurses, and 121 qualified mental health nurses at Ireland, multivariate analysis of variance revealed that nurses working in an inpatient setting held more socially restrictive attitudes indicating that they felt individuals with schizophrenia were dangerous and should be avoided. These findings were statistically significant at $p < 0{\cdot}05$ level. Fujika Katsuki, Masahiro and Toshiyuki Someya (2005) [7], assessed the emotional attitude of 189 Japanese nurses using the 'Nurse Attitude Scale' and the 'Pines Burnout Scale' and concluded that the state of burnout in psychiatric nurses resulted in a critical attitude towards patients.

2. Methodology

Three workshops were conducted at NIMHANS, Bangalore to train B.Sc. Nursing 3rd year students and undergraduate nursing teachers in essential psychiatric nursing skills using innovative teaching tools such as video of simulated mental status assessment, clinical case presentations, and demonstration and return demonstrations with lecture cum discussion. A descriptive research design was adopted and 162 subjects (85 B.Sc. 3rd year nursing students & 77 teachers) were selected using purposive sampling technique and administered 'the psychiatric disorders & psychiatric nursing opinionnaire'. This 50 item likert rating, researcher developed self-administered opinionnaire had high content validity and high test-re-test reliability value (.890). There are 17 items with negative scoring. The scale has 6 domains: humanistic (8 items), custodial (8 items), and punitive (8 items), and professional (10 items), accepting (8 items) and rejecting opinion (8 items). The interpretation of the scale is as follows:

	Humanistic	Custodial	Punitive	Professional	Accepting	Rejecting
Strongly Agree	25-32	25-32	25-32	31-40	25-32	25-32
Agree	17-24	17-24	17-24	21-30	17-24	17-24
Un-decided	9-16	9-16	9-16	11-20	9-16	9-16
Disagree	1-8	1-8	1-8	1-10	1-8	1-8
Strongly Disagree	0	0	0	0	0	0

3. Results

Analysis was done using spss 16. All values were rounded off to the first decimal place. The p value was fixed at $p<0.05$.

Table 1: *Distribution of the subjects (N=162) based on socio-demographic variables*

Variable	Workshop 1 (n=52)		Workshop 2 (n=57)		Workshop 3 (n=53)		Total (n=162)	
	f	%	f	%	f	%	f	%
Designation								
Student (N=85)	39	45.9	14	16.5	32	37.6	85	100
Teacher (N=77)	13	16.9	43	55.8	21	27.3	77	100
Gender								
Male	7	36.8	5	26.3	7	36.8	19	100
Female	45	31.5	52	36.4	46	32.2	143	100
Demonstrated MSE on a patient								
Yes	1	5.3	10	52.6	8	42.1	19	100
No	51	44.3	46	40	18	15.7	115	100
Would like to work in a psychiatric hospital								
Yes	13	16.3	38	47.5	29	36.3	80	100
No	39	47.6	19	23.2	24	29.3	82	100

Table 2: *Distribution of the subjects based on age*

Workshop 1 (n=52)		Workshop 2 (n=57)		Workshop 3 (n=53)		Total (n=162)	
Mean±SD	Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD	Range
21.4 ± 1.9	19-29	24.2 ± 3.2	20-36	21.8 ± 2.4	19-27	22.5 ± 2.9	19-36

Table 3: *Domain wise comparison of subjects (N=162) opinion of psychiatric nursing between the three workshops*

Opinion of Psychiatric Nursing	Workshop 1 Mean ± SD (n=52)	Workshop 2 Mean ± SD (n=57)	Workshop 3 Mean ± SD (n=53)	Total Mean ± SD (n=162)	F	p
Humanistic	20.4 ± 3.7	21.2 ± 3.2	18.7 ± 3.5	20.1 ± 3.6	7.055	0.001*
Custodial	15.4 ± 4.1	14.0 ± 3.1	16.9 ± 3.8	15.4 ± 4.0	7.437	0.001*
Punitive	16.1 ± 4.2	16.6 ± 3.4	17.8 ± 3.7	16.8 ± 3.8	2.627	0.075
Professional	30.8 ± 3.6	31.0 ± 4.3	28.1 ± 3.6	29.1 ± 4.1	9.579	0.000*
Acceptance	18.1 ± 3.9	22.1 ± 2.6	14.7 ± 4.2	18.3 ± 4.7	56.725	0.000*
Rejection	19.8 ± 3.8	16.7 ± 3.1	19.9 ± 3.7	18.7 ± 3.8	15.409	0.000*

*p<0.05, SD: Standard Deviation

4. Discussion

Three workshops funded by NIMHANS were conducted over a span of one year. Of the 162 subjects who participated, 85 were B.Sc. Nursing 3rd year students and the rest 77 were undergraduate nursing teachers. There were 19 males and 143 females. Perhaps this reflects that nursing is still a female dominated profession in India. The subjects Mean age was 22.5 ± 2.9 which ranged from 19-36 years. Rinchen Pelzang (2011) [5] in Bhutan similarly noted that 75.8% of the subjects were females and 87.1% were in the age group of 20-40 years. B.Sc. Nursing students in the third year of their program are in the age group of 20-22 years. In India, a large number of B.Sc. Nursing graduates opt for teaching (as clinical instructors) within one year of their training period. This could perhaps be the reason for a very young mean age and age ranging from 19-36 years. Only 19 of the subjects had demonstrated mental status examination on patients. This indicates the paucity of clinical experience in the psychiatric nursing specialty. Although more than 55 colleges of nursing in Karnataka and 120 in India get clinical psychiatric nursing experience from NIMHANS, there are many colleges of nursing in India which teach essential psychiatric nursing skills such as mental status examination, psychiatric history taking, process recording, neurological and physical examination and case presentation through simulation or on normals. Only 80 of them expressed a desire to work in a psychiatric hospital. Less contact with psychiatric patients due to reduced or no clinical experience, fear of psychiatric patients' unpredictable behaviour may be the reason why majority of them (82) were not interested in working in psychiatric hospitals. Brenda Happell (2008) [8] in a study on 'The importance of clinical experience for mental health nursing – part 1: undergraduate nursing students' attitudes, preparedness and satisfaction' based on the findings suggested that clinical experience in mental health nursing experience can positively influence attitudes, preparedness for practice, and the popularity of mental health nursing.

It is heartening to observe that subjects in all three workshops had a moderately humanistic (i.e. empathetic, considerate and compassionate) opinion (Total Mean 20.1 ± 3.6) of psychiatric disorders and psychiatric nursing. Similarly subjects from the first (30.8 ± 3.6) and second workshops had a strongly professional (28.1 ± 3.6) while those from the third had a moderately professional opinion. Subjects from the first and second workshop had a moderately acceptance opinion while those from the third workshop were undecided.

It is a bit worrying to note that the opinion of the subjects from the first and second workshop was moderately rejecting while those from the third workshop were undecided. Subjects from all the three workshops had undecided custodial opinion, those from the first and third workshop had an undecided punitive opinion and subjects from the second workshop had a moderate punitive opinion about psychiatric disorders and psychiatric nursing. Negative opinions such as these can affect

patient care, increase stigma associated with psychiatric disorders and also influence career choices among the students. Such findings indicate the necessity for interventions targeted at positively impacting nurses and student nurses opinion about psychiatric disorders as well as psychiatric nursing. John Stevens, Graeme Browne and Iain Graham (2012) [9] following a cohort sample of 150 B.Sc. Nursing students from the beginning to the end of their training period, found that mental health nursing was one of the least desirable career choices for most students at the start of their course and remains so as they approach graduation. Linden & Kavanagh (2012) [10] also reported that nurses working in an inpatient setting held more socially restrictive attitudes indicating that they felt individuals with schizophrenia were dangerous and should be avoided. Louise Rushworth, Brenda Happell (2000) [11] noted that a large number of students from the experimental group indicated their reluctance to undertake a career in psychiatric nursing.

4.1 Implication

The above findings indicate that both nurse teachers and nurse administrators need to focus on interventions targeted at creating positive attitudes among students and teachers towards psychiatric disorders and psychiatric nursing. Psychiatric nurses are less in number in India. The burden of mental illness in India is enormous. As per the Government of India's National Commission on Macroeconomics and Health Report of 2005 [12], the prevalence of '*serious'* mental illness in the Indian population is at least 6.5%, which by rough estimate would be 71 million people. A WHO-AIIMS (2006) [13] report on mental health system in India stated that the availability of psychiatric nurses was 0.05/10,000 population as compared to the world figure of 2/10,000. All this indicates the need to influence nursing students' choice of psychiatric nursing as a specialty through inculcating in them a positive opinion towards psychiatric disorders and psychiatric nursing. The findings from this study need to be viewed with caution as the researchers had used purposive sampling technique and the sample size was small.

5. Conclusion

Although the Indian Nursing Council has prescribed 90 hours of theoretical psychiatric nursing and 270 hours of practical psychiatric nursing in the undergraduate program, many colleges are unable to provide clinical experience due to less number of psychiatric hospitals in India. Increased clinical experience for students and more CNE programs for nursing teachers may contribute to positive opinion of psychiatric disorders and psychiatric nursing among students and their teachers.

Acknowledgements

The first author is grateful and acknowledges the administrative support and funding from NIMHANS authorities, the subjects who participated in the study, Principals of the various colleges of nursing in Bangalore who permitted their students and teachers to participate in this research and Leema Rosemary, Glory Joseph, Anies Babu, Valsamma Mathew, Kalaivani P.L. - the nursing tutors from NIMHANS who had supported the author during the research period.

References

[1] Luty J. et al. *Effectiveness of Changing Minds Campaign Factsheets in Reducing Stigmatised Attitudes towards Mental Illness.* Psychiatric Bulletin. 2007. 31 (10) 377-381.

[2] Callaghan P. et al. *Attitudes towards Mental Illness: Testing the Contact Hypothesis among Chinese Student Nurses in Hong Kong.* Journal of Advanced Nursing. 1997. 26 (1) 33-40.

[3] Jadhav S. et al. *Stigmatization of Severe Mental Illness in India: Against the Simple Industrialization Hypothesis.* Indian Journal of Psychiatry. 2007. 49 (3) 189-194.

[4] World Health Organization, 2007: *Atlas: Nurses in Mental Health 2007.* World Health Organization, Switzerland, 75.

[5] Rinchen Pelzang. *Attitude of Nurses towards Mental Illness in Bhutan*. Journal of Bhutan Studies. Summer 2010. 22; 60-76.

[6] Bishop D. et al. *Nurses' Perceptions of Mental Health Assessment in an Acute Inpatient Setting in New Zealand: A Qualitative Study*. International Journal of Mental Health Nursing. 2003. 12 (3) 203-212.

[7] Fujika Katsuki et al. *A Study of Emotional Attitude of Psychiatric Nurses: Reliability and Validity of The Nurse Attitude Scale*. International Journal of Mental Health Nursing. 2005. 14 (4) 265-270.

[8] Brenda Happell. *The Importance of Clinical Experience for Mental Health Nursing – Part 1: Undergraduate Nursing Students' Attitudes, Preparedness and Satisfaction*. *International Journal of Mental Health Nursing.* 2008. 17 (5) 326-332.

[9] Stevens J. et al. *Career in Mental Health Still an Unlikely Career Choice for Nursing Graduates: A Replicated Longitudinal Study.* International Journal of Mental Health Nursing. 2012. DOI: 10.1111/j.1447-0349.2012.00860.x.

[10] Linden M. et al. *Attitudes of Qualified Vs. Student Mental Health Nurses towards an Individual Diagnosed With Schizophrenia.* Journal of Advanced Nursing. 2012. 68 (6) 1359-1368.

[11] Louise Rushworth et al. '*Psychiatric Nursing Was Great, but I Want To Be a "Real" Nurse': Is Psychiatric Nursing a Realistic Choice for Nursing Students?* Australian and New Zealand Journal of Mental Health Nursing. 2000. 9 (3) 128-137.

[12] National Commission of Macroeconomics and Health, Govt. of India, 2005. NCMH Background Papers - Burden of Disease in India.

[13] WHO Department of Mental Health and Substance Abuse (MSD), 2006: *WHO-AIMS report on Mental Health System in Uttarkhand, India.* WHO and Ministry of Health, Dehradun, Uttarkhand, India, 13.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2012, Volume 1, Issue 1, pp. 20-28, Article ID Med-18
ISSN 2320 - 0278

Research Article | Open Access

Burden among Caregivers of Clients with Depression – A Scientific Study

Dr. Sailaxmi Gandhi[1] and Dr. K. Thennarasu[2]

[1] Department of Nursing, NIMHANS, Bangalore, India
[2] Department of Biostatistics, NIMHANS, Bangalore, India

Correspondence should be addressed to Dr. Sailaxmi Gandhi, sailaxmi63@yahoo.com

Publication Date: 19 November 2012

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-18

Abstract Burden among 30 caregivers of in-patients with depression was assessed using the BASS (Burden assessment scale, Thara etal., 1995). **:** Data obtained was analysed using spss 16 with descriptive statistics, t test & pearsons correlation coefficient. The subjective burden levels ranged from 67-98 and Mean Burden was 84.7 ± 9.7 suggesting moderate burden perception by the caregivers. Individual domain standardized percentage scores indicated highest burden in the domain of physical & mental health (67.9), taking responsibility (67.5), patients' behaviour (63.8), and caregivers' routine (61.3). Indian families are very close knit and perhaps hence standardized percentage scores seemed to be comparatively less in the other domains such as support of patient (53.8), caregivers strategy (51.3), other relations (50.0), spouse related (46.3) and external support (35.8). Mean Burden level in female caregivers (17.3) was significantly ($p<0.05$) higher than in male caregivers (15.5). High burden levels could predispose to depression, substance abuse, anxiety, etc. in caregivers of patients with depression. This study results indicate the need for family based interventions addressing this issue.
Keywords *Burden, Caregiver, Depression*

1 Introduction

The global burden of mental disorder is increasing. Depression alone is reported to be one of the leading causes of disability worldwide, accounting for 4.4% of lost years of healthy life due to premature death or disability (DALYs) on a global basis. Researchers generally agree that mental disorder represents a burden to the caregiver and family [1]. Depression affects persons activities of daily living (basic and/or instrumental), occupational abilities, psycho-social functioning and sexual life. Quality of life is affected to a great degree. Over the past few decades, due to de-institutionalization, revolving door syndrome and community based rehabilitation, the onus of caring falls on the caregiver contributing to increased patient contact hours. The strain of caring for these persons impacts caregivers to a great extent.

2. Methodology

A descriptive cross-sectional research design was adopted to assess the level of subjective burden in 30 caregivers of in-patients with depression recruited using convenience sampling technique in a specific tertiary care neuro-psychiatric hospital at Bangalore.

