Community and Public Health Nursing

Corresponding address
Red Flower Publication Pvt. Ltd.
48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-22756995, 22754205, 45796900
E-mail: info@rfppl.co.in
Web:www.rfppl.co.in

Community and Public Health Nursing (CPHN) focuses on health care issues relevant to all aspects of community practice - schools, homes, visiting nursing services, clinics, hospices, education, and public health administration. Well-researched articles provide practical and up-to-date information to aid the nurse who must frequently make decisions and solve problems without the back-up support systems available in the hospital. The journal is a forum for community and Public health professionals to share their experience and expertise with others in the field. CPHN aims to provide worldwide access to timely research and practice features of use to public health nurses, administrators, and educators in the field of public health nursing. Its scope is the range of population-based concerns and interventions in which nurses are involved. The journal emphasizes scholarship on vulnerable populations. Articles include research studies, program evaluations, practice concepts, and educational features published with the goal of replication and development, and theory, education, methods, policy, and ethical and legal papers that stimulate discussion and public debate. Authors from all disciplines are invited to submit manuscripts relevant to Community and public health nursing. Authors who have questions about the appropriateness of a manuscript for publication in this journal are encouraged to communicate with the Editors prior to submission.

Subscription Information

India

Individual

1 year	Rs.1000
Life Subscription (Valid for 10 Years)	Rs.10000
Institutional (1 year)	Rs.5000

Rest of the World

Individual (1 year)	USD50
Insitutional (1 year)	USD500

PAYMENT METHOD

By cheque/Demand Draft:

Cheque should be in the name of **Red Flower Publication Pvt. Ltd**. payable at Delhi.

By Bank Transfer/TT:

Bank name: Bank of India

Swift Code: BKIDINBBDOS

Account Name: Red Flower Publication Pvt. Ltd.

Account Number: 604320110000467

Branch: Mayur Vihar Phase-I

Delhi – 110 091 (India)

Send all Orders to: Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-45796900, 22754205, 22756995, E-mail: sales@rfppl.co.in.

Community and Public Health Nursing

Volume 1 Number 2
July - December 2016

Content

Original Articles

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.1

Assessment of Knowledge Regarding Food Hygiene among Mothers with Underfive Children in Maraimalai Nagar, Kancheepuram District

Okwuchukwu Promise Rose*, M. Hemamalini, Silambuselvi*****

Abstract

Food is an important and basic biological need of man. Food is the foundation of good health. it is a good culture medium and a potential carrier of infection, Cleanliness and care should be maintained in handling. There is need for mothers to understand the knowledge, attitudes, practices of on food safety. The objective of the study was to assess the level of knowledge regarding food hygiene among mothers with under five children in Maraimalai Nagar. Quantitative approach and descriptive survey design was adopted for the study. A total of 40 samples were selected using non probability purposive sampling technique in Maraimalai Nagar. The instrument used for the study comprises of 2 sections, section A was demographic data which includes age, religion, educational status, income per month, type of drinking water and section B was a structured questionnaire developed by the investigator which included 30 questions to assess the knowledge regarding food hygiene among mothers with under five children. The data was collected from the 40 samples and the analysis was done using descriptive and inferential statistic. The study findings concluded that among 40 mothers 18(45%) mothers had moderate knowledge and 17(42.5%) mothers had adequate knowledge on Food hygiene which implies that nurses should play a vital role in enhancing the knowledge on food hygiene among under five mothers.

Keywords: Food Safety; Mothers; Food Borne Illness; Food Hygiene; Children.

Introduction

Food is an important and basic biological need of man. Food is the foundation of good health .it is a good culture medium and a potential carrier of infection. Young children have higher risk than adult of having foodborne illness due to their undeveloped immune system and lower body weight. Foodborne illness can result to long term health consequences and even death, especially in young children. Approximately one half of reported foodborne illness occurs in children (Pew Health Group. Children, 2009) and an estimated one-third of all related costs ($2.3 billion dollars per year) are due to illnesses in infants and children under the age of 10 (Buzby, 2001). The increased risk for foodborne illness (Albrecht and Nagy-Nero, 2009 and Gerba et al., 1996) among children is due to their under-developed immune system, lower body weight, and limited control over meal preparation (Buzby, 2001). Children are disproportionately affected by five foodborne microorganisms; Campylobacter, Escherichia coli O157:H7, Listeria, Salmonella, and Shigella(Pew Health Group, 2009). Infants (under one year of age) have the highest reported cases of salmonellosis and campylobacteriosis(CDC, 2005; Fullerton et al., 2007 and Jones et al., 2006) [1].

Number of survey has been conducted to determine food safety attitudes, knowledge and practice of mothers of infants and children indicate

Author's Affiliations: *B.sc (N) Final Year, **Associate Professor, ***Assistant Professor, S.R.M. College of Nursing, SRM University, Kattankulathur, Kancheepuram District Pin Code: 603203 TamilNadu India.

Corresponding Author: M. Hemamalini, Associate Professor, S.R.M. College of Nursing, SRM University, Kattankulathur, Kancheepuram District Pin Code : 603203 TamilNadu India.
E-mail: hemasrini1979@yahoo.com

a need for food safety message (kwon et al 2008 and trepka et al 2007)[2]. In the world contaminated food contributes to 1.5 billion cases of diarrhea in children each year, resulting in more than three million premature deaths [3]. In South East Asia, approximately one million children under five years of age die each year from diarrheal diseases after consuming contaminated food and water [4].

Food safety is an increasingly important public health issue to prevent or control food borne illnesses. Food borne illnesses comprise a broad spectrum of diseases and are responsible for substantial morbidity and mortality worldwide. In response to the increasing number of food borne illnesses, Governments all over the world are intensifying their efforts to improve food safety

The mothers who prepare all the food in the household,should be aware and take vital role in reduce the number of illness caused by foodborne diseases among under five children. The purpose of this quantitative and descriptive design was to explore the food safety knowledge, in families with under five children. In order to prevent foodborne illness in children below five years of age, the mothers should maintain good cleanliness and adapt good cooking methods and serve methods of cooking. The cooking area should be kept clean and neat, and in order to maintain good health one should maintain good culture medium and prevent potential carrier of infection.

Materials and Methods

Quantitative approach and descriptive survey design was adopted for the study. The variables studied were- study variable and demographic variables. The study variable was knowledge of food hygiene among mothers whereas the demographic variables includes age, education, religion, income per month, type of drinking water facilities available at home. The study was conducted in Maraimalai Nagar, Kancheepuram district.. The setting was chosen on the basis of feasibility in terms of availability of adequate samples and co-operation extended by mothers in various houses. The accessible population includes the mothers with under five children in Maraimalai Nagar. Sample consisted of the mothers who fulfilled the inclusion criteria. The sample size for the study was 40. Non probability purposive sampling technique was adopted to select the samples for the study. The Inclusion criteria comprised of the mothers with under five children from 20 years to 40 years of age ,mothers with under five children who can able to read and understand Tamil. The exclusion criteria includes mothers who were not co-operative and not willing to participate in the study

Instruments

Instrument used for data collection was structured questionnaire developed by the investigators which consists of two sections

Section A: Questionnaire to assess the demographic variables of the samples.

Section B: Structured questionnaire to assess the knowledge on food hygiene among mothers with underfive children which includes 30 questions

The items of the instrument was established on the basis of opinion of nursing experts Suggestions were incorporated in the tool. The reliability of the tool was done by test retest method. The r value was 0.82 which indicated a positive co-relation to proceed for the main study. The proposed study was approved by the dissertation committee of SRM college of Nursing, SRM university, Kattankurathur, Kancheepuram district, Permission was obtained from the Dean, SRM college of Nursing and authorities of selected area. Informed consent was obtained from each participant for the study before starting data collection.

After obtaining formal approval from administration, Maraimalai Nagar ward counselor. The investigator explained the objectives and method of data collection. Data collection was done within given period of 2 weeks . The data collection was done during the day, self-introduction about the researcher and details about the study was explained to the samples and their consent was obtained. The knowledge of food hygiene was assessed among mothers with under five children using the tool. The confidentiality of the data and finding were assured to the participants, the participants took 20 min to complete the tool and their co-operation was imperative. Descriptive statistics such as frequency and percentage distribution was used to analyze the data collected. Inferential statistics - chi square was used to find out the association.

Results

Demographic Profile of Mothers

Considering age 32.5% of mothers were in the age group of less than 20years of age, 57.5% were in the age group of 21-40years of age. With regard to

religion 90% of mothers are Hindu's and 10% of mothers are Christians. Regarding Educational status of mothers 15% of mothers had no formal education, 27.5% of mothers had undergone primary education and 57.5% of mothers has undergone high school. 77.5% of mothers had monthly income of Rs 5000 and above, 7.5% mothers had monthly income of Rs.4000-5000 and 15% of mothers has monthly income of Rs 3000-4000. The mothers utilizes different types of drinking water, 37.5% takes tap water, 30% takes mineral water 30% takes bore well water.

Table 1 depicts that among 40 mothers, 18(45%) mothers had moderate knowledge and 17(42.5%) mothers had adequate knowledge and only 5 (12.5%) mothers had inadequate knowledge on Food hygiene

Table 2 highlights the Mean and Standard deviation of the knowledge of mothers regarding Food hygiene

Table 3 revealed that age and educational status of the mothers with underfive children had association with the knowledge score at P=0.05 level.