Caregivers of both gender in-patients with depression were included in the study while caregivers with sensory deficits were excluded. Interview rooms in the psychiatric wards were used to collect data from the subjects using the BAS (Burden Assessment Schedule, Tara etal., 1995 and the socio-demographic profile). The BASS was developed & standardized by step wise ethnographic exploration method. The inter rater reliability is high (Kappa: 0.80). Has high content validity. Criterion validity was established by comparing with the Family Burden Schedule (Pai & Kapur, 1981) – values ranged between 0.71-0.82. There are 40 items rated on a three point scale (1-3). 1- Mild burden, 2-moderate burden & 3-severe burden. A score of 40 on the BASS would indicate no burden, 80 moderate burdens and 120 extreme burdens. There are 9 domains. Increasing scores indicate increasing levels of burden. This scale has been used many times in the Indian setting. Ethical issues such as confidentiality and anonymity were ensured and assured. Data obtained was analysed using spss 16 with descriptive statistics, t test and pearsons correlation coefficient.

Research on caregiver burden has traditionally focused on relatives of individuals with severe mental disorders like schizophrenia [2, 3, 4], bipolar disorder [5, 6], and dementia [7]. Although more disorders have been included in recent research [8], there are few studies on families of individuals suffering from anxiety and depression disorders, and it has been pointed out that there is a lack of research based on large sample sizes and control groups [6, 9, 10, 11].

Caregiver burden refers to the significant amount of strain and difficulties experienced by the caregiver or family of mentally ill people, including a range of psychological, emotional, social, physical and financial problems [12, 13, 14, 15, 16]. Studies reporting that the burden of depression is smaller or more infrequent compared to the burden of for example bipolar disorder [17], schizophrenia [10] or dementia [18] may lead to a general perception that burden is larger for the more severe psychiatric diagnoses; however, other studies comparing the burden of depression with the burden of schizophrenia [11] or dementia [19] found similar amounts of burden. Furthermore, a study of partners of people suffering from anxiety disorders, depression or schizophrenia did not find any support for a relationship between strength of burden and type of diagnosis or duration of the illness, but rather between burden and level of impairment in everyday functioning [20]. Idstad, Ask & Tambs (2010) observed that the spouses of persons with depression reported higher levels of symptoms of anxiety and depression and lower levels of subjective well-being compared to the other population. This observation may support earlier studies which found that spouses of depressed individuals are at risk of developing depression themselves [10, 20, 21, 22, 23, 24, 25]. These contradictory reports aroused interest and curiosity in the researchers which formed the base for this study.

3. Results

Table 1: *Frequency distribution of the caregivers based on socio-demographic variables (n=30)*

Variable	No. (n = 30)	Percentage
Gender		
Female	17	56.7
Male	13	43.3
Religion		
Hindu	24	80.0
Christian	3	10.0
Muslim	3	10.0
Marital status		
Single	6	20.0
Married	24	80.0
Education		
Nil	3	10.0
High school	15	50.0
UG	9	30.0
PG	3	10.0
Occupation		
Nil	3	10.1
Student	1	3.3
Housewife	10	33.3
Unskilled	0	0
Semi-skilled	7	23.3
Skilled	9	30.0

Table 2: *Frequency distribution of the study sample based on age (n = 30)*

Variable	Range	Mean ± SD
Age of Caregivers	16-67	42.9 ± 15.5
Age of patients	11-76	36.7 ± 16.3

Table 3: *Frequency distribution of the patients based on socio-demographic variables*

Sample Characteristics	f(n = 30)	Percentage
Ward		
Closed wards	2	6.7
Open wards	22	73.3
Child psychiatric wards	3	10.0
ICU	3	10.0
Marital Status		
Single	11	36.7
Married	18	60.0
Divorced	1	3.3
Gender		
Male	19	63.3
Female	11	36.7
Income		
< 1700 (Non-paying)	10	33.3
1700-5000	11	36.7
>5000	9	30.0

Table 4: *Frequency distribution of the patients based on Illness Profile (n = 30)*

Variables	F	Percentage
Diagnosis		
Severe Depression	15	50.0
Moderate Depression	6	20.0
RDD	9	30.0
Episode		
First	9	30.0
Second	10	33.3
Multiple	11	36.7
Number of hospitalizations		
First	10	33.3
Second	12	40.0
More than 2	8	26.7
Caregivers perception of reason for relapse		
Poor treatment response	10	33.3
Non-compliance	5	16.7
Stress	15	50.0

Table 5: *Level of Burden in Caregivers (Domain wise) (n=30)*

BASS Domains	Range (BASS)	Range (Subjects)	Mean ± SD	Mean percentile
Spouse related	4-12	4-11	7.7 ± 2.1	46.3
Physical & Mental Health	7-21	11-20	16.5 ± 2.1	67.9
External Support	6-18	6-17	10.3 ± 2.3	35.8
Caregiver routine	4-12	6-12	8.9 ± 1.6	61.3
Support of Patient	4-12	5-11	8.3 ± 1.4	53.8
Taking responsibility	4-12	7-11	9.4 ± 1.2	67.5
Taking responsibility	4-12	7-11	9.4 ± 1.2	67.5
Other relations	3-9	3-9	6.0 ± 1.8	50.0
Patient's Behaviour	4-12	6-12	9.1 ± 1.6	63.8
Caregiver strategy	4-12	4-11	8.1 ± 1.4	51.3
Total Burden Score	40-120	67-98	84.7 ± 9.6	55.8

Table 6: *Gender wise Comparison of Level of Burden in Caregivers (n=30, *p<0.05)*

BASS Domains	Mean ± SD	t	p value
Spouse related			
Male (n=12)	7.9 ± 1.7	0.454	.654
Female (n=15)	7.5 ± 2.5		
Physical & Mental Health			
Male (n=13)	15.5 ± 1.9	- 0.2.464*	.020
Female (n=17)	17.3 ± 1.9		
External Support			
Male (n=13)	9.8 ± 2.1	-.854	.400
Female (n=17)	10.6 ± 2.5		
Caregiver routine			
Male (n=13)	9.0 ± 1.3	.294	.771
Female (n=17)	8.8 ± 1.8		
Support of Patient			
Male (n=13)	8.5 ± 1.9	.530	.600
Female (n=17)	8.2 ± 1.0		
Taking responsibility			
Male (n=13)	9.3 ± 1.3	-.510	.614
Female (n=17)	9.5 ± 1.1		
Other relations			
Male (n=13)	5.8 ± 1.7	-.614	.544
Female (n=17)	6.2 ± 1.8		
Patient's Behaviour			
Male (n=13)	8.5 ± 1.8	-1.655	.109
Female (n=17)	9.5 ± 1.3		
Care giver strategy			
Male (n=13)	7.84 ± 1.07	-.976	.337
Female (n=17)	8.35 ± 1.62		
Burden (Total)			
Male (n=12)	82.58 ± 9.59	-1.041	.308
Female (n=15)	86.47 ± 9.66		

Table 7: *Co- relation of Level of Burden in Caregivers with age & number of hospitalizations (n=30, * p<0.05, ** p<0.01)*

Variable	Spouse related	Physical & mental health	External support	Caregiver routine	Support of patient	Taking responsibility	Other relations	Patient's behavior	Caregiver's strategy	Total
Age of Patient	.45*	-.001	.078	-.23	.24	.07	.18	-.29	.06	.14
No. of Admission	.14	.07	-.06	.14	.41*	.23	.00	.16	.10	.20

Table 8: *Co- relation between Domain scores of BASS (n=30, * p<0.05, ** p<0.01)*

Variable	Spouse related	Physical & mental health	External support	Caregiver routine	Support of patient	Taking responsibility	Other relations	Patient's behavior	Caregiver's strategy	Total
Spouse related	1	.11	.27	.01	.15	.35	.41*	.11	.18	.50*
Physical & Mental Health	.11	1	.47*	.43*	.08	.27	.32	.46*	.50*	.69*
External support	.27	.47*	1	.47**	.13	.51**	.33	.33	.39*	.78**
Caregiver Routine	.01	.43*	.47**	1	-.12	.30	.24	.37*	.39*	.61**
Patient support	.15	.08	.13	-.12	1	.31	-.07	.36	.014	.30
Taking responsibility	.35	.27	.51**	.30	.31	1	.32	.57**	.30	.68**
Other relations	.41*	.32	.33	.24	-.07	.32	1	.14	.30	-55**
Patient behavior	.11	.46*	.33	.37*	.36	.57**	.14	1	.40*	.67**
Caregiver strategies	.18	.50**	.39*	.39*	.01	.30	.30	.40*	1	.65**
Total Burden	.49**	.69**	.78**	.61**	.30	.68**	.55**	.67**	.65**	1

4. Discussion

While 43.3% of the caregivers were males, 56.7% were females; 80% were married and 20% were single; 80% were Hindus, 10% were Muslims and 10% Christians. While 50% of the patients were diagnosed as BPAD with severe depression, the rest 50% were diagnosed as RDD & moderate depression. The mean age of the patients was 36.7 ± 16.3. By the year 2020, depression is projected to reach second place in the ranking of Disability Adjusted Life Years (DALY) calculated for all ages. Today, depression already is the second cause of DALYs in the age category 15-44 years [31]. 30% of the patients had first episode of the illness and for 33.3% of them this was the first admission. Caregivers age ranged from 16-67 years with Mean age of 42.9 ± 15.5 reflecting that caregivers were in their most productive ages. Mariann Idstad, Helga Ask and Kristian Tambs [27] reported that the caregivers Mean age was 53.4 years (SD = 14.42) for men and 50.8 years (SD = 14.26) for women. The subjective burden levels ranged from 67-98 and Mean Burden was 84.7 ± 9.7. A score of 40 on the BASS would indicate no burden, 80 moderate burden and 120 extreme burden. Increasing scores indicate increasing levels of burden.

Individual domain standardized percentage scores indicated highest burden in the domain of physical & mental health (67.9), taking responsibility (67.5), patients' behaviour (63.8), and caregivers' routine (61.3). Indian families are very close knit and perhaps hence standardized percentage scores seemed to be comparatively less in the other domains such as support of patient (53.8), caregivers strategy (51.3), other relations (50.0), spouse related (46.3) and external support (35.8). Research on caregiver burden noted that spouses of depressed persons reported higher levels of symptoms of anxiety and depression and lower levels of subjective well-being [27]. In a review [32] on Psychiatric symptoms in caregivers of patients with bipolar disorder, it was observed that among the 24 papers that were analyzed, 46% of caregivers reporting depression and up to 32.4% reporting mental health service use. Mean Burden level in female caregivers (17.3) was significantly ($p<0.05$) higher than in

male caregivers (15.5). Similar findings of gender differences with more burden perception by female caregivers have been reported in other studies [27, 29]. There is a correlation between the patient's age and spouse related burden as well as between number of hospital admissions and burden related to support of patient. Leinonen E., Korpisammal L., Pulkkinen L.M., Pukuri T. reported that no correlation was found between stress of the spouse and her or his own age or the age of the patient either within the depressive or within the demented group [30]. High burden levels could predispose to depression, substance abuse, anxiety, etc. in caregivers of patients with depression. This study results indicate the need for family based interventions addressing this issue.

4.1 Methodological Considerations

The subjects for this study were selected from a clinical population. This may have contributed to a higher level of burden perception since patients are admitted only in the acute stage of illness. Small sample size and convenience sampling technique detract from the generalizability of the findings and necessitate that the findings be treated with caution. Research can be conducted on larger sample sizes, in the community, different cultures and also compare caregiver burden between care recipients' of different mental illness.

5. Conclusion

Depression is rapidly becoming a millennium illness that has to be reckoned. In India, especially, nuclear family pattern is becoming a vogue today. Caregivers of persons with mental illness were supported by the joint family system in earlier days. However, today caregivers are more burdened because of reduced family support owing to the nuclear family pattern and this can contribute to depression, anxiety and raised stress levels. Nurses can help family caregivers to identify their negative experiences about care-giving and can help them reflect upon their coping strategies to find balance in their situation. There is a need for psycho-social interventions addressing caregiver burden issues.

Acknowledgements

The authors acknowledge the contributions of the caregivers who participated in the study and the administrative authorities who permitted data collection.

References

[1] Aadil Jan Shah et al. *Psychological Distress in Carers of People with Mental Disorders.* 2010. BJMP. 3 (3) a327.

[2] Rose L.E. *Families of Psychiatric Patients: A Critical Review and Future Research Directions*. Archives of Psychiatric Nursing. 1996. 10 (2) 67-76.

[3] Awad A.G. et al. *The Burden of Schizophrenia on Caregivers: A Review*. Pharmacoeconomics. 2008. 26 (2) 149-162.

[4] Fadden G. et al. *The Burden of Care: The Impact of Functional Psychiatric Illness on the Patient's Family.* The British Journal of Psychiatry. 1987. 150; 285-292.

[5] Ogilvie A.D. et al. *The Burden on Informal Caregivers of People with Bipolar Disorder*. Bipolar Disorders. 2005. 7; 25-32.

[6] Steele A. et al. *Psychiatric Symptoms in Caregivers of Patients with Bipolar Disorder: A Review*. Journal of Affective Disorders. 2009. 121(1-2) 10-21.

[7] Cuijpers P. et al. *Depressive Disorders in Caregivers of Dementia Patients: A Systematic Review.* Aging & Mental Health. 2005. 9 (4) 325-330.

[8] Schulze B. et al. *Caregiver Burden in Mental Illness: Review of Measurement, Findings and Interventions in 2004-2005*. *Current Opinion in Psychiatry.* 2005. 18 (6) 684-691.

[9] Highet N. et al. *Identifying Depression in a Family Member: The Carers' Experience*. Journal of Affective Disorders. 2005. 87 (1) 25-33.

[10] Van Wijngaarden B. et al. *Family Caregiving in Depression: Impact on Caregivers' Daily Life, Distress, and Help Seeking.* Journal of Affective Disorders. 2004. 81 (3) 211-222.

[11] Van Wijngaarden B. et al. *Caring for People with Depression or with Schizophrenia: Are the Consequences Different?* Psychiatry Research. 2009. 169 (1) 62-69.

[12] Baronet A.M. *Factors Associated with Caregiver Burden in Mental Illness: A Critical Review of the Research Literature*. Clinical Psychology Review. 1999. 19 (7) 819-841.

[13] Loukissa D.A. *Family Burden in Chronic Mental Illness - A Review of Research Studies*. Journal of Advanced Nursing. 1995. 21 (2) 248-255.

[14] Kaufer D.I. et al. *Reduction of Caregiver Burden in Alzheimer's disease By Treatment with Galantamine.* CNS Spectrums. 2005. 10 (6) 481-488.

[15] Magliano L. et al. *Family Burden in Long-Term Diseases: A Comparative Study in Schizophrenia Vs. Physical Disorders*. Social Science & Medicine. 2005. 61 (2) 313-322.