Table 1: Assessment of knowledge regarding food hygiene among mothers with underfive children n=40

Level of knowledge	Frequency	Percentage
Adequate	17	42.5
Moderately adequate	18	45
Inadequate	5	12.5

Table 2: Mean and standard deviation of knowledge regarding food hygiene among mothers with under five children N=40

Total score of the Knowledge questionnaire	Mean	SD	Minimum	Maximum	Range
30	18.73	5.51	7	28	21

Table 3: Association between knowledge score and demographic variables n=40

Demographic Variables		N	Mean	SD	Oneway Anova F-test/t-test
Age	18- 20 years	13	16.07	5.15	
	21 - 40 years	23	20.09	4.40	**χ2=3.26p=0.05***
	41-45 years	4	20.55	5.49	
Religion	Hindu	36	18.58	5.48	χ2=0.48 p=0.63
	Christian	4	20.00	6.48	
Education status	No formal education	6	16.33	6.06	**χ2=3.29 p=0.05***
	Primary education	11	19.09	4.07	
	High school	23	19.17	4.10	
Monthly income	Above Rs.5000	31	18.94	5.21	χ2=0.91 p=0.40
	Rs.4001-5000	3	21.33	3.06	
	Rs.3000-4000	6	16.33	7.71	
Type of drinking water facilities available at home	Tap water	15	18.87	5.82	χ2=0.01p=0.98
	Mineral water	13	18.77	5.99	
	Bore well water	12	18.50	5.05	

Discussion

The increased risk and disproportionate prevalence of foodborne illness among young children requires safe food handling by main food preparers to reduce serious health consequences and associated costs. Another possibility of where minority populations may experience greater risks for foodborne illness is at the food retail or food service level. A growing body of public health research [5,6,7] has demonstrated that low income and minority populations have different patterns of access to food at the retail level. The purpose of the present study was to assess the knowledge on food hygiene among mothers with underfive children . The study results revealed that majority 18(45%) mothers had moderate knowledge regarding food hygiene.

Avita A,Usfar, Dwi N,Iswarawanti,Devy Davelyna, Drupadi Dillon(2010) conducted qualitative study on Hygiene Perceptions and Practices among Caregivers whose Children Have Diarrhea: Tangerang, Indonesia. They concluded that most mothers associated the importance of food hygiene with disease prevention, contaminating agents, and health. Mothers perceived that the importance of personal hygiene was for maintaining health and cleanliness. The majority of mothers washed their hands without soap after performing housework and cooking [8].

Sudershan R.V, Subba G.M, Pratima Rao M. Vishnu Vardhana Rao (2008) conducted a case study on Food safety related perceptions and practices of mothers in Hyderabad, India. Results revealed that High incidence of food borne illnesses was reported in the families (21%) and the community (12%). Though 48% buy packed foods, a majority (78%) do not recognize symbols on food labels. Significant associations ($p < 0.05$) were found between standard of living/literacy and certain food safety practices. Qualitative data obtained from three focus group discussions, reiterated most of the observations made in the survey. Television is the preferred medium to seek information on food safety[9].

Conclusion

The study concludes that majority 18(45%) mothers had moderate knowledge and 17(42.5%) mothers had adequate knowledge and only 5 (12.5%) mothers had inadequate knowledge on Food hygiene which implies that knowledge on food hygiene among mothers can be addressed by conducting periodical awareness programs in the community to prevent food borne illnesses among the under five children.

Acknowledgement

The investigators Acknowledge Dean, SRM college of nursing, ward counselor for granting permission to conduct the study in the selected setting , Sincere gratitude to Ms. Bhuvaneswari Lecturer, SRM College of Nursing for translating the tool into local language and thanks to all the study participants who co-operated during data collection

Conflicts of Interest

The author declares no conflict of interest.

References

1. G.M. SubbaRao, R.V. Sudershan, PratimaRao ,M. Vishnu VardhanaRao , Food safety knowledge, attitudes and practices of mothers—Findings from focus group studies in South India. Science direct. 2007; 49: 441–449.
2. J. Kwon, A.N. Wilson, C. Bednar, L. Kennon Food safety knowledge and behaviors of women, infant, and children (WIC) program participants in the United StatesJournal of Food Protection. 2008; 71 (8): 1651–1658.
3. World Health Organization Food Safety Programme "Food Safety – An Essential Public Health Issue for the New Millennium" (2002).
4. Center for Science in the Public Interest. Food Safety around the World. Washington, D.C(2005).
5. Zenk, S.; Schulz, A.; Israel, B.; James, S.; Bao, S.; Wilson, M. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. Amer. J. Public Health 2005; 95: 660–667. [Google Scholar] [CrossRef].
6. Moore, L.; Diez Roux, A. Associations of neighborhood characteristics with location and type of food stores. Amer. J. Public Health. 2006; 96: 325–331. [Google Scholar] [CrossRef].
7. Hilmers, A.; Hilmers, D.C.; Dave, J. Neighborhood disparities in access to healthy foods and their effects on environmental justice. Amer. J. Public Health. 2012; 102: 644–1654. [Google Scholar] [CrossRef].
8. Avita A. Usfar,Dwi N. Iswarawanti,Devy Davelyna, Drupadi Dillon, Hygiene Perceptions and Practices among Caregivers Whose Children Have Diarrhea: A Qualitative Study of Urban Mothers in Tangerang, Indonesia, Journal of Nutrition Education and Behavior. 2010 January–February; 42(10): 33–40.
9. R.V. Sudershan, G.M. Subba Rao Pratima RaoM. Vishnu Vardhana Rao Kalpagam Polas Food safety related perceptions and practices of mothers – A case study in Hyderabad, India. Food Control. 2008 May; 19(5): 506–513.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.2

Knowledge and Attitude Regarding Life Style Modification Related to Obesity among Adolescents at Selected Private Schools, Tirupathi

K. Lakshmi Narasamma*, B. Kokilamma, P. Sudharani***, M. Sreelatha****

Abstract

Background: Obesity is a serious health problem and its prevalence has increased dramatically over the past 20 years [1]. If current trends continue 2.7 billion adults will be overweight by 2025 from 2.0 billion in 2014. On current trends, 177 million adults worldwide will be severely obese and in need of treatment by 2025 [2]. Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults [3]. *Objectives:* To assess the knowledge regarding life style modification related to obesity among adolescents. To assess the attitude regarding life style modification related to obesity. To determine the relationship between knowledge and attitude of adolescents students regarding life style modification related to obesity. To find out the association between knowledge and attitude of Adolescents with selected socio-demographic variables. *Methodes:* A descriptive study involving 100 adolescents was self administered questionnaire. Data were collected by using systematic random sampling technique. It included data regarding socio-demographic characteristics and questions pertaining to knowledge and attitude regarding life style modification related to obesity. *Results:* Out of 100 adolescents, it was seen that 54 per cent adolelescents had moderate knowledge about lifestyle modification related to obesity , 41 per cent adolescents had moderate level attitude about life style modification related to obesity. *Conclusion:* The knowledge and attitude regarding the life style modification related to obesity is moderate. So, there is need to educate adolescents regarding life style modification about obesity as well as dietary pattern, exescises to reduce the obesity .

Keywords: Knowledge; Attitude; Obesity; Life Style Modification; Adolescent.

Obesity is a serious health problem and its prevalence has increased dramatically over the past 20 years [1]. If current trends continue 2.7 billion adults will be overweight by 2025 from 2.0 billion in 2014. On current trends, 177 million adults worldwide will be severely obese and in need of treatment by 2025 [2]. Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2). Practicing certain very simple and convenient day to day lifestyle changes, we can lead a much better and healthier life [3].

Table 1: "BMI classification"

BMI (kg/m^2)		Classification[4]
From	Up to	
	18.5	Underweight
18.5	25.0	Normal weight
25.0	30.0	Over weight
30.0	35.0	Class I obesity
35.0	40.0	Class II obesity
40.0		Class III obesity

Source: World Health Organization Retrieved 15 February 2014

Author's Affiliations: *2nd Year M.Sc (Nursing),**Assistant Professor, ***Principal I/C, College of Nursing, Sri Venkateswara Institute of Medical Sciences (SVIMS), Alipiri Road, Tirupati-517507 Andhra Pradesh.

Corresponding Author: K. Lakshmi Narasamma, 2nd year M.Sc (Nursing), College of Nursing, Sri venkateswara institute of medical sciences (SVIMS), Alipiri Road, Tirupati-517507 Andhra Pradesh.
E-mail: kamasani.lakshmireddy@gmail.com

Adolescence is the period of crucial growth. During this phase physical changes including growth, the onset of menarche for the girls, and increase in fat and muscle mass takes place. This contributes to obesity. Adolescent obesity is associated with increased morbidity and mortality in adulthood. In India among adolescent increased consumption of more energy-dense, nutrient-poor foods with high levels of sugar and saturated fats, combined with reduced physical activity (due to increased use of automated transport, technology in the home) and more passive. Leisure pursuits are suspected as major contributors to rising levels of obesity. Obesity may be caused by number of social, cultural, behavior, physiological metabolic and genetic factors that are beyond the person's control. Symptoms of obesity usually show up in the form of breathing trouble, excess accumulation of fat, insulin resistance increase in size or number of fat cells that rise in blood pressure, high cholesterol levels etc [1].

Obesity can cause a number of further problems, from difficulties with daily activities to serious health conditions. Some of the day-to-day problems that can be caused by obesity includes, breathlessness, increased sweating, snoring, difficulty doing physical activity, feeling very tired a lot of the time, joint and back pain, low confidence and self-esteem feeling isolate type 2 diabetes a condition that causes a person's blood sugar level to become too high blood pressure high cholesterol and atherosclerosis (where fatty deposits narrow your arteries), which can lead to coronary heart disease and stroke asthma metabolic syndrome [5].

World Health Organization and the National Institutes of Health have recommended that obese adults (ie, body mass index ≥30 kg/m^2), as well as those who are overweight (body mass index of 25–29.9 kg/m^2) and have comorbid conditions, lose 10% of their initial weight. comprehensive program of lifestyle modification is considered the first option for achieving this goal. Lifestyle modification, also referred to as behavioral weight control, includes 3 primary components diet, exercise, and behavior therapy. This narrative review examines weight losses achieved with this approach, as well as new developments with each of the 3 components [6].

Diet includes that low-carbohydrate, low-fat, Mediterranean, and low-glycemic load regimens. Low-fat diets, such as the Ornish diet, or as recommended by the American Heart Association, provide 10% to 20% of calories from fat and recommend plant-based foods including grains, fruits, and vegetables [6].

Physical activity plays a critical role in improving cardiovascular health in both average-weight and obese individuals. physical activity, particularly of resistance training, include sparing the loss of fat-free mass, an occurrence that may attenuate the reduction in resting-metabolic rate that accompanies weight loss. Regardless of the mechanisms of action, the message is the same overweight and obese individuals should increase their physical activity by what ever means possible to keep off the lost weight [6].