[16] Schene A.H. *Objective and Subjective Dimensions of Family Burden - Towards an Integrative Framework for Research.* Social Psychiatry and Psychiatric Epidemiology. 1990. 25 (6) 289-297.

[17] Chakrabarti S. et al. *Extent and Determinants of Burden among Families of Patients with Affective Disorders.* Acta Psychiatrica Scandinavica. 1992. 86 (3) 247-252.

[18] Rosenvinge H. et al. *Demented and Chronic Depressed Patients Attending a Day Hospital: Stress Experienced By Carers*. International Journal of Geriatric Psychiatry. 1998. 13 (1) 8-11.

[19] Yeatman R. et al. *Is Caring For Elderly Relatives with Depression As Stressful As Caring For Those with Dementia? A Pilot Study in Melbourne*. International Journal of Geriatric Psychiatry. 1993. 8 (4) 339-342.

[20] Wittmund B. et al. *Depressive Disorders in Spouses of Mentally Ill Patients*. Social Psychiatry and Psychiatric Epidemiology. 2002. 37 (4) 177-182.

[21] Benazon N.R. *Predicting Negative Spousal Attitudes toward Depressed Persons: A Test of Coyne's Interpersonal Model.* Journal of Abnormal Psychology. 2000. 109 (3) 550-554.

[22] Coyne J.C. et al. *Living With a Depressed Person*. Journal of Consulting and Clinical Psychology .1987. 55; 347-352.

[23] Fadden G. et al. *Caring and Its Burdens - A Study of the Spouses of Depressed Patients*. British Journal of Psychiatry. 1987. 151; 660-667.

[24] Jacob M. et al. *Recurrent Depression - An Assessment of Family Burden and Family Attitudes.* Journal of Clinical Psychiatry. 1987. 48 (10) 395-400.

[25] Muscroft J. et al. *The Impact of Depression on Caregivers and Other Family Members: Implications for Professional Support*. Counselling Psychology Quarterly. 2000. 13 (1) 117-134.

[26] Scazufca M. et al. *Caregiver Burden in an Elderly Population with Depression in Sao Paulo, Brazil.* Social Psychiatry and Psychiatric Epidemiology. 2002. 37 (9) 416-422.

[27] Mariann Idstad et al. *Mental Disorder and Caregiver Burden in Spouses: The Nord-Trøndelag Health Study.* BMC Public Health. 2010. 10; 516. doi:10.1186/1471-2458-10-516.

[28] Aadil Jan Shah et al. *Psychological Distress in Carers of People with Mental Disorders*. BJMP. 2010. 3 (3) a327.

[29] Pinquart M. et al. *Gender Differences in Caregiver Stressors, Social Resources, and Health: An Updated Meta-Analysis.* Journals of Gerontology Series B: Psychological Sciences and Social Sciences .2006. 61 (1) 33-45.

[30] Leinonen E. et al. *The Comparison of Burden between Caregiving Spouses of Depressive and Demented Patients*. International Journal of Geriatric Psychiatry. 2001. 16 (4) 387-93.

[31] M.S. Reddy. *Depression: The Disorder and the Burden*. Indian Journal of Psychological Medicine. 2010. 32 (1) 1-2.

[32] Steele A. et al. *Psychiatric Symptoms in Caregivers of Patients with Bipolar Disorder: A Review*. Journal of Affective Disorders. 2010. 121 (1-2) 10-21.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 29-35 Article ID Med-205
ISSN: 2320 – 0278

Case Study | Open Access

A Study to Assess the Effectiveness of Video Assisted Teaching Module (VATM) on Knowledge Regarding Care of Newborn Baby under Photo Therapy among Female Health Workers in Selected Hospital, Bhubaneswar, Odisha

Sinmayee Kumari Devi and Nirupama Jena

Department of Obstetrics and Gynecological Nursing, Lord Jagannath Mission College of Nursing, Mancheswar, Bhubaneswar, Odisha, India

Correspondence should be addressed to Sinmayee Kumari Devi, Sinmayee.devi@gmail.com

Publication Date: 14 March 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-205

Abstract A quasi experimental study with pre and posttest without control group design was undertaken on 30 female health workers of Capital Hospital, Bhubaneswar, Odisha selected by purposive sampling technique. The data collected by multiple choice close ended questionnaire and analyzed by using descriptive and inferential statistics. Area wise posttest highest mean percentage is 90% with mean (2.7±0.46) for area “Indication and contraindication of Phototherapy” and (3.6±0.49) for area “Techniques of Phototherapy”. The lowest mean percentage in posttest is 76.66% with mean score (2.3±0.53) for area “Types of Phototherapy”. Further effectiveness varies from 56.69% to 73.5%. Item wise comparison shows that there is effectiveness of VATM in increasing knowledge of the female health workers on care of the newborn baby under Phototherapy. A significant difference between pre and posttest knowledge was found ($t=25.48$, $p\leq0.05$). No significant association was found between posttest knowledge and demographic variable.
Keywords *Newborn Baby; Phototherapy; Female Health Worker*

1. Introduction

“We bring children into the world, but we are not committed to the tremendous time & effort which takes to nurture, train & teach them and they are the future citizens of this world & our legacy.” (By S.R. Covey)

The main form of therapy for neonates with hyperbilirubinemia is phototherapy. It is believed that this light in the blue range acts to decompose bilirubin by the process of oxidation, phototherapy is effective in preventing or reducing an increase in bilirubin levels. When the large surface area is exposed to the light phototherapy produces its greatest effect, so the infant must be unclothed during

the treatment. In order to prevent chilling, an external means of maintaining normal body temperature must be used. The vital signs are taken at least 4 hours to monitor the infant temperature [1].

Phototherapy is a non-invasive method to bring down the bilirubin level by exposing the skin of the baby to blue or cool white light. Light converts the bilirubin to non-toxic water soluble compounds which is excreted in urine & stool. Baby is undressed completely but diaper is kept onto protect the gonads. Eyes are covered to prevent damage to the retina. Nude baby is kept under the light source at a distance of 45c.m. the baby is turned every 2 hours or after each feed for maximum exposure. Phototherapy is stopped when severe bilirubin returns to a safe value as per unit protocol. Phototherapy is a primary treatment in neonates with un-conjugated hyperbilirubinemia. Proper nursing care should be given to enhance its effectiveness & to minimize the adverse effects & its complications [2].

WHO reveals the source of incidence of hyperbilirubinemia is 50 to 60,000 neonates reported. 2% has total serum bilirubin level over 20 mg/dl; the total serum bilirubin level in normal range is 0.3 to 1 mg/dl. 0.15% had levels over 25mg/dl & 0.01% had over 30mg/dl. Each year in India over 1 million newborn dies before they complete their first month of life, accounting for 30% of the world's neonatal death. Neonatal mortality rate is higher in rural areas. Orissa has the highest neonatal mortality rate of 61 per 1000 live births [3-4].

In United States 4.3% of 47,801 infants had total serum bilirubin (TSB) levels in a range in which phototherapy was recommended by the 2005 American Academy of Pediatrics (AAP) guidelines suggests considering phototherapy [5-6].

Nurses play a very important role in caring the baby during phototherapy. Of all the care givers in the NICU, nurses usually spend the most time at the baby's bedside. So that I felt that there is a need to provide more knowledge regarding the care of newborn during phototherapy among female health workers and decided to administer a VATM among female health workers regarding care of newborn during phototherapy.

1.1. Objectives

1) To assess the existing of knowledge of female health workers regarding care of the newborn baby under phototherapy.
2) To evaluate the effectiveness of VATM on care of the newborn baby under phototherapy among female health workers.
3) To compare the pre and posttest knowledge score with their selected demographic variables.
4) To find out the association between posttest knowledge score with their selected demographic variable.

1.2. Hypothesis

H_{01}

There will be no significant association between posttest knowledge scores among female health workers regarding care of newborn baby under phototherapy with their selected demographic variables.

H_{02}

There will be no significant difference between pre and posttest knowledge score among female health workers on care of newborn baby under phototherapy.

2. Materials and Methods

The research design used for this study was Quasi-experimental in nature. The study was conducted at Capital Hospital, Bhubaneswar, Odisha. The sample included 30 female health workers on the basis of inclusion & exclusion criteria were selected. Purposive sampling technique was used for this study. The tool used for the study was the structured knowledge questionnaire consisting of section I (Socio-demographic variables such as age, year of professional experience, duration of experience of working in neonatal unit, previous exposure to care of newborn baby under phototherapy & section II (consisting of 40 items related to knowledge regarding care of newborn baby under Phototherapy). The content validity of structured questionnaire was ensured by submitting the tool to the expert in the field of pediatricians for content validation. Pilot study was conducted (who were not included in the study) at District Head Quarter Hospital, Khordha, Odisha. The reliability of tool was computed by applying split half technique & was calculated by Karl Pearson's coefficient of correlation formula, which was found 0.86.

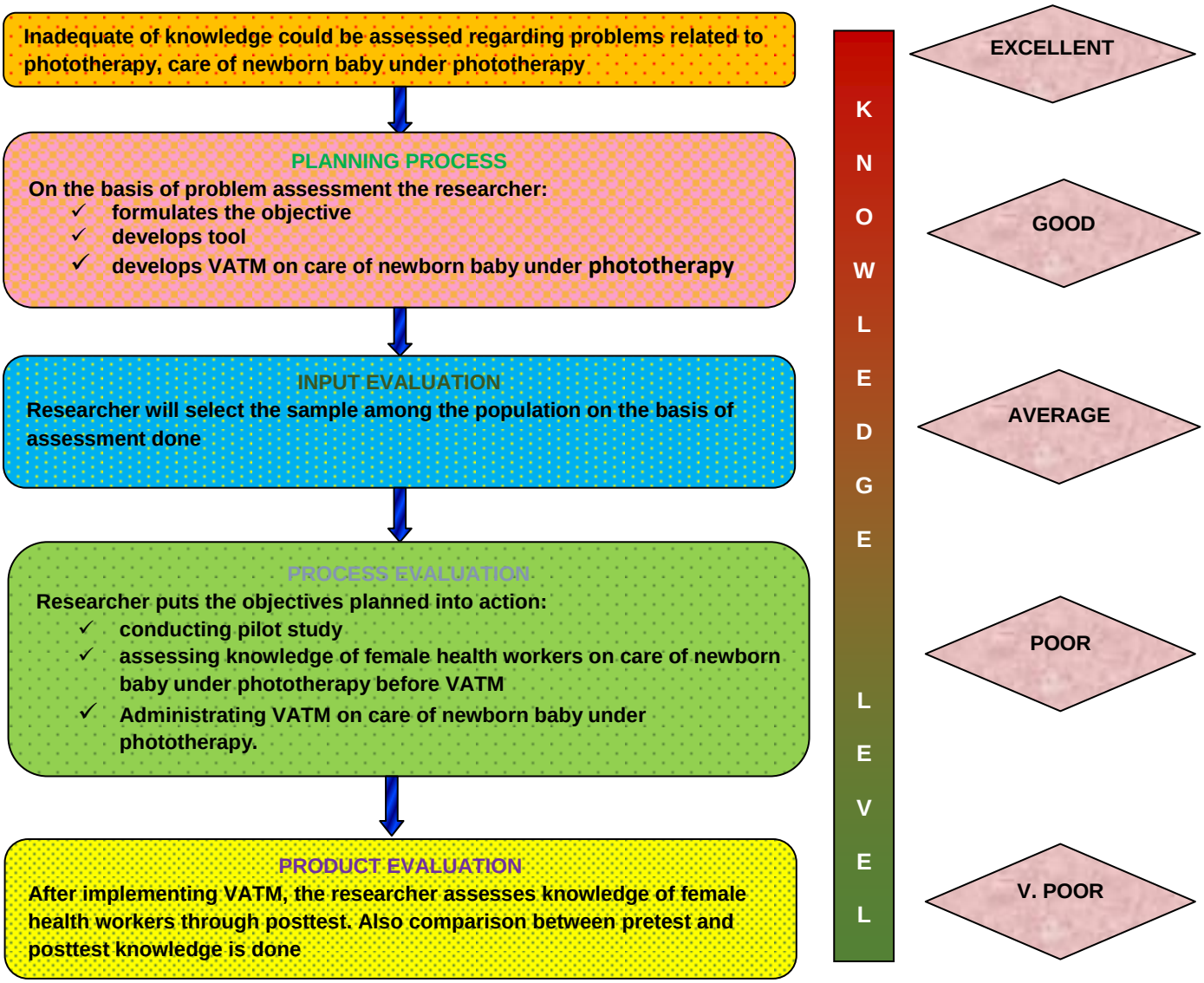

Figure 1: *Conceptual Framework based on Modified Deniel Stuffle Beam's Cipp Model (2002)*

3. Results and Discussion

Distribution of demographic variable shows that maximum of female health workers 12 (40%) were in the age group 30-34 years and majority of sample 15 (50%) samples had >5 year experience in workplace. 17 (57%) had <1year experience in paediatric unit & 13 (43%) had no experience in pediatric unit where as in this study majority of sample 17 (57%) samples had no exposure to care of newborn baby under Phototherapy & 13 (43%) of samples are exposure to care of newborn baby under Phototherapy.

Figure 2 the level of knowledge of the staff nurses reveals that in pretest, (53%) of the female health workers had V. POOR knowledge, (37%) of them had POOR knowledge & (3%) them had AVERAGE knowledge. But in posttest majority (93%) of the female health workers have EXCELLENT knowledge & (7%) have GOOD knowledge.

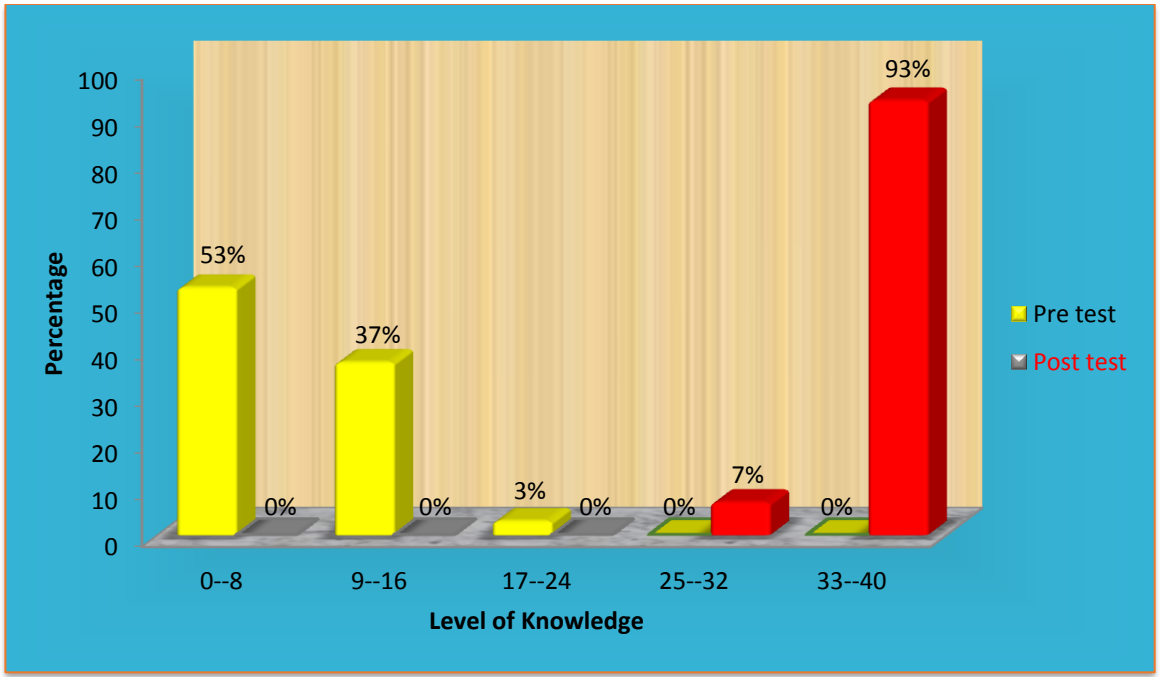

Figure 2: *Comparison of Level of knowledge of Pre and Post Test Knowledge Scores of FHWs Regarding Care of Newborn Baby under Phototherapy*

Table 1: *Frequency and Percentage Distribution of FHW According to their Demographic Variable*

Demographic Variable	Frequency	% Distribution
Age(in year)		
20-24yrs	0	0%
25-29yrs	8	27%
30-34yrs	12	40%
>35yrs	10	33%
Year of Prof. Experience		
<1yrs	0	0%
1-3yrs	5	17%
3-5yrs	10	33%
>5yrs	15	50%
Duration of Exp. In Neonatal Unit		
0	17	57%
<1yrs	13	43%

Previous Exposure To Care of the Newborn Baby Under Phototherapy		
yes	13	43%
No	17	57%

***Table 2**: Overall and Area Wise Comparison of Mean, SD, and Mean Percentage of Pre & Posttest Knowledge Scores of Female Health Workers Regarding Care of Newborn Baby Under Phototherapy*

Sl. No.	Area	Pre test			Post test			Difference in Mean%
		Mean	SD	Mean%	Mean	SD	Mean%	
1	General information on phototherapy	**4.2**	**1.73**	**30**	**12.56**	**0.93**	**89.71**	**59.71**
2	Indication and contradiction	0.9	0.66	30	2.7	0.46	90	60
3	Types of photo therapy	0.5	0.68	16	2.3	0.53	76.66	60.66
4	Technique of phototherapy	0.66	0.80	16.5	3.6	0.49	90	73.5
5	Care of newborn under phototherapy	**5.13**	**1.88**	**32.06**	**14.2**	**0.61**	**88.75**	**56.69**
	Overall	**11.4**	**4.91**	**28.5**	**35.36**	**1.58**	**88.4**	**59.9**

Table 2 Area wise posttest highest mean percentage is 90% with mean (2.7±0.46) for area “Indication and contraindication of Phototherapy” and (3.6±0.49) for area “Techniques of Phototherapy”. The lowest mean percentage in posttest is 76.66% with mean score (2.3±0.53) for area “Types of Phototherapy”. Further effectiveness varies from 56.69% to 73.5%. It is observed that overall mean score during posttest was (35.364±1.58) which is 88.4% of the total score and the difference in mean percentage between pre and posttest knowledge score was 59.9% revealing the effectiveness of VATM for all the areas.

***Table 3:** Area Wise Comparison between Pre and Posttest Knowledge Score among FHWS Regarding Care of the Newborn Baby under Phototherapy*

Sl. No.	Area	‘t’ Value	Level of significant
1	General information on phototherapy	8.27	Highly significant
2	Indication and contradiction	12.85	Highly significant
3	Types of photo therapy	12	Highly significant
4	Technique of phototherapy	17.29	Highly significant
5	Care of newborn under phototherapy	25.19	Highly significant
	Overall	25.2	Highly significant

(df = 49) (Table value=2.00), (p<0.05)

Table 3: Paired‘t’ test was calculated to assess the significant difference between the area wise score values of pretest and posttest. Thus, the difference observed in the mean score value of pretest and posttest were true difference and not by chance. Hence stated null hypothesis is rejected (p<0.05) and statistical hypothesis is accepted it can be interpreted that VATM was effective for all the areas.

***Table 4:** Association between Posttest Knowledge Scores of FHWs on Care of Newborn Baby under Phototherapy with Their Demographic Variable*

Sl. No.	Variables	Chi-square Value	df	Table Value	Level of Significance
1	Age	1.89	3	7.82	Not significant
2	Experience	3.13	3	7.82	Not significant
3	Experience in neonatal unit	0.8	3	7.82	Not significant
4	Prior exposure to educational programme related to care of baby under phototherapy	0.8	1	3.84	Not significant

(p>0.05)

Table 5: From the Chi square test it interpreted that there was no significant association between knowledge scores among the health worker Female in posttest when compared to relationship with the demographic variable ($p>0.05$). Hence the difference in mean score related to the demographic variables only by chance and not true hence the null hypothesis is accepted.

4. Implication

4.1. Nursing Practice

- ✓ The content of Video Assisted Teaching Module will help the FHWs for reinforcing their knowledge on care of newborn baby under phototherapy.
- ✓ The FHWs can utilize this VATM in their work field.

4.2. Nursing Education

- ✓ The nurse educator can use the video assisted teaching module to teach the students about care of the newborn baby under phototherapy.
- ✓ The finding will help the nursing faculty to give more importance for planning and organizing VATM to improve the knowledge of FHWs so that they can implement in the clinical practice.

4.3. Nursing Administration

- ✓ With technological advances and ever growing challenges of nursing, the nurse administrators have responsibility to provide the nurses with substantive educational opportunities.
- ✓ Nursing administrator should provide necessary facilities and opportunities for nursing students and staffs.

4.4. Nursing Research

- ✓ The findings can be utilized as evidence based practice in clinical practice beneficial for pediatric nursing students and staffs.
- ✓ A large scale study can be done for replication to standardize the video assisted teaching module on care of newborn baby under phototherapy.

5. Recommendations

Keeping in view the findings of the present study, the following recommendations were made:

- ✓ A similar study on a large sample may help to draw more definite conclusion and make generalization.
- ✓ A similar study can be conducted among staff nurses.

6. Conclusion

Based on the findings of the study there was increase in knowledge after administration of Video Assisted Teaching Module (VATM). Thus, it was inferred that VATM was the best teaching strategy to improve the knowledge of the FHWs on care of the newborn baby under Phototherapy.

References

[1] Meharban Singh, Vinod K. Paul, Ashok K. Deorari, 2007: *Indian Academy of Paediatrics.* 3rd Ed., New Delhi: Jaypee Brothers Medical Publishers. 68.

[2] Marlow, R., Dorothy and Redding A. Barbara, 2001: *Text Book of Pediatric Nursing.* 6th Ed., W.B. New Delhi: Saunders Company, Harcourt India. 415-416.

[3] Meharban Singh, 2009: *Essential Paediatrics for Nurses.* 1st Ed. New Delhi: Sagar Publications. 257.

[4] Meltonk Akinbi, H.T., 1999: *Neonatal Jaundice. Strategies to Reduce Bilirubin–Induced Complications.* Postgrad Med. 167-168; 171-174; 177-178.

[5] British Columbia Reproductive Care Program. Jaundice in the Healthy Term Newborn. 2004. 1.

[6] Donna L. Wong, 2005: *Nursing Care of Infants and Children.* 6th Ed., Missouri: Mosby Publication. 276-277.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 36-40 Med-208
ISSN: 2320 – 0278

Case Study | Open Access

Nursing Students Knowledge on Sports Brain Injury Prevention

Umadevi A.K. and Gandhimathi M.

Department of OBG, RMCON, Annamalai University, Annamalai Nagar, Chidambaram, Tamil Nadu, India

Correspondence should be addressed to Umadevi A.K., umadeviak@yahoo.co.in

Publication Date: 19 March 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-208

Abstract A descriptive study was conducted with the aim of to assess the knowledge on sports brain injury prevention among nursing students at a selected nursing college, Bangalore, Karnataka. Quantitative research approach and non-experimental exploratory research design was used to accomplish the stated objective. The investigator selected a sample of 146 female nursing students using a convenient sampling technique. The data were collected by using self-administered knowledge questionnaire. Descriptive statistical analysis was performed by using SPSS-IBM 21. Results were calculated by using P value < 0.01. The result revealed that out of 146 nursing students only 2 (1.4%) had adequate knowledge score (>75%), 93 (63.7%) students had in adequate knowledge score (<50%). This is concluded from the result of this study that nursing students need to have education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.
Keywords *Nursing Students Knowledge; Sports Trauma; Brain Injury Prevention*

1. Introduction

“Health is Wealth” and “Prevention is better than cure”. Health is an essential factor for a happy and contented life. Advances in nursing science and nursing research focus on violence, injury and human safety [5].

Head is the top part of the human body containing brain, mouth and sense organs. It is regarded as the seat of intellect, the ornamental top of a pillar. Accident is the principle cause of head injury. It is the leading cause of emergency room visits and hospitalization [5].

According to the Centers for Disease Control and Prevention (CDC) there are 1.7 million documented TBIs each year, with estimates closer to around 3.8 million. About two third are of those younger than 30 years [2].

Traumatic Brain Injury (TBI) has received increased attention, both in the medical literature and social media, particularly in the field of sports. There are 1.7 million documented TBIs annually, with estimates closer to around 3.8 million [1], 173,285 of which are sports- and recreation-related TBIs among children and adolescents. As the number of participants in youth sports continues to grow, the incidence of brain injury is proportionally increasing as well. The activities most commonly associated with TBI-related ED visits included bicycling and football; followed by playground activities, basketball, and soccer [2].

The study aims to assess the knowledge on sports brain injury prevention among nursing students at a selected nursing college, Bangalore, Karnataka.

2. Materials and Methods

Research Approach and Research Design

For the present study quantitative research approach and non-experimental exploratory research design were used to accomplish the stated objectives.

Attribute Variable

Age, type of programme, year of study and source of information.

Dependent Variable

Knowledge of nursing students regarding sports brain injury prevention.

Research Setting

Kempegowda College of Nursing, Bangalore, Karnataka.

Sample and Sampling Technique

The investigator selected a sample of 146 female year nursing students using a convenient sampling technique.

Inclusion Criteria

Students who were willing to participate.

Exclusion Criteria

Students who were absent on the day of data collection.
Students who already had head injury.
Students who had participated in pilot study.

Description of Tool

The tool consisted of following two parts:

Part I: Socio Demographic Characteristics

This part consisted of 10 items i.e. age, type of programme, year of study, family income, source of information etc.

Part II: Knowledge Questionnaire Related to Sports Brain Injury Prevention

This part consisted of 30 self-administered structured multiple choice questions. Each question had four options. Each correct answer carried one mark and wrong answer carried zero mark.

Reliability of Tool

The reliability of tool was established by split half method and was calculated using Karl Pearson's coefficient of correlation and Spearman's Brown Prophecy formula, r'=0.79.

Data Collection Procedure

The data was collected by using self-administered structured knowledge questionnaire regarding sports brain injury prevention.

Ethical Consideration

Prior to the data collection, formal written permission was taken from the Principal, Kempegowda College of Nursing, Bangalore. Informed written consent was taken from the nursing students.

3. Statistical Analysis

Statistics were performed by using SPSS-IBM 21. Results were calculated by using P-value <0.01. Chi-square was used to associate the knowledge score with selected demographic variables. Frequency and percentage distribution was used to analyse the demographic variables. Mean and SD was used to assess the knowledge.

4. Results

Table 1: *Distribution of Demographic Characteristics*

Demographic Variables		Frequency	%
Age	18 Yrs- 25 Yrs	146	100
Course of Study	Basic B.Sc.	133	91.1
	Post B.Sc.	13	8.9
Year	I – Year	32	21.9
	II- Year	37	25.3
	III- Year	29	19.9
	IV- Year	48	32.9
Mother Tongue	Tamil	1	0.7
	Telugu	5	3.4
	Kanata	29	19.9
	Malayalam	103	70.5
	Hindi	8	5.5
Religion	Hindu	49	33.6
	Muslim	0	0
	Christian	97	66.4
Family Income	Rs. 0 to 10,000	43	29.5
	Rs. 10,001 to 20,000	75	51.4

	Rs. 20,001 to 30,000	28	19.2
Place of residence	Hosteller	119	81.5
	Days Scholar	27	18.5
Previous exposure to education	Yes	16	11.0
	No	130	89.0
Family History of TBI	Yes	0	0
	No	146	100
Engaged in sports actively	Yes	46	32.5
	No	100	68.5

Table 1 depicts majority of students 133 (91.1%) were from Basic B.Sc. (N) programme. Among 133 majority 48 (32.9%) of them were 4th year B.Sc. students, 16 (11%) of them had previous exposure to sports brain injury prevention education. Whereas 46(32.5%) students were engaged in sports activity such as throw ball, table tennis, shuttle, swimming and athletic games.

Table 2: *Level of Knowledge*

Level of Knowledge	No. of Frequency	Percentage
Inadequate knowledge	93	63.7
Moderately knowledge	51	34.9
Adequate knowledge	2	1.4
Total	146	100

Table 2 reveals the knowledge score of nursing students regarding sports brain injury prevention. Out of 146 students 2(1.4%) had adequate knowledge, 51(34.9%) had moderately adequate knowledge and 93(63.7%) had inadequate knowledge.

Association with the level of knowledge of students and their selected demographic variables:

Among the demographic variables analyzed in this study there was a significant association at p 0.05 between the course of study, year of study, previous exposure to education and students engaged in sports actively.

Thus it shows that majority of nursing students need to have education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.

5. Discussion

The present study confirms that the overall knowledge level of nursing students was significantly low with the mean score of 63.7%.

The study findings are supported by a study conducted on Effect of Structured Teaching Programme on First Aid and Emergency Management of Head Injury in Salem. The result revealed that the mean of the overall total knowledge score was 93.33% in pre test and there was a significant association between previous knowledge and level of knowledge of students [5].

The research hypothesis H_2 stated in the study is accepted since there was a significant association between the level of knowledge of students and their selected demographic variables.

The results of the study suggest that there is a need for education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.

6. Limitation of the Study

a. Duration of the study was short.
b. There was no follow up.

7. Recommendations

Based on the present study findings it is recommended that;

a. Large scale replica study can be conducted.
b. Comparative study can be conducted.
c. Structured teaching programme can be implemented and knowledge can be assessed.