Behaviour therapy refers to a set of principles and techniques for helping obese individuals modify eating, activity, and thinking habits that contribute to their excess weight. Records of their food intake, physical activity, and body weight, which they review with their interventionist to identify areas of success and areas in need of improvement. Record keeping is expanded over time to include information about times, places, thoughts, and feelings associated with eating and physical activity. Frequent self-monitoring is a consistent predictor of both short- and long-term weight loss [6].

Methodology

After obtaining the permission from the Dr. KKR Gowtham school Tirupathi. The adolescents were aproached individually with the permission of authorities. The tools used were baseline proforma, structured knowledge questionnaire with 20 questions and fivepoint "Likert scale" with 19 items to assess the attitude regarding life style modification related to obesity. The data was collected from adolescent with informed consent. The sample was selected by systematic random sampling technique. The total 100 adolescent were by the investigator using self administered questionnaire schedule.

Inclusion Criteria

Adolescent who are studying at Dr.KKR gowtham school, adolescents who are available at the time of data collection ,adolescents who are willing to participate .

Results

Table 2 The data presented in the above table reveals that among the sample of adolescents majority (52%) are in the age up to 13 years, were

as 28 respondents are in the age group 14 years and 20 sample respondents are in the age group of above 15 years. Based on the residence of the adolescents, 81 were living in urban areas, 14 were living in rural areas, and only 5 were living at slum area. The occupational status is one of the indicator of socio economic back ground of a person, with regards to father occupational status greater proportion (45) were private employes, 38 were govt employee, only 1 was un employee. With respect to adolescents pocket money per month, 58 per cent receving 0- 100 rupees, 30 per cent receving 101-500, 12 per cent above 500 rupees. Based on the dietary habits, majority (74) of adolescents consumed mixed diet, 18 were vegetarians, 8 were non vegetarians.Based on weight of the adolescents, 53 adolescents were below 50 kgs, 23 adolescents were between 50-60 kgs, 24 were adolescent's body weight above 60 Kgs.Based on the height of the adolescents, 44 were below 150 cm, 31 were between 150-160cm, 25 were above160cm. Based on the dietary habits, majority (74) of adolescents consumed mixed diet, 18 were vegetarians, 8 were non vegetarians.Based on weight of the adolescents, 53 adolescents were below 50 kgs, 23 adolescents were between 50-60 kgs, 24 were adolescent's body weight above 60 Kgs.Based on the height of the adolescents, 44 were below 150 cm, 31 were between 150-160cm, 25 were above 160 cm.

Table 2: Frequency and percentage distribution of socio demographic variables among adolescents

Sl. No.	Socio demographic variables		Frequency (F)	Per cent (%)
1	Age			
	a)	up to 13 years	52	52%
	a)	14 years	28	28%
	b)	15 and above	20	20%
2	Standard of the study			
	a)	8 th class	55	55%
	b)	9 class	23	23%
	c)	10 th class	22	22%
3	Type of family			
	a)	Nucler family	90	90%
	b)	Joint	10	10%
4	Residence			
	a)	Urban	81	81%
	b)	Rural	14	14%
	c)	Slum	5	5%
5	Present staying with			
	a)	Parents	98	98%
	b)	Relatives	1	1%
	c)	Hostler	1	1%
6	Father education			
	a)	Illiterate	2	2%
	b)	Primary	3	3%
	c)	Secondary	6	6%
	d)	Intermediate	15	15%
	e)	Graduate	22	22%
	f)	P G and above	52	52%
7	Father occupation			
	a)	Unemployed	1	1%
	b)	Private employee	45	45%
	c)	Govt employee	38	38%
	d)	Retired/others	16	16%
8	Pocket money received per month			
	a)	0-100	58	58%
	b)	101-500	30	30%
	c)	500 Above	12	12%
9	Mother education			
	a)	Illiterate	8	8%
	b)	Primary	1	1%
	c)	Secondary	14	14%
	d)	Intermediate	16	16%
	e)	Graduate	39	39%
	f)	P G and above	22	22%

10	Mother occupation			
	a)	Home maker	74	74%
	b)	Cooli	1	1%
	c)	Private employee	14	14%
	d)	Govt employee	10	10%
	e)	Retired	1	1%
11	Family income per month			
	a)	Below 20000	51	51%
	b)	20000-40000	18	18%
	c)	above 40000	31	31%
12	Diatery habits			
	a)	Vegetarian	18	18%
	b)	Non Vegetarian	8	8%
	c)	Mixed diet	74	74%
13	Height			
	a)	below 150 cm	44	44%
	b)	150-160 cm	31	31%
	c)	above 160 cm	25	25%
14	Weight			

Table 2: Distribution of knowledge regarding regarding life style modification related to obesity among adolescents

S. No	Variable	Inadequate Knowledge		Moderate Knowledge		Adequate Knowledge	
		f	%	f	%	f	%
1	Knowledge	33	33%	54	54%	13	13%

It shows that out of 100 adolescents, 54 had moderate knowledge regarding life style modification related to obesity followed by 33 of the adolescentsof had inadequate knowledge and only 13 of the adolescents had adequate knowledge regarding life style modification related to obesity

Table 3: Distribution of attitude towards life style modificarion related obesity among adolescents

Sl. No	Level of attitude	Category	Frequency (f)	Percentage (%)
1.	Low level attitude	< 50%	19	19%
2.	Moderat level attitude	51-75%	41	41%
3.	High level attitude	Above 75%	40	40%

Table 3: Mean and standard deviation for knowledge and attitude towards obesity among adolescents

Sl. No	Category	$\bar{\chi}$ Mean	Standard Deviatation (SD)
1	Knowledge	25.4	7.89
2	Attitude	60.35	14.49
3	Total	85.75	22.28

Table 4: Correlation between the knowledge scores and attitude scores life style modification related to obesity

So. No	Variables	Mean	SD	Co - relation
1	Knowledge	25.04	7.89	r =0.334 p=0.001
2.	Attitude	60.05	14.49	highly positive correlation

Shows that 41 adolescents had high level of attitude, 40% had moderate level of attitude and 19 had low level of attitude regarding life style modification related to obesity

Mean and standard deviation scores of knowledge were 25.4 +- 7.89.with regard to attitude the mean and standard deviation scores were 60.35± 14.49. total mean and standard deviation scores were 85.75 ± 22.28.

It shows that calculated correlation coefficient (r) was 0.334 with P Value 0.001, which shows that there was statistically highly positive correlation between knowledge and attitude.

Association between the Socio Demographic Variables with Level of Knowledge

There is a significant association between level of knowledge regarding life style modification

rerlated to obesity with age, residence, father occupation ,pocket money, height were statistically significant at 0.01 level where as remaining demographic variables (standard of the study, type of family, mother occupation, family income, and dietary habits present living status, father and mother education) are not showing any significance.

Association Between Socio Demographic Variables With The Level Attitude

There is a statistically significant association between level of attitude regarding life style modification related to obesity with residence, diatery habits, father occupation were statistically significant at 0.01 level where as remaining demographic variables (age, father occupation, pocket money, height , standard of the study, type of family, mother occupation, family income, and dietary habits present living status, father and mother education)are not showing any significance.

Discussion

The discussion part according to the results ubtained from statistical analysis based on the data of the study, the reviewed literature, hypothesis which was selected for the study is to reveal the fact about assess the knowledge and attitude regarding life style modification related to obesity among adolescents .

The present study mainly concentrates on adolescent obesity the problem statement of the study was "A study to assess the knowledge and attitude regarding life style modification related to obesity among adolescents".

The first objective of the study to assess the knowledge of adolescents regarding life style modification related to obesity

Present study shows that among 100 adolescents 54 per cent were having moderate knowledge,33 per cent were having inadequate knowledge ,13 per cent were having adequate knowledge

The second objective of the study is to assess the attitude of adolescents regarding life style modification related to obesity

Present study shows that among 100 adolescents 41 per cent were having high level attitude, 40 per cent were having moderate level of attitude ,19 per cent were having low level of attitude

The third objectives of the study was to determine the relationship between knowledge and attitude of adolescents students regarding life style modification related to obesity.

Present study shows that the correlation between mean knowledge scores 25.4 and mean attitude scores 60.35 of adolescent of life style modification related obesity is highly positive correlation between knowledge scores and attitude score the compted 'r' vale between knowledge scores and attitude score obtained by adolescents was significant at 0.01level

The fourth objective of the study was find out the association among knowledge and attitude of Adolescents with selected demographic variables

There is significant associatation between the demographic variables like Age, residence, father occupation , pocket money, height leve of knowledge at $p< 0.01$ level and there is significant associatation between the demographic variables like residence, father occupation leve of attitude at $p< 0.01$ level only dietary habits at 0.05 level

Conclusion

The study findings revealed that out of 100 adolescents, (54%) had moderate knowledge regarding life style modification related to obesity followed by (33%) of the adolescents of had inadequate knowledge and only (13) of the adolescents had adequate knowledge regarding life style modification related to obesity and attitude level Shows that 41 adolescents had high level of attitude, 40% had moderate level of attitude and 19 had low level of attitude regarding life style modification related to obesity. A majority of the adolescents were having medium level of knowledge and attitude regarding life style modification related to obesity and demographic variables were statistically significant, and hence it can be concluded that, there should be improved awareness regarding life style modifications related to obesity by providing information regarding life style modifications included that dietary changes, exercises, sleepling patterns in order to improve the adolescent health.

Recommendations

A similar study needs to be conducted on a large sample size with the same problem.

A comparative study can be taken in urban and rural area to find out the effectiveness of Self

Instructional Module.

A comparative study can be done to assess knowledge and attitude and practices prevention of obesity among male and female adolescents.

A study can be counducted to assess the effectives of structured teaching on prevention of obesity among adolescents.

Aknowledgement

My heartful thanks to Mrs.B. Kokilamma, Mrs. P. Sudharani, Mrs. M. Sreelatha. I am greatly indepted to my beloved Husband and parents and brothers, sister. I am also deeply grateful to the 100 adolescents who are participated in my study. I express my sincere thanks to my friends.