8. Conclusion

From this study it was concluded that, increase knowledge of students will improve their skill in patient care. Education is the key for development of excellent nursing practice. Student nurses need to give strong emphasis on giving incidental teaching in their clinical area. The hospital can provide timely information and training to the nurses to update their knowledge and encourage them to use the Brain Trauma Foundation recommendations in their day to day nursing practice.

References

[1] Debra L. Ryan. *Caring For Patients with Traumatic Brain Injuries: Are You Up To the Challenges?* American Nurse Today. 2009. 23.

[2] Adnan A. Hyder and Prasanthi Puvanachandra. *The Burden of TBI in ASIA: A Call for Research*. Pak J Neurological Science. 2009. 4 (1) 27-32.

[3] Esther Bay and Samuel. *Mild Traumatic Brain Injury: An Update for Advanced Practice Nurses*. Journal of Neuro Science Nursing. 2007. 39 (1) 43-51.

[4] Adnan A. Hyder and Prasanthi Puvanachandra et al. *The impact of TBI: A Global Perspective*. Neuro Science Rehabilitation. 2007. 22; 341-353.

[5] Maragatham, S. et al. *Effect of Structured Teaching Programme on First Aid and Emergency Management of Head Injury*. The Nursing Journal of India. 2011. CII (12) 293-294.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 41-48 Med-222
ISSN: 2320 – 0278

Research Article | Open Access

Primipara Mother's Knowledge, Attitude and Practice of Breastfeeding

Seena Girish and M. Gandhimathi

Elite College of Nursing, Koorkenchery, Thrissur, Kerala, India
Rani Meyyammai College of Nursing, Annamalai University, Tamilnadu, India

Correspondence should be addressed to Seena Girish, seena.girish@gmail.com

Publication Date: 10 June 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-222

Abstract To assess the knowledge, attitude and practice of primipara mothers regarding breastfeeding, the study was conducted in Elite Mission Hospital, Thrissur among 50 primipara mothers who were breastfeeding their newborns. The sample was collected by nonprobability convenient sampling. The knowledge, attitude and practice were assessed by using breastfeeding knowledge questionnaire, IOWA infant feeding attitude scale and breast feeding practice checklist respectively. The study revealed that the knowledge of primipara mothers regarding breastfeeding was not adequate and that was reflected on their practice of breastfeeding. They had favourable to very favourable attitude towards breastfeeding. The primary care givers need to implement strategies to educate primimothers about breastfeeding to enhance good breastfeeding practice thereby reducing infant mortality and morbidity.

Keywords *Knowledge on Breastfeeding; Attitude towards Breastfeeding; Practice of Breastfeeding; Primipara Mothers; IOWA Infant Feeding Attitude Scale*

1. Introduction

"A newborn baby has only three demands. They are warmth in the arms of its mother, food from the breasts, and security in the knowledge of her presence; breastfeeding satisfies all three".

Grantly Dick-Read

According to WHO, (2012), Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond [1].

Anuchithra S. (2011) conducted a study to assess the infant feeding attitude among the antenatal women in selected maternity hospital at Belgaum, Karnataka. She reported that 91.9% of antenatal women conveyed that breast milk is ideal food for the babies, 85.1% felt breast milk is more easily digestible, 21.4% opined that formula is healthier for an infant, 86.1% believed that breastfeeding is more convenient and 79% said breast milk is cheaper. There was a significant association between infant feeding attitude and selected variables like age, educational qualification of self and spouse and employment status of self and spouse. She also reported that majority of the antenatal women have moderately positive attitude on infant feeding. This implies that the minimal effort is required by the health professionals, especially nurses, who take care of antenatal women closely in the hospital and in turn the community in educating and changing their behavior towards highly positive attitude which in turn helps to minimize infant morbidity and mortality rate [2].

2. Statement of Problem

A descriptive study to assess the knowledge, attitude and practice of primipara mothers regarding breastfeeding in a selected hospital, Thrissur.

3. Objectives

a) Assess the knowledge of breastfeeding among primipara mothers.
b) Assess the attitude of primipara mothers towards breastfeeding.
c) Assess the practice of breastfeeding among primipara mothers.
d) Correlate the knowledge of breastfeeding among primipara mothers with attitude towards breastfeeding.
e) Correlate the knowledge of breastfeeding among primipara mothers with practice of breastfeeding.
f) Find out the association between knowledge, attitude and practice of breastfeeding among primipara mothers with selected sociodemographic variables.

4. Hypothesis

H1: There will be a significant relationship between knowledge of breastfeeding among primipara mothers with attitude towards breastfeeding.

H2: There will be a significant relationship between knowledge of breastfeeding among primipara mothers with practice of breastfeeding.

H3: There will be significant association between knowledge, attitude and practice of breastfeeding among primipara mothers with selected sociodemographic variables.

5. Methodology

Research Approach
Descriptive survey approach

Research Design
Non experimental descriptive design

Setting
Elite Mission Hospital, Thrissur

Population
Primipara mothers who are admitted in Elite Mission Hospital, Thrissur

Sample
Primipara mothers who are breastfeeding their newborns.

Sample Size
50 primipara mothers

Sampling Technique
Non probability convenient sampling

Inclusion Criteria
Primipara mothers:

- Who underwent normal vaginal deliveries?
- Delivered a newborn at term with an APGAR score of more than or equal to 7
- Who were interested in breastfeeding?
- Who were willing to participate?
- Who were able to read and write in Malayalam

Exclusion Criteria

- Multipara mothers

Primipara mothers:

- With medical and gynecological problems
- Who develop intra partum or postpartum complications
- With abnormal breast and nipple conditions
- Infant deficits to breastfeeding such as cleft lip, cleft palate or tongue-tie
- Infant weighing less than 2.5 kg

6. Description of the Tool

Sec I- Sociodemographic variables of primipara mothers consist of 12 items collected by structured questionnaire on sample characteristics like age of the mother, religion, educational status, occupation, monthly family income, type of family, place of residence, supporting persons available in the family, having helping persons for household work, exposure of the mother to breastfeeding education, source of information and whether the father supports breastfeeding the baby.

Sec II- Structured questionnaire on knowledge of breastfeeding, consisting of 20 items. Each right response carries 1 mark and each wrong response carries zero mark. (Total score 20)

Sec III- Modified IOWA Infant Feeding Attitude Scale (IIFAS) consists of 14 items scored with a 5 point rating scale (0 to 4). (Total score 56)

Sec IV- Observational checklist for assessing practice of breastfeeding technique among primi mothers, which consists of 20 items rated as yes or no on a likert scale. Each ‘yes’ carries a score of one and ‘no’ carries a score of zero.

6.1. Validity

The prepared instruments along with the statement, objectives, hypotheses and operational definition were submitted to four experts in the field of Nursing, two gynecologists, one neonatologist and one expert in the field of statistics for developing an appropriate tool. The items of the tool were scrutinized, selected and checked for any overlapping. The tools were finalized with the valuable suggestions of the experts.

6.2. Reliability

Test- retest method was used to find out the reliability of section I and II of the tool and the reliability was found to be 0.9. Iowa Infant Feeding Attachment Scale (IIFAS) was found to have a reliability of 0.85 through Cronbach's alpha. The observational checklist for breastfeeding practice is found to have an interrater reliability of 0.8.

7. Method of Data Collection

Permission was sought from the Medical Superintendent and Managing Partner of Elite Mission Hospital. The investigator introduced herself to the respondents, established rapport, explained about the purpose of the study and the willingness of the participants was ascertained. The respondents were assured the anonymity and confidentiality of the information provided by them. The investigator explained about the purpose of the study and a written informed consent was obtained. Data was collected from 50 samples by using structured questionnaire on breastfeeding, IOWA infant feeding attitude scale for assessing attitude and breastfeeding practice checklist for assessing practice of breastfeeding.

8. Major Findings and Results

8.1. Description of Sociodemographic Variables

Majority (50%) of primipara mothers were in the age group of 22-27 years, 52% of them were from Hindu religion, 36% were educated till graduate level, 56% were employed, 58% of them were from the monthly income group of Rs. 9001-12000, 54% of them were from joint family. 88% were residing in urban area. 92% of the primi mothers were having previous exposure to breastfeeding education from literature and mass media. 50% of the samples were having a male baby and another 50% a female baby.

The table shows that 46% of the mothers were having average knowledge of breastfeeding. 32% were having good knowledge and 22% were having poor knowledge of breastfeeding. 39% were having very favourable attitude towards breastfeeding and 11% of them were having favourable attitude. 8% of the mothers were showing good level of practice of breastfeeding. 58% showed average level of practice and 34% showed poor level of breastfeeding practice. No one fell under the category of very poor practice of breastfeeding.

***Table 1**: N= 50*

	Minimum	Maximum	Mean	SD
Knowledge score	9	17	13.4	2.7
Attitude score	40	54	46.7	4.2
Practice Score	8	17	12.2	2.4

Table 1 shows the obtained scores of mean and standard deviation of knowledge, attitude and practice scores of primipara mothers regarding breastfeeding.

Table 2: *N=50*

Knowledge Level	Frequency	Percent
Very poor	0	0
Poor	11	22.0
Average	23	46.0
Good	16	32.0

Table 2 shows that 32% of the primipara mothers were having good knowledge on breastfeeding, 46% were having average knowledge and 22% of them were having poor knowledge on breastfeeding. No one fall under the category of having very poor knowledge on breastfeeding.

Table 3: *N=50*

Attitude Level	Frequency	Percent
Unfavourable	0	0
Moderately favourable	0	0
Favourable	11	22.0
Very favourable	39	78.0

Table 3 shows that 78% and 22% of the primipara mothers were having very favourable and favourable attitude towards breastfeeding respectively. No one falls under the category of moderately favourable and unfavourable attitude towards breastfeeding.

Table 4: *N=50*

Practice Level	Frequency	Percent
Very poor	0	0
Poor	17	34.0
Average	29	58.0
Good	4	8.0

Table 4 shows that only 8% of the primipara mothers were having good practice on breastfeeding. 58% and 34% of the primipara mothers were having average and poor practice on breastfeeding respectively. No one showed very poor practice level.

Table 5: *Correlation Matrix on Knowledge, Attitude and Practice N=50*

	Pearson Correlation 'r' value	P Value	Significance
Knowledge	-	-	-
Attitude	0.026	0.858	NS
Practice	0.428	0.002	S

The findings showed that there was a significant correlation between knowledge and practice of breastfeeding among primipara mothers. But there was no significant correlation between knowledge and attitude.

Table 6: *Association between Knowledge, Attitude and Practice of Breastfeeding among Primipara Mothers with Selected Sociodemographic Variables. N=50*

Demographic Variables	Chi-sq. (knowledge)	P Value	Sig.	Chi-sq. (Attitude)	P Value	Sig.	Chi- sq. (Practice)	P Value	Sig.
Age	4.807	0.308	NS	3.014	0.222	NS	15.247	0.004	S
Religion	0.369	0.985	NS	1.43	0.489	NS	1.641	0.801	NS
Education	7.396	0.286	NS	27.05	0.001	S	3.143	0.791	NS
Occupation	0.718	0.698	NS	4.723	0.03	S	0.659	0.719	NS
Income	2.3	0.681	NS	0.406	0.816	NS	2.462	0.651	NS
Type of family	0.065	0.968	NS	0.415	0.52	NS	3.798	0.15	NS
Place of residence	3.169	0.205	NS	7.927	0.005	S	3.401	0.183	NS
Exp. to bf. Education	15.415	0.0001	S	0.023	0.88	NS	8.44	0.15	S
Sex of the baby	0.134	0.935	NS	1.049	0.306	NS	0.84	0.657	NS

Table 6 shows the association between knowledge, attitude and practice of breastfeeding among primipara mothers with selected sociodemographic variables. It shows that there is a significant association between knowledge and exposure to breastfeeding education. There is significant association between attitude and educational status, occupation and place of residence. There is significant association between practice and age of mothers and exposure to breastfeeding education. Hence the null hypothesis was rejected at 0.05 level.

9. Discussion

A descriptive study was conducted to explore the knowledge, attitude and practices of breastfeeding among postnatal mothers and factors that determine them in the Neonatal Division, Department of Pediatrics at a tertiary care hospital in South India. The data was collected from 100 postnatal mothers by trained interviewers using a structured proforma. In addition to demo-graphic data, mothers were also asked about their knowledge on and attitude towards breastfeeding and the practices they follow. The knowledge of the mothers was inadequate in areas of time of initiation of breastfeeding (92%), colostrum feeding (56%), duration of exclusive breastfeeding (38%), knowledge on expressed breastmilk (51%) and continuation of breastfeeding while baby is sick. Better scores correlated significantly with higher maternal age, better maternal education, higher socioeconomic status and having received antenatal care. There is still a need for programmes, which support and encourage breast-feeding particularly at a primary care level, focusing more on younger, less well-educated women and those from lower socioeconomic class [3].

Anuchithra S. conducted a study to assess the infant feeding attitude among the antenatal women in selected maternity hospital at Belgaum, Karnataka. She reported that 91.9% of antenatal women conveyed that breast milk is ideal food for the babies, 85.1% felt breast milk is more easily digestible, 21.4% opined that formula is healthier for an infant, 86.1% believed that breastfeeding is more convenient and 79% said breastmilk is cheaper. There was a significant association between infant feeding attitude and selected variables like age, educational qualification of self and spouse and employment status of self and spouse. She also reported that majority of the antenatal women have moderately positive attitude on infant feeding. This implies that further effort is required by the health professionals, especially nurses, who take care of antenatal women closely in the hospital and in turn the community in educating and changing their behavior towards highly positive attitude which in turn helps to minimize infant morbidity and mortality rate [2, 5].

Women in rural areas have a very positive attitude towards initiation of breastfeeding. In a study conducted in the rural areas of Karnataka, almost all the women had initiated breastfeeding and continued to breastfeed beyond 9 months. Other studies conducted in rural areas show that almost all the mothers initiate breastfeeding. Urban areas in the other studies also show a similar pattern [4].

A study was conducted by Sushma Sriram et al. [6] on knowledge, attitude and practices of mothers regarding infant feeding in 2013. They found no association between knowledge and practice. Chidozie E. Mbada et al. conducted a study on evaluation of mother's knowledge, attitude and practices on breastfeeding and found that there is no association between knowledge, attitude and practice of breastfeeding with selected sociodemographic variables [7].

The above findings were supported with this study done on knowledge, attitude and practice of breastfeeding among primipara mothers and showed that there is a need to enhance a little more knowledge and bring good practice towards breastfeeding.

10. Recommendations

1) The study can be replicated with the large group.
2) A comparative study can be conducted among rural and urban residents.
3) An experimental study can be conducted giving a structured teaching module on breastfeeding.

11. Conclusion

This study concluded that the knowledge of primipara mothers regarding breastfeeding was not completely adequate and this was reflected on the practice. But the primipara mothers were having favourable to very favourable attitude towards breastfeeding. Hence the primary care givers need to implement strategies to enhance good practices of breastfeeding among mothers to reduce infant mortality and morbidity [8].

References

[1] World Health Organization, South-East Asia, 2012: *International Public Health Hazards: Indian Legislative Provisions*. http://www.searo.who.int/publications.

[2] Anuchithra, S., et al., 2012: *Infant Feeding Attitude among Antenatal Women in Selected Maternity Hospital.* Belgaum: A and V Publications.

[3] Maheswari Ekambaram, Vishnu Bhatt B. and Ahammed, M.A.P. *A Study on Knowledge, Attitude and Practice of Breastfeeding among Post Natal Women.* Journal of Current Paediatric Research. 2010. 14 (2).

[4] Madhu K., et al. *Breastfeeding Practices and Newborn Care in Rural Areas of Karnataka.* Indian Journal of Community Medicine. 34 (3) 243-246.

[5] Devang Raval, Jankar, D.V. and Singh, M.P. *A Study of Breastfeeding Practices among Infants Living in Slums of Bhavnagar City, Gujarat, Health Line.* 2011. 2 (2).

[6] Sushma Sriram, Priyanka Soni, Rashmi Thanvi, Nisha Prajapati and Mahariya, K.M. *Knowledge, Attitude and Practices of Mothers Regarding Infant Feeding Practices.* National Journal of Medical Research. 2013. 3 (2) 147-150.

[7] Chidozie E. Mbada, Adekemi E. Olowookere, Joel O. Faronbi and Folasade C. Oyinlola. *Knowledge, Attitude and Techniques of Breastfeeding among Nigerian Mothers from a Semi-Urban Community.* BMC Research Notes. 2013. 6; 552.

[8] Dakshayini, K.P. *Primipara Mothers' Knowledge about Breastfeeding.* Nightingale Nursing Times. 2014. 10 (8).

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 49-54 Med-239
ISSN: 2320 – 0278

Research Article | Open Access

A Study to Evaluate the Effectiveness of Psycho Education on Family Burden among the Family Members of Schizophrenic Patients

Rajathi A. and Gandhimathi M.

Rani Meyyammai College of Nursing, Annamalai University, Chidambaram, Annamalai Nagar, Tamil Nadu, India

Publication Date: 11 September 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-239

1. Introduction

Mental health is vital for individuals, families and communities; also it is more than simply the absence of a mental disorder. Mental health is defined by the World Health Organization (WHO) as 'a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community'. According to National Alliance of Mental Illness (NAMI) there are 1 in 20 lives with a serious mental illness such as schizophrenia in India. In addition to the person directly experiencing by a mental illness, the family, friends and communities are also affected. In India 4.3 to 8.7 million people were affected by Schizophrenia. 50% of mental health conditions begin by the age of 14 and 75% of mental health conditions develop by the age of 24. Schizophrenia is a common and serious neurologic illness that affects 1% of people globally and approximately 2.5 million Americans (National Institute of Mental Health, 2006). Nowadays, there is evidence suggesting that the course of the schizophrenic disorder is highly associated with patient psychosocial factors and home atmosphere (Urizar, et al., 2014). The family members are significantly distressed by the fact of having one of their members suffering from schizophrenia. Mental Illness attached to stigma in families is still frequent and can contribute to social isolation (Martensant and Ton A., 2001). Family members often play a vital role in the lives of individuals with schizophrenia and other serious mental illnesses, as an estimated 30% to 65% of adults with serious mental illnesses live with family members. Schizophrenia is ranked fourth worldwide in terms of burden and illness (WHO).

2. Need for the Study

Schizophrenia occurs in all societies regardless of class, color, religion and culture. However there are some variations in terms of incidence and outcomes for different groups of people. Schizophrenia Ranks among the top 10 causes of disability in developed countries worldwide. The Prevalence Rate for schizophrenia is approximately 1.1% of the population over the age of 18 or, in other words, at any one time as many as 51 million people worldwide suffer from schizophrenia. Epidemiological studies

report prevalence rates for psychiatric disorder from 9.5 to 370/1000 population in India (Math, B.S., Chandrashekar, C.R. and Bhugra, D., 2007).

Being overburdened with worry about a loved one, family members of schizophrenic patients can ignore their own needs and become depressed and anxious. In order to prevent caregiver "burnout," it is crucial that family members find support of their own. National Alliance on Mental Illness (NAMI, 2008) survey of caregivers for schizophrenic patients found that 41 percent of caregivers have been filling that role for more than 10 years, 19 percent currently provide care for more than 40 hours a week, 63 percent have difficulties finding time for them, 55 percent of caregivers face challenges in taking care of their own health, 51 percent report that they have been taken advantage of by loved ones living with schizophrenia and 90 percent worry what will happen to their loved one when they (the caregiver) die.

Psycho educational interventions are likely to have equivalent effects when conducted with other significant support interventions, regardless of the degree of biological relation. The critical factor is identifying people who are integrally involved in the care and support of the patient. The more that the patient and family are involved with each other, (outcomes that they would like to see eg, reduced relapses, employment), the more likely they will benefit from family psycho education in terms of better outcomes.

For generation, life in India revolved around the join family system, which acted as a buffer against stress. However with rapid industrialization leads to fragmentation of this joint family system and now more number of nuclear families are emerging (Indian Journal of Psychological Medicine, 2012).

3. Objectives

1) To assess the existing level of knowledge and family burden among family members of schizophrenic patients.
2) To evaluate the effectiveness of psycho education on the level of knowledge and family burden among family members of schizophrenic patients.
3) To associate the pretest level of knowledge and family burden among family members of schizophrenic patients with their selected demographic variables.

4. Methodology

The pre experimental design was used based on quantitative approach. The study was conducted at Mercy Hospital in Trichy. The sample consisted of 30 family members of schizophrenic patients. The study was conducted over a period of six weeks using Simple Random Sampling Technique (Lottery method). The researcher explained the purpose of the study and written consent was obtained from the samples. The participants were taken to assess the pretest knowledge and family burden and the psycho education was given using power point by the researcher. Then after on interval of six weeks posttest knowledge and family burden was assessed by the researcher.

4.1. Inclusive Criteria

[A]. Family members who are willing to participate in the study.
[B]. The care giver who stayed with the patient and provided minimum 6 month of care to the Patients.
[C]. Both male and female family caregivers.
[D]. Family members who are able to understand Tamil or English language.

4.2. Exclusive Criteria

[A]. The health care providers.
[B]. The Family members who are all other than schizophrenic patient.
[C]. The care givers who are having any obvious psychiatric illness.

4.3. Description of the Tools

Section A: It contains two parts

Part I: Demographic variables of the Family Members of Schizophrenic Patients
Part II: Demographic variables of the Schizophrenic Patients

Section B: Structured Questionnaire to assess the knowledge regarding care and management of Schizophrenic Patients

Section C: Semi structured interview schedule to assess the family burden of family members of Schizophrenic Patients. (SAFB, Pai and Kapur, 1981)

4.4. Data Collection Procedure

Formal permission was obtained from Head of the Department of Mercy Psychiatric Hospital at Trichy. The samples were selected according to the inclusion criteria by using Simple Random Sampling Technique (Lottery method). The subjects were contacted individually and the purpose of the study was explained to them and they were assured that the data collected will be kept confidential. Written consent was taken from the study participants. After assembling all the study participants in a common room, the general introduction was given. The pre-test was conducted to the family members. The investigator accompanied the study participants and clarified the doubts. Then, the psycho education was given to the family members of schizophrenic patients for 45–50 minutes by using power point presentation. After interval of six weeks, the post-test was conducted. The data was collected from each family member by using Knowledge questionnaire and Perceived Family Burden Assessment scale. The investigator has taken minimum 15 minutes for collecting data from each family member. However the data was collected within a stipulated time of six weeks.

5. Findings

Table 1: *Frequency and Percentage Distribution of Pretest and Posttest Knowledge Regarding Care of Schizophrenic Patients among Family Members of Schizophrenic Patients. N=30*

S. No.	Level of Knowledge	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
1.	Inadequate knowledge	11	37%	-	-
2.	Moderately adequate knowledge	18	60%	13	43%
3.	Adequate knowledge	1	3%	17	57%

Table 1 shows the distribution of level of knowledge on care and management of schizophrenic patients in pre and post-test. In pre test 11(37%) of them had inadequate knowledge, 18(60%) of them had moderately adequate knowledge and 1(3%) of them had adequate knowledge. In post test, none of them (0%) had inadequate knowledge, 13(43%) had moderately adequate knowledge and 17(57%) had adequate knowledge.

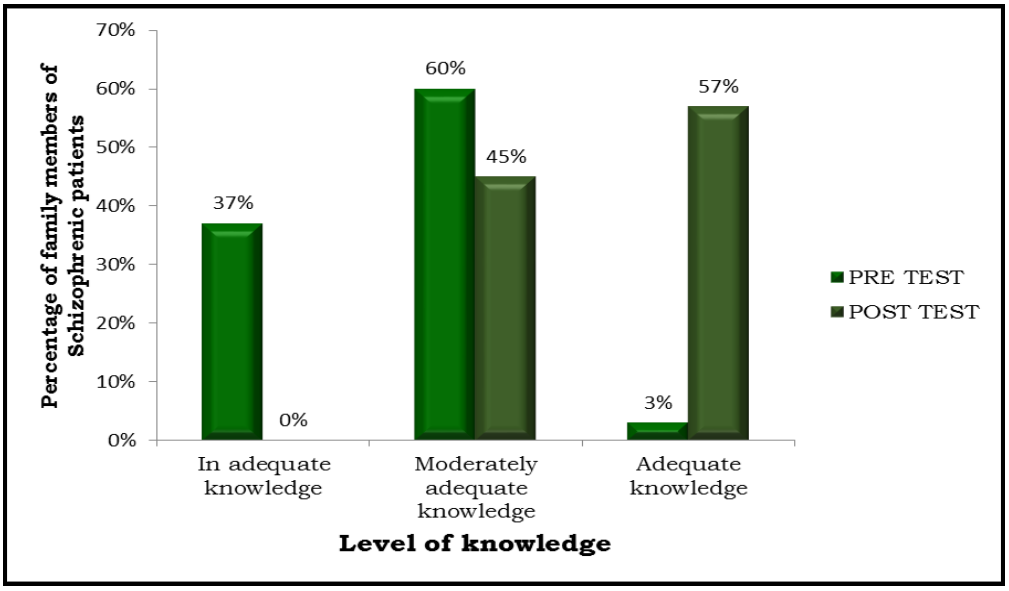

Figure 1: *Distribution of Pre-Test and Post-Test Knowledge Regarding Psycho Education on Level of Knowledge Regarding Care of Schizophrenic Patients among Family Members of Schizophrenic Patients*

Table 2: *Frequency and Percentage Distribution of Pre test and Post test level of Family Burden among Family Members of Schizophrenic Patient*

S. No.	Level of Family Burden	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
1.	Mild Burden	1	3%	25	83%
2.	Moderate burden	11	37%	5	17%
3.	Severe Burden	18	60%	0	0%

Table 2 shows the distribution of level of family burden among the family members of schizophrenic patients in pre and post-test. In pre test, 1(3%) of them had mild burden, 11(37%) of them had moderate burden and 18(60%) of them had severe burden. In the post test, 25(83%) of them had mild burden, 5(17%) of them had moderate burden and none of them (0%) had severe burden.

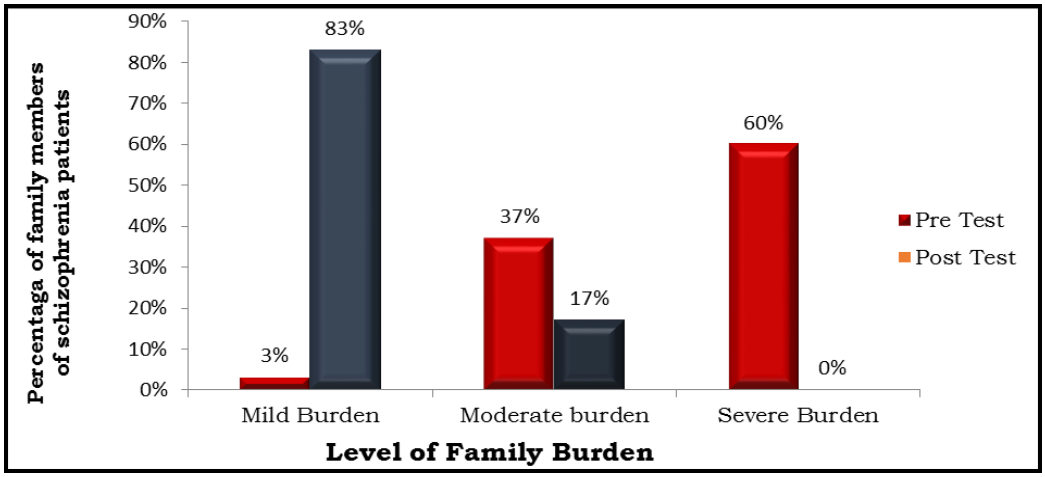

Figure 2: *Pre Test and Post Test Level of Family Burden among Family Members of Schizophrenic Patients*

Table 3: *Comparing of Mean and Standard Deviation of Knowledge and Family Burden Scores among Family Members of Schizophrenic Patients in Pre and Post Test*

S. No.	Category	Max Score	Mean		S.D		Paired "t" Value	"P" Value
			Pre test	Post test	Pre test	Post test		
1	Knowledge level	20	11.4	22.96	4.306	4.358	t=14.45	**SIGNIFICANT** (p<0.05)
2	Family burden level	48	40.9	33.3	8.027	5.7953	t=8.752	**SIGNIFICANT** (p<0.05)

Table 3 shows the mean and standard deviation of knowledge and family burden scores in pre and post test. The mean knowledge score was less in pre test (11.4) compared to post test (22.96). The calculated value of knowledge (14.45) paired't' test was greater than the table value at 5% level of significance. The mean burden score was more in pre test (40.9) compared to post test (33.3). The calculated value of burden (8.752) paired't' test was greater than the table value at 5% level of significance. The results revealed that psychoeducation programme was effective in gaining knowledge regarding care and management of schizophrenic patients and reducing the family burden.