References

1. Titi Xavier Mangalathil, Pushpendra Kumar, Vikas Choudhary. Knowledge and attitude regarding obesity among adolescent students of Sikar, Rajasthan. IOSR-JNHS. 2014 Mar-April; 3(2).
2. www. worldobesity.org
3. World health organization updated obesity incidence 2015.
4. BMI classification world health organization, Retrived 15 february 2014.
5. www.nhs.uk/conditions/obesity/Pages/ Complications.
6. Wadden TA[1], Butryn ML, Wilson C Lifestyle modification for the management of obesity Gastroenterology. 2007 Jul; 133(1): 371.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.3

Understanding Miseries: An Exploratory Study to Understand Coping Strategies in life style of HIV/ AIDS Affected Persons Visiting ART Center

Chakrapani Chaturvedi

Abstract

The existence of human beings is threatened by many maladies including increased incidence of HIV/ AIDS. In Indian annual HIV sentinel surveillance survey estimated an infection of 2.9 million populations by the year 2010.government of India estimate aids accountable more death rate than tuberculosis and malaria. In the present study an exploratory approach is used to find the impact of HIV/ AIDS on the life style of affected persons and the coping strategies adopted by them. The study has been taken place in ART Center at G.R. Medical College, Gwalior, and M.P. The research approach and design adopted for the study was descriptive exploratory approach. The population consisted of persons affected by HIV/ AIDS. Purposive sampling techniques were used to obtain a sample of 45 persons affected by HIV/ AIDS. 100% of the samples were in the productive age group of 26 to 45 years and majority of the affected persons (53%) were male and 47% were female. However homosexual accounted for 20% of affected persons in the sample. Majority of the sample (47%) were married, 41% were single and 6% each were either divorcee or widower. All the persons in the sample (100%) in the sample were Literate (27% Primary, 40% secondary and 33% were graduate. 77.56% affected persons uses positive coping strategies and rest negative coping strategies.

Keywords: Life Style; Persons Affected by HIV/ Aids, Coping Strategies.

Introduction

The first Acquired Immune Deficiency Syndrome (AIDS) case in India was detected in 1986 and since then Human Immunodeficiency Virus (HIV) infection has been reported in all states and union territories.

In 2009, 2.4 million people living with this condition and 170, 000 HIV/AIDS related deaths happened .The key risk groups are categorized under High Risk Groups (HRG) - Female Sex Workers (FSW), Men who have Sex with Men (MSM), Transgender (TG), and Injecting Drug Users (IDU) & Bridge Populations – Truckers, and Migrants.

National adult HIV prevalence, or the number

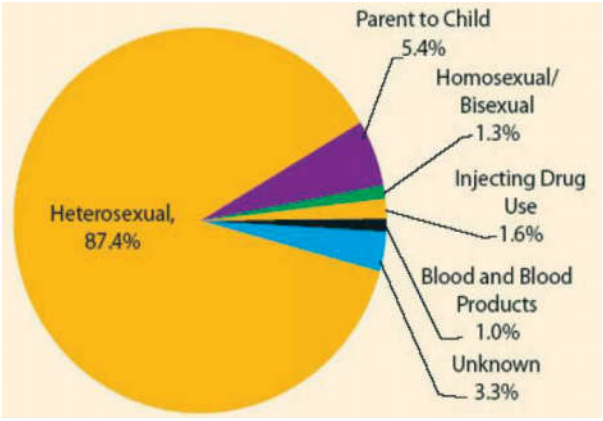


Fig. 1: Routes of transmission of HIV/ AIDS in India, 2010-2011

Author's Affiliations: Principal (Pursuing Ph.D. in Nursing, M.Sc.-Community Health Nursing), BVM Nursing College, Gwalior - 474011 M.P.

Corresponding Author: Chakrapani Chaturvedi, Principal, BVM Nursing College, Gwalior-474011 M.P.
E-mail: chakrapanijichaturvedi@gmail.com

of adults living with HIV as a proportion of the total population, has declined by over 0.10% points from 2000 to reach an estimated 0.31% in 2009.The total number of people living with HIV (PLHIV) in India is estimated at 2.4 million with uncertainty bounds of 1.93 to 3.04 million in 2009.Sex disaggregated data for number of people living with HIV is estimated at approximately 61% male and 39% female.

The percent distribution of HIV infection by age is estimated at 4.4% among children below the age of 15 years, 82.4% among adults aged 15 to 49 years and the remaining 13.2% among people over 50 years of age. Thirty-nine percent of all HIV infections are estimated to be among women. This amounts to 0.93 million women with HIV in India.

The four high prevalence states of South India account for 57% of all HIV infections in the country. Whilst Andhra Pradesh accounts for 500,000 cases; Maharashtra accounts for 420,000 cases, Karnataka accounts for 250,000 cases and Tamil Nadu accounts for150,000 cases. Over 100,000 PLHIVs are estimated in West Bengal, Gujarat, Bihar and Uttar Pradesh and together these states account for 22% of HIV infections in India.

The number of PLHIVs in Punjab, Orissa, Rajasthan and Madhya Pradesh range from 50,000 to 100,000 and these states collectively account for 12% of HIV infections. These states may have low HIV prevalence; however, a large number of PLHIVs are reported due to the states'overall population size.

Approximately 172,000 people died of AIDS related causes in 2009 in India.At national level, HIV prevalence is highest amongst the injecting drug users (IDU) at 12.22% followed by men who have sex with men (MSM) at 6.82% and female sex workers (FSW) at 5.92%. HIV prevalence amongst IDU, MSM and FSW is 14.92%, 10.31% and 9.48% respectively

Estimated Annual New HIV Infections

New HIV infections have declined by more than 50% over the past decade from 2.7 lacs in 2000 to 1.2 lacs in 2009. Of these, six high prevalence states account for only 39%, while the states of Orissa, Bihar, West Bengal, Uttar Pradesh, Rajasthan, Madhya Pradesh and Gujarat together account for 41% of new infections.

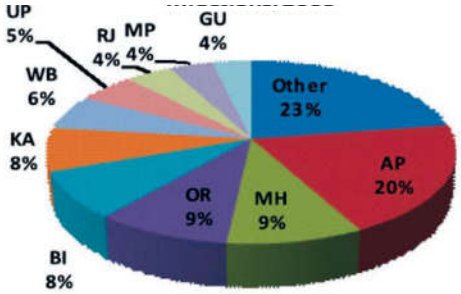


Fig. 2: State wise distribution on New HIV Infection, 2009

Objectives

The objectives of the study were:

- To the impact of HIV/ AIDS on the life style of patients suffering from it.
- To explore the various coping strategies people adopt to the impact of HIV/ AIDS.
- To determine the relationship that might exist between impacts on life style and adopted coping strategies of HIV/ AIDS.

Hypothesis

The hypothesis of the study was:

There will be significant association between the impact of HIV/ AIDS on life style and the coping strategies adopted by the infected persons.

Conceptual Framework

Conceptual model of the study was based on *Callista Roy's adaption model* (1984) it is assumed by HIV/ AIDS has impact on lifestyle and adult persons affected by HIV/ AIDS adopts coping strategies to overcome this impact.

Methodology

The research approach and design adopted for the study was descriptive exploratory approach. The population consisted of persons affected by HIV/ AIDS. Purposive sampling techniques were used to obtain a sample of 50 persons affected by HIV/ AIDS.

Variables

➢ *Independent Variable*

Impact of HIV/ AIDS

➢ *Dependent Variable*

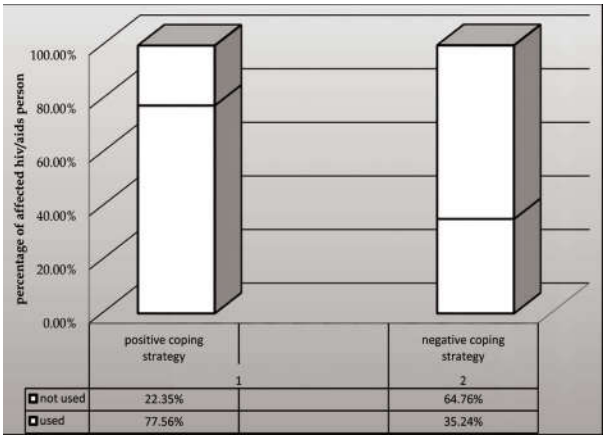
Life style and coping strategies

Conclusion

Findings in the present study showed that:

- 100% of the samples were in the productive age group of 26 to 45 years and majority of the affected persons (53%) were male and 47% were female. However homosexual accounted for 20% of affected persons in the sample.
- Majority of the sample (47%) were married, 41% were single and 6% each were either divorcee or widower.
- All the persons in the sample (100%) in the sample were Literate (27% Primary, 40% secondary and 33% were graduate).
- 100% of the adult person affected by the HIV/ AIDS talk to other patients having similar problem and also rise to get help from the qualified practitioner.
- 91% of the affected person tries to accept the situation as nothing can change.
- 69% of the affected person participated in social activity with full enjoyment.
- 16% of the affected people do meditation or relaxation technique to cope with the tense situation.
- 51% of the affected persons hide their feelings and suffer silently.
- 58% smoke/ chew tobacco and or take drugs, alcohol to get rid of their anxiety.
- 77.56% affected person's uses positive coping strategies and rest negative coping strategies.

The salient features of the study were as mentioned below:



- The Majority of the persons affected by HIV/ AIDS were males and were in the productive age group (26-45 years)
- Majority of the Persons affected were drug users and also Homosexual also accounted for good percentage of the sample.
- Majority of adult persons affected by HIV/ AIDS were facing moderate impact on their lifestyle in all the areas except in spiritual aspect. The impact on financial front was higher than the other areas.
- Some of the persons in the sample have lived for more than 10 years after the diagnosis of the disease.
- Respondents used both positive and negative coping strategies. There was association between level of impact of HIV/ AIDS on lifestyle and the level of coping strategies adopted by persons affected by HIV/ AIDS.

Implications

The findings of the study have number of implications for nursing practice, administration and education. Presence of HIV/ AIDS is known to affect the person in various ways. There has been good attention towards HIV/ AIDS patients with lots of funding for awareness of the disease and counseling of the affected persons. Besides there has been lot of awareness amongst the mass to understand the disease and not to discriminate and ill treat the affected persons. The various identified measure to manage the disease need to be reached out to a wider population in order that, the patient and society adjust effectively the HIV/ AIDS affected persons.

Nursing Practice

In the area of nursing practice nurses:

- Should help the HIV/AIDS affected persons to express, recognize and develop positive attitude towards the disease. It will provide more benefits to them and to others.
- Nurses should involve themselves in regular teaching session.
- Should conduct the special lecturer on HIV/ AIDS in educational institution for students or in community to increase the public awareness and remove misconception about the disease, thereby strengthening the community support system.
- Can participate in setting HIV/ AIDS ART unit and also conduct the home visits to guide, supervise and provide individual/ group

consultation and training for HIV/ AIDS patients on Management of the impact on their lifestyle. It enables the affected person to adjust better with their life.

Nursing Administration

In the event of ever growing challenges in community health nursing, nurse administrators have a responsibility to provide nurses with staff development opportunities. This would enable the nurses to update their knowledge, acquire skills on community engagement and handle serious situations, develop favorable attitude and demonstrate quality care in management of HIV/ AIDS patients and their families.

The nurse administrator should look after the special clinics, community health center, and ART center and provide adequate support with money, material and manpower for conducting teaching programs and developing teaching material or self instructional module regarding management of persons affected by HIV/ AIDS.

Nursing Education

Nursing students should be provided with learning experiences in planning and organizing health education programs on prevention, early detection and management of HIV/ AIDS.

Community health nursing experts should conduct programs for the nurses, community health workers, personnel in the ART centers, so that they can update their knowledge and abilities to deal with the impact of HIV/ AIDS and to adopt effective coping strategies.

General Education

- There should be awareness for early diagnosis of the disease.
- Test of the disease should be a mandatory practice before marriage so that the innocent partners are not victimizing knowingly of unknowingly.
- Education and health authorities should increase their efforts and invest more monetary funds in order to provide appropriate education and training to HIV/ AIDS patients.
- There is a strong need to have rehabilitation centers to conduct counseling of HIV/ AIDS patients.

Limitations

- The study was confined to a 45 affected persons in the selected ART center in Gwalior.
- This limits generalization beyond the study sample of adult persons affected by HIV/ AIDS.
- Findings were purely based on verbal responses of patients.
- The tools used for data collection had to be developed for the purpose of study. Hence, the tool was not standardized.

Reference

1. Department of AIDS Control (2010) Annual Report 2009-2010.
2. DFID India & CDC (2009-2010) Analysis of Program Assumptions and Targets.
3. ILO (2009) An Assessment of implementation of HIV-AIDS Work Place Policies.
4. McKinsey and company (2009) Organizational Diagnostic of NACO and Selected SACS.
5. Ministry of Health and Family Welfare (2009) Annual Report 2008-2009.
6. NACO & UNICEF (2006, 2007, 2008, 2009) Policy Framework for Children, AIDS & Operational Guidelines for second line ART.
7. National AIDS Control Organization (NACO), Department of AIDS Control, Ministry of Health and Family Welfare, Government of India, New Delhi, Behavioral Surveillance Survey 2006, NACO.
8. National Rural Health Mission (2008- 2009) State Wise Reports.
9. UNAIDS India. Report on the UNGASS Regional Consultation with Civil Society in Madhya Pradesh. 2010.
10. UNDP. Study on Levels of HIV Related Stigma among the Health Workers in India. 2009.
11. WHO-UNICEF-UNAIDS. Progress towards Universal Access in India 2009.
12. World Bank- Development Partners. Aide Memoire: Third Joint Implementation Review Mission of the NACP III, 8-19 December 2008.
13. Sample Registration System, Sample Registration System Report, 2008, Office of the Registrar General, India.
14. Registrar General of India. Population Projection for India and States 2001-2026: Report of the Technical Group on Population Projections, Constituted By The National Commission On Population, Office Of The Registrar General and Census Commissioner, India, New Delhi, May 2006.

15. International Institute for Population Sciences (IIPS) and Macro International, 2007, National Family Health Survey, 2005-06 (NFHS-3), IIPS, Mumbai.
16. A. Pandey, D. C. S. Reddy, P. D. Ghys, M Thomas, D Sahu, M Bhattacharya, K. D. Maiti, F. Arnold, S.Kant, A. Khera and R. Garg, Improved estimate of India's HIV burden, Indian Journal of Medical Research. 2009 January; pp. 50-58.
17. D. Bachani, R. Sogarwal and K.S. Rao, A population based survey on HIV prevalence in Nagaland, India, SAARC Journal of Tuberculosis and Lung Diseases: HIV/AIDS. 2009; 1(1): 1.
18. P. D. Ghys and G. P. Garnett, the 2009 HIV and AIDS Estimates and Projections: Methods, Tools and Analyses, Sexually Transmitted Infections, 2010,Vol.86:ii1-ii2doi:10.1136/sti. 2010. 047852.
19. T. Brown, L. Bao, A. E. Raftery, J. A. Salomon, R. F. Baggaley, J. Stover and P. Gerland, Modeling HIV Epidemics in the Antiretroviral Era: the UNAIDS Estimation and Projection Package 2009, Sexually Transmitted Infections. 2010; 86: ii3-ii10 doi:10.1136/sti.2010.044784.

Community and Public Health Nursing

Library Recommendation Form

If you would like to recommend this journal to your library, simply complete the form below and return it to us. Please type or print the information clearly. We will forward a sample copy to your library, along with this recommendation card.

Please send a sample copy to:

Name of Librarian

Name of Library

Address of Library

Recommended by:

Your Name/ Title

Department

Address

Dear Librarian,

I would like to recommend that your library subscribe to the c**ommunity and Public Health Nursing**. I believe the major future uses of the journal for your library would provide:

1. useful information for members of my specialty.
2. an excellent research aid.
3. an invaluable student resource.

I have a personal subscription and understand and appreciate the value an institutional subscription would mean to our staff.

Should the journal you're reading right now be a part of your University or institution's library? To have a free sample sent to your librarian, simply fill out and mail this today!

Stock Manager
Subscription and Marketing Manager
Red Flower Publication Pvt. Ltd.
48/41-42, DSIDC, Pocket-II
Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-45796900, 22754205, 22756995
E-mail: sales@rfppl.co.in

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.4

A Study to Assess the Knowledge of Adolescent Girls towards Teenage Pregnancy at Selected Government Junior Colleges, Tirupathi

P. Manjula*, M. Sreelatha, P. Sudharani*****

Abstract

Background: Adolescent is derived from Latin word meaning is to grown up. Adolescents comprise 20% of the world's total population, out of 1.2 billion Adolescents worldwide, about 85% live in developing countries. In India, there are 190 million adolescent's comprising 21% of India's total populations. Teenage pregnancy is an important public health problem in both developed and developing countries, as it is a 'high risk' or 'at-risk' pregnancy due to its association with various adverse maternal and foetal outcomes which results in increased mortality and morbidity of the mother and the child. *Objectives:* To assess the knowledge of adolescent girls towards teenage pregnancy. To find out the association between knowledge of adolescent girls towards teenage pregnancy with their selected socio demographic variables. To prepare information booklet of knowledge towards teenage pregnancy. *Mehods:* A descriptive study involving 100 adolescent girls was carried out with self administrated schedule. Data were collected using a structured questionnaire and purposive sampling technique. It included data regarding socio- demographic characters tics and questionnaire pertaining to knowledge of adolescent girls towards teenage pregnancy. *Result:* Out of 100 participants, 34% of father's were intermediate, 32% of mother's were primary education and 55% of family income per month. It was seen that 41% adolescent girls had moderate knowledge,34% had adequate and 25% had inadequate knowledge towards teenage pregnancy. 96% participants knew about the first sign of pregnancy that is absence of menstrual cycle. *Conclusion:* The knowledge of adolescent girls have towards teenage pregnancy is moderate. So, there is need to educate the adolescent girls towards teenage pregnancy, in order to reduce maternal and child mortality and morbidity rates.

Keywords: Adolescent Girls; Teenage Pregnancy; Knowledge.

Introduction

Adolescent is derived from Latin word meaning is to grown up. Adolescents comprise 20% of the world's total population, out of 1.2 billion Adolescents worldwide, about 85% live in developing countries [1]. In India, there are 190 million adolescent comprising 21% of India's total populations. Teenage pregnancy is an important public health problem in both developed and developing countries, as it is a 'high risk' or 'at-risk' pregnancy due to its association with various adverse maternal and foetal outcomes which results in increased mortality and morbidity of the mother and the child. Early childbearing is associated with various health risks for both mother and child, teenage pregnancies are considered problematic because complications from pregnancy and childbirth are the leading causes of death in teenage girls aging between 15and 19 years in developing countries. It is estimated that 70,000 female teenagers die each year because they are pregnant before they are physically mature [2].

World Health Organization defines Teenage

Author's Affiliations: *2nd year M.Sc (Nursing), **Assistant Professor, Principal I/C, College of Nursing, Sri Venkateswara Institute of Medical Sciences (SVIMS), Alipiri Road, Tirupati-517507 Andhra Pradesh.

Corresponding Author: P. Manjula, 2nd year M.Sc (Nursing), College of Nursing, Sri venkateswara institute of medical sciences (SVIMS), Alipiri road, Tirupati-517507 Andhra Pradesh.
E-mail: manjulaparusu@gmail.com

Pregnancy as "any pregnancy from a girl who is 10-19 years of age", the age being defined as her age at the time the baby is born. Often the terms "Teenage pregnancy" and "Adolescent pregnancy" are used as synonyms. According to UNICEF, worldwide every 5th child is born to teenage mother. Worldwide 13 million births each year occur to girls younger than 19 years. The incidence of teenage pregnancies varies dramatically between the different countries. Approximately 90% of the teenage births occur in developing countries, although the teenage pregnancy and birth rate of developed countries are significantly lower than that of developing countries [2].