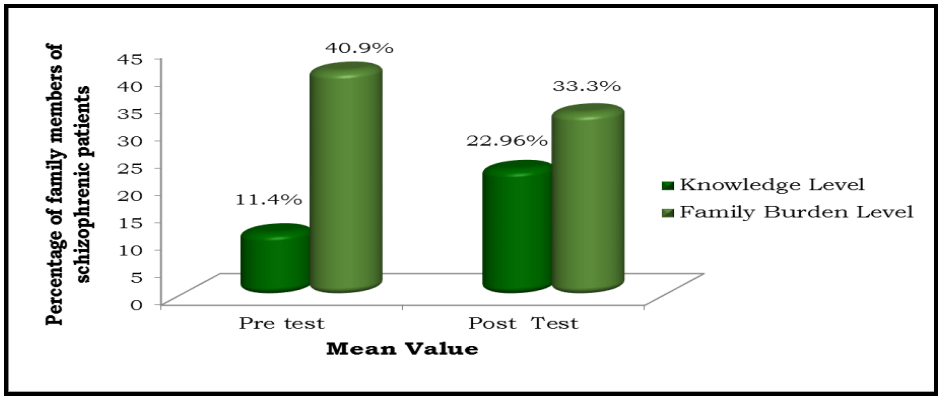

Figure 3: *Pre Test and Post Test Mean Value of Knowledge and Family Burden among Family Members of Schizophrenic Patient*

There is a significant difference between the pre test and post test level of knowledge and family burden among family members of schizophrenic patient.

There is a significant association between family member's gender, relationship with patient, number of visits per week, time spend with the patients per day and residence with the knowledge of the family members. The other variables like age, marital status, number of children, education, occupation, income and had no association with burden of family members.

There is a significant association between family members, number of children, education, family income, relationship with the patients and time spend with the patients per day with the burden of family members of schizophrenia (P<0.05). The other variables like gender, age, religion, marital status, number of visit and residence had no association with burden of the family members.

6. Discussion

The first objective to assess the existing level of knowledge and family burden among family members of schizophrenic patients represent the pre test level of knowledge reveals that 11(37%) of them had inadequate knowledge, 18(60%) of them had moderately adequate knowledge, 1(3%) of them had

adequate knowledge regarding care and management of schizophrenic patients and post test level of knowledge reveals that 0(0%) of them had inadequate knowledge, 13 (43%) of them had moderately adequate knowledge, 17(57%) of them had adequate knowledge. In the family burden 1(3%) of them had mild burden, 11(37%) of them had moderate burden and 18(60%) of them had severe burden in pre test. The Post test level of burden reveals that 25(83%) of them had mild burden, 5(17%) of them had moderate burden and none (0%) of them had severe burden.

The second objective is to evaluate the effectiveness of psycho education on the level of knowledge and family burden among family members of schizophrenic patients. The mean knowledge score was less in pre test (11.4) compared to post test (22.96). The calculated value of knowledge (14.45) paired't' test was greater than the table value at 5% level of significance. The mean burden score was more in pre test (40.9) compared to post test (33.3). The calculated value of burden (8.752) paired't' test was greater than the table value at 5% level of significance. The results revealed that psychoeducation programme was effective in gaining knowledge regarding care and management of schizophrenic patients and reducing the family burden.

7. Nursing Implication

This study would help the mental health nurses to provide the effective care to the patient. Understanding the level of burden of the family members would help the nursing community to plan for better care. Psychoeducation may improve the knowledge of the family members and reduce the family burden and in turn it decreases the severity of symptoms and recurrent episodes among the schizophrenic patients. Effective care helps the patient to have faster recovery.

8. Conclusion

Family Members of schizophrenic patients experience burden on the physical, emotional and financial aspects and the extent of the family burden is closely linked to the amount of symptomatic behavior of the patient. Psycho education helps to improve the knowledge of family members and to reduce the family burden. Hence, the family members has less burden and able to provide a better care for the schizophrenic patients.

References

Dadwani Roma, S., and Tintu Thomas. *Mental Morbidities: Prevalence and Health Seeking Behavior*. International Journal of Biological and Medical Research. 2014. 5 (3) 4186-4189.

Martensant and Ton, A. *The Burden of Schizophrenia on Caregivers: A Review*. Pharmacoeconomics. 2001. 26 (2) 149-162.

Math, B.S., Chandrashekar, C.R. and Bhugra, D. *Psychiatric Epidemiology in India*. Indian Journal of Medical Research. 2007. 126; 183-192.

Suresh Bada Math and Ravindra Srinivasaraju. *Indian Psychiatric Epidemiological Studies: Learning from the Past*. Indian Journal of Psychiatry. 2010. 52; 95-103.

Surekha Kumari, Singh, A.R., Verma, A.N., Verma, P.K. and Chaudhury, S. *Subjective Burden on Spouses of Schizophrenia Patients*. Industrial Psychiatry Journal. 2009. 18 (2) 97-100.

Tiwari, S.C. and Pandey, N.M. *Status and Requirements of Geriatric Mental Health Services in India: An Evidence-Based Commentary.* Indian Journal of Psychiatry. 2012. 54; 8-14.

Urizar et al. *An Updated Review on Burden on Caregivers of Schizophrenia Patients*. Psicothema. 2014. 26; 235-243.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 49-53 Med-253
ISSN: 2320 – 0278

Research Article | Open Access

Effectiveness of Structured Teaching Programme on Pregnancy Induced Hypertension among Primigravida Mothers

Debajani Nayak

Department of Obstetrics and Gynaecological Nursing, SUM Nursing College, S 'O' A University, Kalinganagar, Ghatikia, Bhubaneswar, Odisha, India

Publication Date: 11 September 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-253

Abstract Hypertension and its complications are common in primigravida mother. Hypertension in pregnancy is still largely unknown & it still stands a public health problem. The present study aimed to determine the effectiveness of structured teaching programmed on pregnancy induced hypertension among primigravida mothers attending antenatal clinic (ANC) in IMS & SUM hospital, Bhubaneswar, Odisha, India. A pre experimental study was conducted over period of one month in the department of Obstetrics & Gynecology in the above hospital. A total of 50 pregnant women with Pregnancy Induced Hypertension (PIH) were enrolled in the study. The pretest and posttest structured Performa was prepared & they were interviewed to collect necessary information such as background data and knowledge regarding PIH. The mean of posttest (27.25) knowledge was found to be significantly higher than the pretest (13.96) knowledge score with a mean difference of 13.29 as evident from 't' value of 2.035 for df, 49 at <0.05 level of significance. Pregnancy induced hypertension is a common medical problem associated with pregnancy. Its incidence and related mortality are high due to lack of adequate antenatal care. Maternal and perinatal outcomes were found to be better in women who attended regular ANC. Educating primigravida will help create awareness among the public.
Keywords *Structured Teaching Programme; Pregnancy Induced Hypertension; Primigravida Mothers*

1. Introduction

Hypertension during pregnancy or pregnancy induced hypertension (PIH) is a common medical condition that may cause maternal and perinatal morbidity and mortality (Seyom et al., 2015; Witlin et al., 1997). During this condition the systolic blood pressure of at least 140 mm Hg and/or diastolic blood pressure of 90 mm Hg on at least two occasions at least 4-6 hours apart is observed in the pregnant women known to be normotensive beforehand (Sibai, 2003). PIH is multisystem disorder characterized by development of edema, hypertension and may be associated with proteinuria after 20 weeks of gestation, a condition called preeclampsia which may be fatal to the mother as well as to the developing fetus (Backes et al., 2011)

In India pregnancy induced hypertension contributes to about 7-10% of all antenatal admission (Dubhashi et al., 2008) and about 14% of maternal deaths is reported to occur due to hypertensive

disorders in pregnancy (Say et al., 2014). The prevalence of gestational hypertension and comorbidity increases with advancing age (Prakash et al., 2006). Nursing staffs face the challenge in caring the PIH patients. PIH per se and complications of severe preeclampsia could well be prevented through prenatal care, prompt diagnosis (Yücesoy et al., 2005) and patient counseling.

1.1. Objective

1) To determine effectiveness of structured teaching programmed on pregnancy induced hypertension among primigravida.

2. Materials and Methods

Pre experimental one group pre-test, post-test design was adopted for the present study. Population for the study consists of fifty antenatal mothers attending outpatient department of IMS & SUM Hospital, Bhubaneswar. The samples were selected by convenient sampling technique in the month of June-July 2014. The study protocol was approved by the institutional ethical committee. The pre-test and posttest structured Performa was prepared & the mothers were interviewed to collect necessary information such as background data and knowledge regarding PIH. Confidentiality of the subjects was maintained throughout of the study. Data was expressed in terms of mean and standard deviation (SD) and analyzed with SPSS v20.0 software. The 't' test was conducted to compare the mean pretest & posttest knowledge scores of the samples.

3. Results

3.1. Description of Sample According to the Socio Demographic Variable

The distribution of subjects according to the age of mother depicts 40% of patients are age in between 18-22 years, 30% of mothers in between age 23-27 years, 20% of mothers in between age 28-32 years & 10% of mothers in 40 and above age group. In education level shows that 20% of mothers have literate, 30% of people under matric, 50% of mothers were graduate and above. In case of residence majority of mothers having 60% were from rural, 40% of mothers from urban areas. Dietary pattern of mothers 30% of mothers were vegetarian, 70% people are non-vegetarian. As regards to Occupation of sample 40% of mothers were working, 60% of people were not working. In monthly income of sample 15% of mothers having monthly income <5000/-, 55% of mothers having 5000-10,000/-, 30% of mothers >10,000/-. As regard to type of family 80% of people having nuclear family, 20% of people having joint family. As per the family history, family members of 60% of mothers had hypertension and 40% mothers had no family history of hypertension.

3.2. Finding Related to Evaluation of Knowledge of Mothers Regarding PIH

In this study of PIH found, 30% mothers provided the correct meaning of PIH. However, 40% mothers with their 1st pregnancy answered correctly. 70% of the mothers gave answer that family history is the risk factor of PIH while 30% had no family history as a risk factor of PIH. Back ache and hypertension before pregnancy each contributed as 40% as prominent risk factors in the mothers. In 45% cases it was observed increased chances of PIH contributed by kidney diseases. Twin or single fetus contributed equally (35% each) for PIH. Intrauterine death of fetus, hyperactivity etc. could also be observed. For therapeutic management of PIH about 65% of mothers gave answer of using methyldopa during the questionnaire.

Table 1: *Knowledge Score of Sample Mothers using Pretest & Posttest*

Knowledge Score of Sample Mothers	Pretest	Posttest
Poor(0-8)	33	2
Average(9-16)	17	28
Good(17-24)	0	16

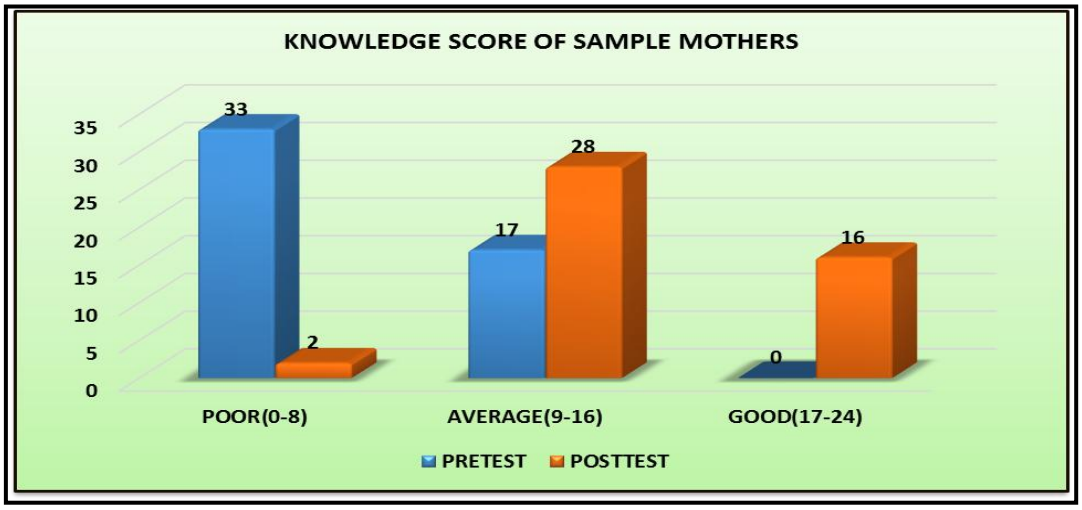

Figure 1: *Knowledge Score of Sample Mothers using Pretest & Posttest*

The depicted in Table 1 shows that the knowledge score of sample divided in 3 categories i.e. poor, average, & good. In poor knowledge i.e. (0-8): score in pretest 33 while posttest score is 2, similarly in average (9-16): score was 17 in pretest while posttest score was 28. In case of Good (17-24): pretest has low knowledge & posttest having score 16.

3.3. Knowledge of Sample of Mothers using Mean, Median, & T- Value in between Pre-Test & Post-Test

Table 2: Knowledge of Sample of Mothers using Mean, Median, & 't' - Value

Knowledge of Sample Mothers							
Knowledge Score	**Mean**	**Median**	**Sem**	**Md**	**Sd**	**'t' Value**	**P Value**
Pretest	13.96	7	6.851		48.92		
Posttest	27.25	15	13.37	13.29	95.46	2.035*	0.0472

* Significant at 0.05 level of significance

The data depicted in Table 2 & Figure 1 shows that: as regarded to knowledge of sample of mothers the mean of pretest 13.96 while increase in posttest mean 27.25, median of pretest sample 7 where the post test 15, standard error of mean in pretest 6.851 & posttest 13.37, standard deviation of pretest 48.92 & posttest value 95.46, resulting 't' value is 2.035 of both the sample, p value is 0.0472 where degree of freedom is 49 & it is significant at <0.05 level of significance.

4. Discussion

In the present study it was found that more number of primimothers (62%) were having PIH than multi mothers (38%). Similar study was conducted by Muhammad Obaid Ur Rehman et al. in a sample size of 1000 pregnant women, 37% were found to be having PIH and 72% of the cases were primigravidae and others were multi gravidae (Rehman et al., 2003).

The present study resulted in 60% of mothers having family history of hypertension whereas 40% of mothers having no family history of hypertension. This is supported by a study reported in 2010 by Shamsi et al. that the family history of hypertension is an important risk factor for preeclampsia and happens more frequently in the women having family history of hypertension (Shamsi et al., 2010).

Low socio-economic status, teenage pregnancy and family history of hypertension also affect the outcome of PIH in primigravidas and reported to be higher in these cases (Parmar et al., 2012).

In the present study the findings of the study are discussed in terms of statistically measured data. The 't' test is also statistically significant. It was finding that the knowledge score of sample divided in 3 categories i.e. poor, average, & good. In poor (0-8) score in pretest 33 while posttest score is 2, for average (9-16) group, score is 17 in pretest while posttest score is 28. For good (17-24), pretest has low knowledge and posttest having score of 16.

5. Conclusion

Among PIH cases severe cases were more. The incidence of PIH was higher among teenage pregnancy, primigravida, those having history of PIH in previous pregnancy, family history of PIH. So the finding of the study may help to bring awareness among mothers regarding PIH. After analysis it was observed that there was a significant improvement in knowledge regarding awareness among pregnancy induced hypertension mothers.