Adolescent pregnancy occurring in girls aged 10-19 years remains a serious health and social problem worldwide and has been associated with numerous risk factors evident in the young people, family, peer, school and neighbourhood contorts [2]. Teenage pregnancy varies from country to country and from region to region within the same country. Factors that are associated with teenage pregnancy include rapid urbanization, low socio-economic status, child marriages, gender in equality, poverty, sexual abuse, dating violence, career aspiration, residence in a single parent home, poor family relationship, low education, lack of access to education, lack of school or career goals, low academic achievement, poor school performance or dropping out of school, educational failure, unemployment, low self-esteem, early use of alcohol and/or other substance use, media influence, and reproductive health services [2,5].

symptoms of pregnancy in teenagers are similar to the symptoms in adult pregnancy and include missed period, fatigue, and breast tenderness, distension of abdomen, nausea/vomiting, light-headedness or actual fainting there are usually weight changes, examination may show increased abdominal girth, and the fundus may be palpable, pelvic examination may reveal bluish or purple coloration of vaginal walls, softening of the cervix and enlargement of the uterus. A pregnancy of urine and/or serum HCG is usually positive, an obstetric scan confirms accurate dates for pregnancy, it also tells about the wellbeing of the foetus [4].

Teenagers had a significantly higher risk of poor maternal weight gain, anaemia, gestational hypertension, pre-eclampsia, obstructed labour, small for gestational age, low birth weight and spread of sexually transmitted infections [8]. Adolescent pregnancy has been associated with some countries complications of un safe abortions are leading cause of death among adolescent women. Teenage mothers have a higher incidence of low birth babies these babies are usually associated with birth injuries, serious childhood illness and mental and physical disabilities. The incidence of low birth weight, the neonatal death rate is almost three times higher, low birth weight and prematurity raise the probability of a number of adverse conditions, including infant death [2,3].

Adolescent pregnancy is associated with higher rates of morbidity and mortality for both the mother and infant. Teenage mothers are at greater risk of socioeconomic disadvantage throughout their lives [3]. Many social factors have been associated with poor birth outcomes, including poverty, unmarried status, usually terminates a girl's educational career, school interruption, teenage mothers are at greater risk of lower intellectual and academic achievement, threatening her future economic prospects, earning capacity, limited vocational opportunities, persistent poverty, drug abuse, Psychosocial problems, separation from the child's father, divorce, and to become dependent on welfare, and overall well being [4].

Prevention of Adolescent Pregnancy is Prevent the marriage at teenage can only eliminate teenage pregnancy in developing countries where early marriage is a common practice, directed at delaying the initiation of early marriages. An approach for prevention of teen pregnancy will be to create awareness through abstinence education program, clinic-focused program to bring about behavioural changes in the teens. Early childbearing can be postponed by delaying early marriage and delaying the timing of the first birth through the effective use of family planning methods [4].

Adolescent sex education to prevent teenage pregnancy has recently gained importance for rise of STD's, premarital sex and pregnancy. Adolescent clinics should provide easier access to information, counselling by health care providers, and contraceptive services programs have addressed the challenging issue of prevention of adolescent pregnancy [7]. Effective and successful programs include multiple approaches to the problem, such as abstinence promotion, contraception availability, sexuality education, school completion strategies, and job training [8]. Primary prevention (first pregnancy) and secondary prevention (repeat pregnancy) programs are both needed, the global problem of adolescent pregnancy is common and has become a key public health concern for all. In order to reduce the rate of early child bearing adolescents, their parents and community should be made more aware of the negative health, social and economic

consequences of it. Such awareness could be created through social mobilization, information dissemination, sex education and communication campaigns. Each and every aspects of teenage pregnancy should ideally be dealt with carefully and sensibly to reduce the occurrence, complications and societal burden [4] .

Methodology

After obtaining permission from principal government jr college, Tirupati. The data was collected from adolescent girls in Academy of Gandhi an studies with informed consent included in the study. The sample was selected by purposive sampling technique. The total 100 adolescent girls were selected by the investigator using self administrated schedule.

Inclusive Criteria

Who are studying in intermediate. Are willing to participate in the study. Are accessible during data collection. Are in the age group of 15 to 19 years. Are only female Are studying in selected Govt junior college.

Result

Table 1: Frequency and percentage distribution of demographic variables among adolescentgirls

S. No	Socio Demographic Variables	Frequency (F)	Percentage (%)
1	Age in years		
	15	36	36%
	16	64	64%
2	Standard of studying		
	Inter 1st Year	40	40%
	Inter 2nd Year	60	60%
3	Father Education		
	Illiterate	23	23%
	Primary Education	19	19%
	Secondary Education	11	11%
	Intermediate	34	34%
	Graduate	13	13%
4	Father Occupation		
	Un employee	3	3%
	Private employee	20	20%
	Govt employee	7	7%
	Retired/others	51	51%
	Daily wages	19	19%
5	Mother Education		
	Illiterate	20	20%
	Primary education	32	32%
	Secondary education	14	14%
	Intermediate	20	20%
	Graduate	14	14%
6	Mother Occupation		
	Home maker	36	36%
	Un employee	14	14%
	Private employee	11	11%
	Govt employee	23	23%
	Retired/others	16	16%
7	Type of Family		
	Nuclear family	84	84%
	Joint family	13	13%
	Single parent family	3	3%
8	Income		
	Rs, 5000-10000	55	55%
	Rs10001-15000	13	13%
	Rs15001- 20000	12	12%
	above 20000	20	20%

9	Religion		
	Hindu	90	90%
	Muslim	5	5%
	Christian	5	5%
10	Place of Residence		
	Urban	37	37%
	Rural	58	58%
	Slum	5	5%
11	Sources of Information		
	Parents	28	28%
	Friends/peer group	13	13%
	Books	23	23%
	Mass media	36	36%

Table 2: Distributionof knowledge levels regarding Teenage pregnancy among

S. No	Level of knowledge	Catery	Frequency (f)	Percentage (%)
1	Inadequate	0-27%	25	25%
2	Moderate	28%-40%	41	41%
3	Adequate	41-54%	34	34%

Table1 shows that 36% of adolescent girls belonged to age group of 15 years followed by 64% of adolescent girls to the age group of 16 years. Considering standard of studying, it shows that majority (60%) of adolescent girls were intermediate 2nd year and 40% were intermediate 1st year. Regarding educational status, 23% of Father's adolescent girls were illiterate, 19% were primary education, 11% were secondary education, 34% were intermediate, and remaining 13% were graduates respectively. With respect to occupation 3% of Fathers were un employees, 20% were private employees, 7% were government employees, 51% were retired/others, 19% are doing daily wages. Regarding educational status 20% of mother's of adolescent girls were illiterates, 32% were primary education, 14% were secondary education, 20% were intermediate and 14% were had graduates. With respect to occupation, of mother's of adolescent girls were 36% were homemakers, 14% were un employees, 11% were private employees, 23% were Government employees, and 16% were retired/ others. Regarding type of family, 84% of the adolescent girl belongs to nuclear family, 13% were of them were belongs to joint family, 33% were adopted single parent family. When family income per month was taken in to consideration majority (55%) of adolescent girls family income was Rs 5000-10000, 13% adolescent girls family income was Rs 10001-15000, 12% adolescent girls family income was 15001-20000, and 20(20%) family income was above 20000 respectively. As for as religion was concerned most (90%) of adolescent girls were from Hindus, 5% of adolescent girls were from muslims, very few 55% of adolescent girls from christians.Considering place of residence 37% of adolescent girls were belongs to urban area, 58% of adolescent girls were belongs to rural area, and very few 5% of adolescent girls were belongs to slum areas.When sources of information 28% of adolescent girls were from parents, 13% of adolescent girls from friends/peer groups, 23% of adolescent girls from books, and 36% of adolescent girls from mass media.

Table 2 shows that 25% of adolescent girls had inadequate knowledge, 41% had moderate knowledge and 34% had adequate knowledge.

Table 3: Mean and standard deviation on knowledge of adolescent girls towards teenage pregnancy

Mean	Standard Deviation
33.54	10.68

Table 3 depicts that the mean knowledge score was 33.54 and the standard deviation was 10.68.

Disscussion

The study was under taken to "assess the knowledge of adolescent girls towards teenage pregnancy at selected Government junior colleges, Tirupati". The discussion of the present study is based on the findings obtained from descriptive and inferential statistical analysis of collected data. It is presented in view of the objectives of the study.

The First Objective of the study was, To assess the level of knowledge among adolescent girls towards teenage pregnancy. Present study shows that out of 100 adolescent girls 25 (25%) had inadequate knowledge, 41(41%) had moderate knowledge, and 34(34%) had adequate knowledge.The findings were supported by a qualitative study conducted by Rachel lebese, (2015)

conducted a study on knowledge, attitudes and perception of students on teenage pregnancy rural based university students in South Africa. Explorative and descriptive design was used. The population included all tertiary students from one selected institution. Non-probability convenience sample was used to sample 110 participants (58 females and 52 males) for focus groups discussions. Purposive sampling was used to select 17 female students, ten (10) pregnant and seven that delivered a baby whilst at university for in-depth interviews. Data was analyzed qualitatively through open coding. Four sub-themes emerge, that is knowledge about pregnancy, participants' views about pregnancy at the university, factors influencing pregnancy and participants' experiences of pregnancy whilst studying. emanating from the themes were used to propose recommendations on the best strategies that could reduce pregnancy rate at the selected institution [5].

The second objective of the study was to determine the association between the levels of knowledge towards teenage pregnancy among adolescent girls with their selected socio demographic variables.The study reveals that among 100 adolescent girls there is significant association between level of knowledge towards teenage pregnancy with some of their variables like father education, mother education, mother occupation, income of the family, regarding at $P<0.01$ level, hence H_{01} was rejected.

In relation to association between some of demographic variables and knowledge levels a similar study was conducted by Dr M. Saranya (2016) a discriptive study was conducted to assess the level of knowledge on teenage Pregnancy among adolescent Girls, in India. Descriptive research design was used for this study adolescent girls between the age group of 14 years to 20 years, sample size of the study was 30 adolescent girls, purposive sampling technique was used, out of 30 respondents 18 (60%) had below mean value (6) regarding their knowledge level on teenage pregnancy. Major findings shows that the calculated value of chi-square of age (2.695%), education (0.086%), family income(3.65%) are not significant. the calculated value of chi-square of previous knowledge (9.93%) is significant. majority of the respondents18 (60%) have less level of knowledge regarding teenage pregnancy [6].

The third objective of the study was to develop and distribute information booklet for adolescent girls towards teenage pregnancy.

Accordingly, after collecting the information from adolescent girls the information booklet was distributed to adolescent girls. Adolescent girls were well satisfied.

Conclusion

Evidence from this investigation revealed that, majority of adolescent girls had in adequate and moderate knowledge. This study suggests that necessity of creating awareness and providing motivation, to prevent teenage pregnancy. Thus, if we could provide correct knowledge and motivation to younger adolescent girls on a population basis, a positive change could be achieved among adolescent girls to bring out healthy community. Health education should be incorporated in the curriculum which should be given through teaching, inter personal communication, television, health camps. Mobiles are very common among adolescents. Broad casting of health message would be effective through mobiles. Reproductive health problems should be discussed among adolescents and identify and solve their reproductive health problems through counselling with the help of specialist on time to time.

Recommendations

- A similar study could be conducted on large sample.
- A comparative study can be conducted between urban and rural school students.
- Structure teaching program can be conducted for primary level students.
- A similar study can be conducted on large sample for better generalization.
- The study can be replicated in different community settings. Manuals, information booklet and self-instructional module can be prepared and distributed in community to create awareness.

References

1. www. World health statistics of teenage pregnancy 2014.
2. GazalaYasmin, Aruna Kumar, BhartiParihar, Teenage Pregnancy Its Impact on Maternal and Fetal Outcome. International Journal of Scientific Study. 2014;1(6).

3. G Mchunu, K Peltzer, B Tutshana, and L SeutlwadiAdolescent pregnancy and associated factors in South African youth. African Health Sci. 2012 Dec; 2(4): 426–434.
4. Dangal. An Update on Teenage Pregnancy. The Internet Journal of Gynecology and Obstetrics. 2004; 5(1).
5. Rachel lebese, Sonto maria, Jabu mabunda, Phineas khazamula chauke. Knowledge, Attitudes and Perception of Students on Teenage Pregnancy A Case Study of Rural Based University Students in South Africa January 2015 *with* 661 Reads
6. M.Saranya. Assess the Level of Knowledge on Teenage Pregnancy Among Adolescent Girls. Indian journal of applied research january. 2016; 6(1). 2249-555X Paper.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.5

Influence of a Yoga Program on Stress and Anxiety in Patients with Hypertension

Sujatha T.

Abstract

Background: Hypertension is a major chronic lifestyle disease affecting one in three adults over 25 years or about one billion, thereby resulting in cardiovascular, cerebrovascular, and renal complications. In addition, it is an important contributor for increased cardiovascular morbidity and mortality in industrialized countries. Reports suggest that hypertension is rapidly increasing in the developing countries like India. Although medical management is effective in treating hypertension, owing to the side effects, alternative therapy such as Yoga practice is recommended. However, evidences on the efficacy of yoga practice in patients with hypertension are insufficient and further research is required. *Objective:* The study aimed to investigate the effectiveness of a Yoga program on Stress and Anxiety in patients with hypertension. *Methods:* Of 238 patients, 118 were randomly assigned to participate in yoga program (YP) group and 120 to the control group (CG) with no treatment. Parameters such as blood pressure (BP), anxiety, and perceived stress were measured before and after intervention. *Results:* The groups were initially homogeneous; however, after intervention, the groups significantly differed. The YP group exhibited reduced BP, anxiety, and perceived stress ($5 < 0.001$). *Conclusion:* The study suggests that yoga program may offer an effective intervention in reducing BP, anxiety and perceived stress in patients with hypertension. Practicing Yogaasanas at home are helpful to avoid increased BP-related complications.

Keywords: Hypertension; Yoga; Blood Pressure; Anxiety; Stress.

Introduction

Hypertension is a chronic lifestyle disease and a major public health problem. More than half of coronary heart diseases and two-third of stroke and heart failure events are directly attributed to either high blood pressure (BP) or hypertension [1]. In 2000, the total number of adults with hypertension was estimated to be 972 million, of which 333 million were in economically developed countries and 639 million in economically developing countries. By 2025, this number is predicted to increase by about 60% to a total of 1.56 billion [2].

High BP is estimated to affect one of three adults aged ≥25 years or about 1 billion people worldwide. The theme of the "World Health Day" 2013 is "Measure your BP, reduce your risk", which is a call for intensified efforts to prevent and control hypertension [3]. Hypertension is a chronic condition with systolic blood pressure (SBP) of 140 mmHg and/or diastolic blood pressure (DBP) of 90 mmHg (JNC7 2003).

Hypertension is a major contributor to the cardiovascular morbidity and mortality in the industrialized countries. Reports suggest that hypertension is rapidly increasing in the developing countries like India. It has now become a global

Author's Affiliations: Assistant Professor, SRM College of Nursing, SRM University, Kattankulathur, Kancheepuram District- 603203, Tamil Nadu, India.

Corresponding Author: Sujatha T., Assistant Professor, SRM College of Nursing, SRM University, Kattankulathur, Kancheepuram District- 603203, Tamil Nadu, India.
E-mail: sat_sujatha@yahoo.co.in

pandemic. The World Health Organization reports that hypertension affects more than 100 million individuals in India. Due to decreased awareness, the treatment and control rates are abysmally low in India[3].

Yoga may be an appropriate intervention to reduce BP. There is no single definition of universally accepted yoga practice, although it is generally described as an ancient tradition[4]. Yoga includes the techniques of posture (asana), breath control (pranayama), and meditation, as well as moral and ethical observances. A complete description of the historical origins of yoga and its philosophy can be found elsewhere. Reviews of current literature suggests that yoga can reduce BP and related dysfunction in adults[5], although most of these reviews suggest caution is warranted, as several studies have substantial methodological limitations. Few studies have examined the effect of yoga on stress in patients with hypertension.

In particular, controlled studies on hypertension have demonstrated improvement with yoga practice on BP[6,7], stress[8,9], and anxiety[10,11]. The mechanism of yoga in reducing psychosocial stress remains unclear. Theory suggests that yoga alters the extent to which events are experienced as being stressful or impacts reactions to perceived stress. In addition, yoga on stress management is directly associated the regulation of autonomic arousal. Therefore, parameters such as BP, HR, BMI, and anxiety may provide additional sources of information to understand both the efficacy and mechanisms of yoga.

Few studies investigated the stress levels of the hypertension patients before and after yoga therapy. A pilot study was conducted among 24 participants with hypertension. The protocol developed included meditation, yoga body positions, and respiration techniques. The study assessed physiological variables, namely, BP and psychological variables such as anxiety and stress level. Application of specific questionnaires allowed the researchers to detect improvement in the participant's state and trait anxiety and the perceived stress level. Therefore, the present study aimed to investigate whether yoga practice alters BP, HR, BMI, stress, and anxiety levels in patients with hypertension.

Methods

Study Participants

The present study was approved by the Research Ethics Committee of SRM University, Protocol no.57/IEC/2010. Inclusion criteria were as follows: patients with Stage 1 and Stage 2 hypertension (SBP, 140–169 mm hg; DBP, 90–109 mm hg), aged 30–60 years, and those receiving antihypertensive medications. Exclusion criteria included patients with diabetes mellitus, asthma, and hypercholesteremia, alcoholics, smokers, antenatal and postnatal mothers, and those with regular yoga practice or practicing similar techniques.

Of 272 patients, 238 were randomly allocated into two groups: 118 patients (55 males and 63 females) participated in the yoga program group (YP group), and 120 (55 males and 65 females) in the control group (CG). For ethical reasons, after the study completion, the CG also participated in the suggested intervention. The participants visited the community health centers of SRM University and were subjected to clinical examination for assessing overall health, identification questionnaires were filled, and informed consent was obtained. Furthermore, psychological scales and inventories, such as BP, HR, and BMI were assessed. These assessments were repeated after 12 weeks in both the groups.

Outcome Measures

The following instruments were used to assess the Blood pressure

- A sphygmomanometer and Stethoscope to determine BP.
- BP was recorded in the sitting position in the right arm to the nearest 2 mm Hg using mercury sphygmomanometer (Diamond Deluxe BP apparatus, Pune, India). Two readings were taken 5 min apart, and the mean was recorded as BP. BMI was calculated as weight divided by height squared (Kg/m^2)

Psychological Variables have been Assessed by 2 Standardized Tools.

a. State Trait Anxiety Inventory (STAI): A four point Standardised State Trait Anxiety Inventory devised by Spielberger was adapted, which consists of 40 statements in 2 sections to assess the anxiety level (Spielberger 1983)[12].

b. Perceived Stress Scale (PSS): A five point Perceived Stress scale consists of 10 statements rated on a five-point likert scale ranged from 0 to 4 as very low, low, average, high, and very high level of stress (Cohen 1983)[13].

Intervention

The yoga program comprised a 5-day intensive continuous training for 2 h/day, after which the participants were asked to practice yoga daily for 30–45 mins at home, at least for 5 days per week. They were followed-up for 12 weeks. Instruction was provided to these participants, and they were requested to attend the yoga group session once in two weeks till 12 weeks. The program included the following traditional *Hatha Yoga* exercises:

a. Yoga body poses (*asanas* for 18 min) such as *Sukhasana, Vajrasana, Ardha-Matsyendrasana, Shavasana*, *Bhujangasana* and *Standing Chakrasana*. The average duration of each asana was approximately 3 min [14].
b. Exercises involving awareness and voluntary regulation of breath (pranayamas for 12 min) such as Nadi Shodhana[15].
c. Meditation for 10 mins[16].