References

Backes, C.H., Markham, K., Moorehead, P., Cordero, L., Nankervis, C.A. and Giannone, P.J. *Maternal Preeclampsia and Neonatal Outcomes.* Journal of Pregnancy. 2011.

Dubhashi, S.S., Wani, R., Chikhal, P. and Hegde, C. *PIH-Confounding Situations, Management Dilemmas and Severe Consequences: Does Antenatal Care Have a Role.* Bombay Hospital Journal. 2008. 50 (1) 34-37.

Parmar, M.T., Solanki, H.M. and Gosalia, V.V. *Study of Risk Factors of Perinatal Death in Pregnancy Induced Hypertension (PIH)*. Community Med. 2012. 3 (4) 703-707.

Prakash, J., Pandey, L., Singh, A. and Kar, B. *Hypertension in Pregnancy-Hospital Based Study*. Journal-Association of Physicians of India. 2006. 54 (R) 273.

Rehman, M.O., Salah-Ud-Din, Siddiqui, M.A. and Rehman, S. *Incidence of Women Having Pregnancy Induced Hypertension in Karachi.* Pak. Jour. of Pharmacology. 2003. 20 (1) 5-8.

Say, L., Chou, D., Gemmill, A., Tuncalp, O., Moller, A-B. and Daniels, J., et al. *Global Causes of Maternal Death: A WHO Systematic Analysis*. The Lancet Global Health. 2014. 2 (6) e323-e333.

Seyom, E., Abera, M., Tesfaye, M. and Fentahun, N. *Maternal and Fetal Outcome of Pregnancy Related Hypertension in Mettu Karl Referral Hospital, Ethiopia*. Journal of Ovarian Research. 2015. 8 (1) 10.

Shamsi, U., Hatcher, J., Shamsi, A., Zuberi, N., Qadri, Z. and Saleem, S. *A Multicentre Matched Case Control Study of Risk Factors for Preeclampsia in Healthy Women in Pakistan*. BMC Women's Health. 2010. 10 (1) 14.

Sibai, B.M. *Diagnosis and Management of Gestational Hypertension and Preeclampsia*. Obstetrics & Gynecology. 2003. 102 (1) 181-192.

Witlin, D., Andrea, G., Sibai, M. and Baha, M. *Hypertension in Pregnancy: Current Concepts of Preeclampsia*. Annual Review of Medicine. 1997. 48 (1) 115-127.

Yucesoy, G., Ozkan, S., Bodur, H., Tan, T., Calıskan, E., Vural, B., et al. *Maternal and Perinatal Outcome in Pregnancies Complicated with Hypertensive Disorder of Pregnancy: A Seven Year Experience of a Tertiary Care Center*. Archives of Gynecology and Obstetrics. 2005. 273 (1) 43-49.

Cloud Publications
International Journal of Advanced Nursing Science and Practice
2019, Volume 3, Issue 1, pp. 60-63
ISSN: 2320 – 0278, Crossref: 10.23953/cloud.ijansp.428

Review Article

A Study to Assess the Effectiveness of Simulation in terms of Knowledge and Skill Regarding Basic Life Support (BLS) Among Non-Medical Faculty. - A Narrative Review.

Ms. Manjari Panday[1], Mr. N. Siva[2], Ms. Kiran Sharma[3]

[1]MSc Nursing 1st Year, Department of Medical Surgical Nursing School of Nursing Science and Research, Sharda University, Greater Noida, Uttar Pradesh, India
[2]Assistant Professor, Department of Child Health Nursing, School of Nursing Science and Research, Sharda University, Greater Noida, Uttar Pradesh, India
[3]Professor, Department of Medical Surgical Nursing, School of Nursing Science and Research, Sharda University, Greater Noida, Uttar Pradesh, India

Correspondence should be addressed to Manjari Panday, manjaripandey17@gmail.com

Publication Date: 29 August 2019

DOI: https://doi.org/10.23953/cloud.ijansp.428

Abstract Cardiac arrest, (is also known as circulatory arrest) is the cessation of normal circulation of the blood due to failure of the heart to contract effectively. Arrested blood circulation prevents delivery of oxygen to the body. Lack of oxygen to the brain causes loss of consciousness, which then result in abnormal or absent breathing. When unexpected cardiac arrest leads to death this is called sudden cardiac death. The treatment for cardiac arrest is cardiopulmonary resuscitation (CPR) to provide circulatory support. The aim of this narrative review is to find information on the effectiveness of simulation in terms of knowledge and skill regarding basic life support among non-medical faculty (participants). Intervention-Simulation on Basic life support method was used in the study. Quasi experimental study with skill lab of College was used in the study. This narrative review result has appeared that simulation will be effective for acquiring knowledge and skills on basic life support.
Keywords *Basic Life Support; Knowledge; simulation; Non Medical Faculty.*

1. Introduction

Cardiovascular disease is the leading global cause of death, accounting for more than 17.9 million deaths per year in 2015, a number that is expected to grow to more than 23.6 million by 2030. The majority of Out of Hospital Cardiac Arrests (OHCA) occurs at public settings (39.5 percent). In 2015, home or residence (27.5 percent) and nursing homes (18.2 percent) were the second and third most common locations of OHCA (WHOSIS) 2017.

BLS is an evolving life-saving technique of modern medicine that comprises a series of life-saving actions that is useful in cardiac arrest. It consists of chest compression and rescue breaths which re-establish oxygenated blood flow to the vital organs of an individual who has suffered cardiac arrest. BLS can be administered by a trained person before the arrival of emergency medical services; this skill must be acquired by all adults, since many sudden cardiac arrest occurred outside the hospital

setting. The most important actions that have been proven to significantly reduce mortality rates is considered to be the more basic actions of BLS, known as high quality chest compression. Other actions within the CPR realm, such as advanced life support (ALS) (administering medications, ventilation, intubation, intravenous fluids etc.); have also shown to have a significant effect on reducing mortality rates in SCA if BLS is initiated early. Thus, BLS is considered to be the foundation to save lives following sudden cardiac arrest (SCA) (Olatunji, 2019).

A Quantitative research was conducted by Sansari and Susan et al. (2017) on Effect of basic life support training program on knowledge and practice by using quasi-experimental one group pre-test post design. Sample of 60 administrative employees were selected for study by using Non-probability sampling technique. The mean knowledge score of subjects in pre-test was 4.90 and in post-test was 9.78 and total means score of subjects in pre-test was 3 and in post-test 16.15. Positive response to the demonstration and teaching was found equal and really useful to administrative employees who will help them to take quick decisions, perform cardiopulmonary resuscitation and save many lives of cardiac arrest victims outside the hospital.

A quasi experimental study was conducted by Tobase et al. (2017), using before and after design. Sample size was 62. An online course on basic life support was designed and administered on undergraduate nursing students. Practical evaluation of simulated activity. The electronic records system from the immediate feedback device was used. Theoretical learning was evaluated by means of a pre- and post-test and, to evaluate the practice, simulation with immediate feedback devices was used. Sample size was 62, with a mean age of 21.47. Mean scores in the pre-test was 6.4 and 9.3 in the post-test in practice. As a result, showed an increase in the mean score of the post test, which shows high significant learning, was gained. Study also suggested the use of simulation with high fidelity simulators and feedback devices for quality learning. Improvement in resuscitation were also identified when using feedback devices on training of lay person.

An experimental study was conducted by Danniel and Evangeline (2018) on impact of simulation based basic life support training among medical students. Sample size was 85 undergraduate medical students. Statistics shows significant difference in pre and post test score. As a result, a study has proven that simulation based basic life support plays significant role for acquiring knowledge and skills.

A quasi experimental study was conducted on Effect of 3 basic life support training on future primary school teachers by Navarro-Patónaet at al. (2018) by using non probability sampling without control group. Sample size was 124 students with no previous knowledge of basic life support. Audio-visual aids and immediate feedback devices were used for training. As a result, teaching course using feedback devices shows the best results in terms of the quality of chest compressions, followed by the traditional course and audio-visual approach. These favorable results were present in both male and female.

A randomized control trial on simulation versus standard training for medical student was conducted by Eric McCoye et al. (2019). Sample size of the study was 74 and they were divided into two groups, on group for simulation and other for standard training. The use of high-fidelity simulation has also shown benefit in CPR knowledge, skills, acquisition, retention, and advanced resuscitation in the disciplines of nursing and pharmacy. An early systematic review and meta-analysis evaluating simulation technology for resuscitation training recommend that simulation-based training for resuscitation is highly effective.

A Quasi-experimental interventional study was conducted by Goduhan et al. (2015) on to find out the Effectiveness of Basic Life Support Training on Knowledge of Life Saving Skills among College student. Total 1500 sample were included in this study and grouped in three divisions according to

their knowledge scores as poor, good and excellent. Scores was obtained from pre and post training assessment where 883 participants in the poor category who all improved skills after training as in the post test results none of them found in poor category. There were only eight participants in the excellent category before intervention which increased to 1188 in excellent group of knowledge after training intervention. As a result, planned teaching and demonstration is great solution for improving knowledge, about CPR in cases of emergency and lifesaving situations.

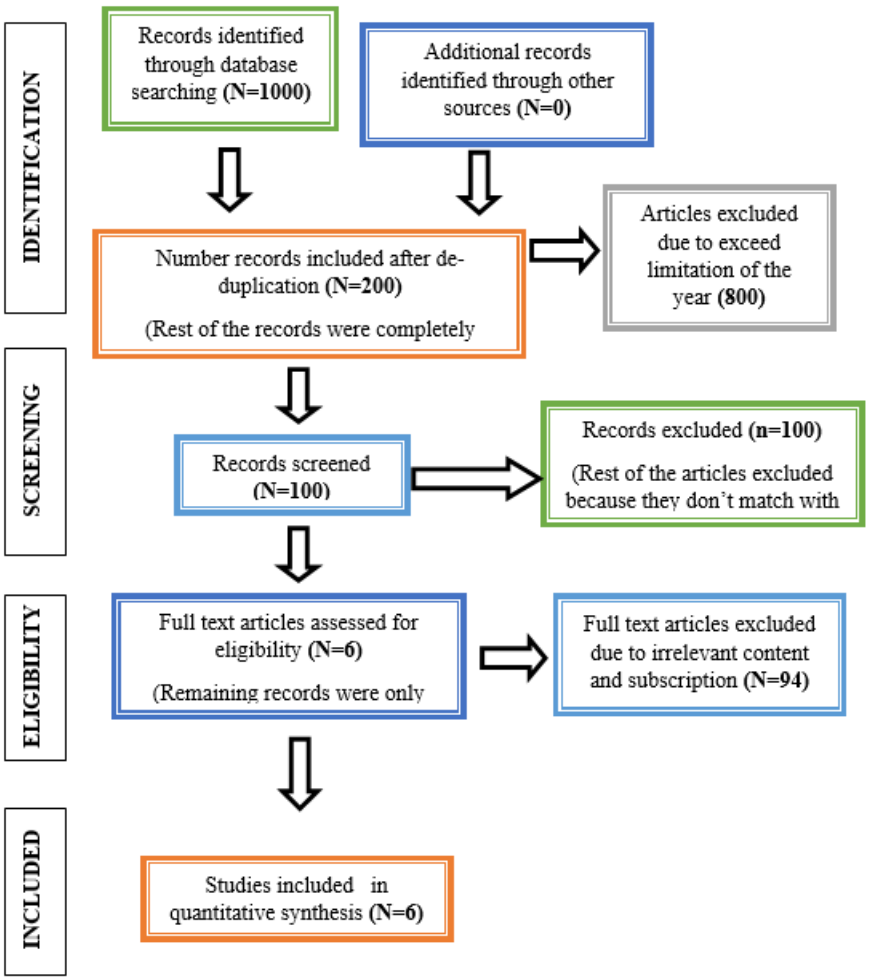

Figure 2: *Prisma flow diagram of narrative review*

2. Findings

The systematic search was conducted by formulating the terms separately and in integration with all synonyms, also according to the database. Likewise, a manual Google scholar search was undertaken using the keywords and search synonyms from already articles. An addition of 6 articles was found in the database. Initial search recovers1000 articles over which 200 articles were selected manually.100 articles were rejected as a result of replication in the database. Replication was removed and reviewed 100 articles for acceptability.94 more studies were rejected because of unreachable of the full text. Hence, 6 articles were screened which includes quantitative study.

3. Discussion

These findings are supported by a study conducted by Maria Pichel-aquasi-experimental study with no control group, reported that simple training program for school teachers were able to perform the BLS sequence and to produce chest compression with a quality similar to that obtained by staff with a duty to assist cardiac arrest victim. Result suggests that training for non-medical faculty on BLS, which is significant to be able to train student as well as they will be able to take prompt decision and perform CPR in outside hospital cardiac arrest.

4. Conclusion

Systematic review and meta-analysis evaluating simulation technology for resuscitation training recommend that simulation-based training for resuscitation is highly effective. There was a significant change in mortality rate outside hospital cardiac arrest thus it is effective methods for acquiring skill and knowledge for BLS. Therefore, this intervention should be encouraged for non-medical faculty.

Source of Funding

Self-funding

Conflict of Interest

Nil

References

Danniel, R. and Evangeline, D. 2018. Impact of simulation based BLS training among the medical student. *National Journal of Physiology, Pharmacy and Pharmacology*, 8(12), pp.1635-1640.

Eric McCoy, C., Rahman, A., Rendon, J.C., Anderson, C.L., Langdorf, M.I., Lotfipour, S. and Chakravarthy, B. 2019. Randomized controlled trial of simulation vs. standard training for teaching medical students' high-quality cardiopulmonary resuscitation. *West J Emerg Med.*, 20(1), pp.15-22.

Goduhan, A.K., Kshirsagar, A.Y. and Zagade, T.B. 2015. Effectiveness of BLS training on knowledge of life saving skills among college students. *International Journal of Science and Research*, 6(6), pp.2724-2735.

Navarro-Patóna, R., Freire-Tellado, M., Basanta-Camiño, S., Barcala-Furelo, R., Arufe-Giraldez, V. and Rodriguez-Fernández, J.E. 2018. Effect of 3 basic life support training programs in future primary school teachers. A quasi-experimental design. *Medicina Intensiva (English Edition)*, 42(4), pp.207-215.

Olatunji, I. 2019.Theoretical Knowledge and psychomotor skill acquisition of BLS training program among secondary school student. *World J Emerg Med.,* 10(2), pp.81-87.

Sansari and Susan et al. Effect of BLS training program on knowledge and practice among administrative employee of health institute. *Journal of Nursing Education and Research*, 6(2).

Tobase, L., Ciqueto Peres, H.H., Sartorelli Tomazini, E.A., Valentim Teodoro, S., Bruna Ramos, M. and Facholi Polastri, T. 2017. Basic life support: evaluation of learning using simulation and immediate feedback devices. *Revista Latino-Americana de Enfermagem*, 25.