Statistical Analysis

Data were analyzed using SPSS Version 16 (IBM, Chicago, USA). Baseline equivalence of both the groups related to age, gender, ethnicity, annual family income, medication, and nature of work were determined using independent t- tests or chi squared tests as appropriate. BP (systolic and diastolic) values at pre- and post tests were evaluated for normality for parametric assumptions and were evaluated for baseline equivalence between the groups at pretest using independent t-tests. To analyze the psychological (STAI and PSS)) and BP measurements, a 2-way ANOVA was applied before and after intervention. The differences between the groups and time points were investigated according to their statistical significance and as was the interaction between these factors. With regard to STAI and PSS, the chi-square test (x^2) was used to compare the groups.

Results

Before intervention, both groups were statistically homogeneous with regard to the following variables: male gender (YP group: n = 55, 47%; CG: n= 55, 46%) and female gender (YP group: nn = 63, 53%; CG, n = 65, 54%); educational level, no formal education (YP group: n = 26, 22%; CG: n = 25, 21%), complete elementary education (YP group: n = 63, 53%; CG: n = 54, 45%), complete secondary education (YP group: n = 26, 22%). The participants in the YP group reported 100% commitment to the suggested program. This level of adherence was most likely facilitated by the relative flexibility of the program, as the group sessions could be attended at two different times. Furthermore, the use of DVD for practice at home facilitated the optimal rate of adherence to the protocol.

Table 1: Frequency distribution of the level of stress before and after intervention

Level of stress	Before Intervention		After Intervention	
	YP group	Control group	YP group	Control group
Slightly lower	7 (6%)	3 (2%)	38 (32%)	3 (2%)
Average	51 (43%)	53 (44%)	68 (58%)	52 (44%)
Slightly higher	54 (46%)	57 (48%)	12 (10%)	59 (49%)
Much higher	6 (5%)	7 (6%)	-	6 (5%)

Data described as frequency (percentage); 001YP: yoga program.

Table 1 shows the frequency of distribution of the level of stress in both the groups. Before intervention, the groups were statistically similar: chi-square test (x^2) ($P > 0.001$). In the YP group, 7 (6%) participants had lower stress, 51 (43%) average stress, 54 (46%) with higher stress, and 6 (5%) with extreme level of stress. In the control group, 3 (2%) participants had lower stress, 53 (44%) had average stress, 57 (48%) with higher stress, and 7 (6%) with extreme level of stress.

However, after intervention, the groups exhibited statistically significant differences: chi-square test (x^2) ($P < 0.001$). In the YP group, 36% of the participants with higher stress before intervention exhibited lower level of stress after stress.

In addition, Table 1 illustrated statistically significant differences in the YP group. Conversely, CG did not exhibit any statistically significant change before and after intervention.

Table 2: Scores of anxiety as measured using STAI in both the groups before and after intervention

Anxiety	Before intervention	After intervention	*t* value	*t* (inter)
		State		
YP group	50.42 ± 7.65	40.33 ± 7.14	29.12, P = 0.001	0.85, P = 0.39
Control group	49.54 ± 8.17	48.98 ± 8.18	1.80, P = 0.07	8.69, P = 0.001
		Trait		
YP group	46.31 ± 9.05	37.27 ± 8.18	52.54, P = 0.001	0.29, P = 0.77
Control group	45.98 ± 8.42	45.55 ± 7.75	1.13, P = 0.26	8.01, P = 0.001
		Over all		
YP group	96.72 ± 15.07	77.60 ± 13.13	44.81, P = 0.001	0.61, P = 0.53
Control group	95.52 ± 15.09	94.53 ± 14.51	1.32, P = 0.24	9.36, P = 0.001

Data are described as the mean ± standard deviation; $P < 0.001$ differs before and after the intervention in the corresponding group— ***student's dependent t-test***. $P < 0.001$ differs between the groups— ***student's independent t-test***. YP: yoga program.

Table 2 demonstrates that the average anxiety (STAI) scores exhibited statistically significant interactions with the time point and group factors. These interactions suggest that the groups' profiles differed over time. Both variables exhibited a significant reduction in the YP group. Furthermore, the YP group exhibited a 12.6%, 11.3% and 11.9% reduction in the state, trait and overall anxiety scores, respectively, after the intervention, whereas the CG exhibited only a reduction of 0.7% 0.5% and 0.6% increase, respectively, at the same time point.

Table 3: Scores of BP of hypertension patients before and after intervention

Blood Pressure	Before Intervention	After intervention	t value	F (inter)	F (within)
SBP					
YP group	152.75 ± 11.57	138.51 ± 9.39	10.88	16.39	384.1
CG	152.85±10.68	152.38 ± 10.25	P = 0.001	P = 0.001	P = 0.001
DBP					
YP group	94.51 ± 6.92	86.17 ± 6.3	9.78	22.7	254.3
CG	94.77 ± 6.4	94.23 ± 6.43	P = 0.001	P = 0.001	P = 0.001

Data are described as mean ± standard deviation; $P < 0.001$ differs before and after the intervention as well as between and within the groups**.** YP: Yoga program; CG: Control group; SBP: Systolic blood pressure; DBP: Diastolic blood pressure

Table 3 demonstrates that the average BP scores showed statistically significant interactions with the time point and group factors. Both SBP and DBP exhibited a significant reduction in the YP group in addition to the difference between the groups after intervention. The YP group exhibited a reduction of 14.24% SBP and 8.3% DBP after the intervention, whereas the CG exhibited reduction of 0.5% SBP and 0.5% DBP decrease at the same time point.

Table 4: Comparison of level of BP Reduction before and after intervention N=238

Level of BP		Group			
		Study (n=118)		Control (n=120)	
		SBP-n (%)	DBP-n (%)	SBP-n (%)	DBP-n (%)
Before	Normal/Pre HT	0(0%)	7(5.9%)	0(0%)	7(5.8%)
	Stage 1	80(67.8%)	69(58.5%)	77(64.2%)	76(63.3%)
	Stage 2	38(32.2%)	36(30.5%)	43(35.5%)	31(25.8%)
	Stage 3	0	6(5.1%)	0	6(5.0%)
After	Normal/Pre HT	35(29.7%)	68(57.6%)	2(1.7%)	7(5.8%)
	Stage 1	75(63.6%)	42(35.6%)	84(70.0%)	76(63.3%)
	Stage 2	8(6.8%)	8(6.8%)	34(28.3%)	34(28.3%)
	Stage 3	0	0	0	3(2.5%)

Pre HT: Pre Hypertension: SBP: Systolic blood pressure; DBP: Diastolic blood pressure

Table 4 demonstrates that in YG before the intervention, Regarding SBP 5.1% in Stage 3 and 30.5% of clients in Stage 2 SBP, whereas after the yoga intervention it is reduced and shows to none in Stage 3 and only 6.8% in Stage 2 SBP. Similarly in DBP, before the study, 35.5% were in Stage 2 DBP whereas at the end of the study, 2.5% were in Stage 2 DBP and 28.3% were in Stage 2 DBP.

Discussion

The present study aimed to analyze whether an intervention using yoga exercises could change BP, stress and anxiety levels in patients with hypertension. The stress levels of the participants in the YP group changed from the level of much higher (N= 6), slightly higher (N = 54), average (N = 51), and lower (N = 7) to absence in much higher, slightly higher (N = 12), average (N = 68), and lower (N = 38), thereby demonstrating the effectiveness of intervention. These changes indicated that the yoga program could reverse stress-related symptoms (Table 1). The intervention group exhibited a statistically significant reduction in the stress and anxiety scores, thereby indicating that this type of intervention may be useful to reduce stress in patients with hypertension.

This study demonstrates statistically significant reduction in the anxiety symptoms among the participants in the YP group. An emergent body of evidence points to the possible therapeutic effects of the practice of aerobic or anaerobic exercises on anxiety (Kang et al 2009). In addition, these exercises may be either mindful or nonmindful physical exercises, which proved to be effective in reducing anxiety symptoms [17].

It is worth noting that among other activities, the volunteers in our study were subjected to the practice of hatha yoga, which includes physical exercise, most were anaerobic. Nevertheless, our results cannot be discussed on the grounds of the therapeutic effects of practicing only physical exercise, because our purpose was to subject the volunteers to a program that included exercises to the mind and meditation. Therefore, our results must be attributed to the program as such and not merely to one of its parts. In addition, Kozasa et al. investigated the efficiency of a program that included mantra meditation and pranayamas, known as Siddha Samadhi Yoga, in reducing scores of anxiety in participants with anxiety. This program includes meditation exercises associated with exercises of respiration (pranayamas) of 22 volunteers, 14 were allocated to the intervention group and eight to the control group. The intervention group received practice 3 times a day for 15 mins. The intervention group exhibited a significant reduction in the anxiety and depression scores compared to the control group (Kozasa et al 2008), and the results were consistent with the present study.

With regard to BP, 80 (67.8 %) adults with Hypertension in the YP group had Stage 1 systolic hypertension, 38 (32.2%) had Stage 2 SBP, whereas at the end of 12th week, 35 (29.7%) shows Normal or in Pre hypertension stage. In CG, 75 (63.6%) had Stage 1 and only 8 (6.8%) had Stage 2 level of systolic hypertension. Similarly in DBP, 69 (58.5 %) had Stage 1 level of hypertension, 36 (30.5%) had Stage 2 DBP, whereas at the end of 12th week, 68 (57.6%) shows Normal or in Pre hypertension stage, 42 (35.6%) had Stage 1 and only 8(6.8%) had Stage 2 levels of diastolic hypertension. Though it is evidend that more than 70% of participants exhibited a improvement in both systolic and diastolic BP in study group, they did not achieve 100% achievement. Hence further research is needed and those who have not received yoga also to be provided with other alternative methods .The study results are consistent with the findings of Soubia Malik et al observed the effect of BMI on BP among 100 respondents from Karachi. The findings proved that decreased BMI reduces the systolic pressure and diastolic pressure [18].

Comparing to previous studies in patients with hypertension, the present study is randomized and controlled and has a bigger sample. However, both the groups are under regular antihypertensive medications, which could be a study limitation. We suggest that further research is necessary to analyze the effect of Yoga program in those without treatment. The control group could be given some other mode of exercises. In this study, data on the impact of yoga on quality of life was not collected.

As previously mentioned, the mental stability could be related to sympathetic reduction and improvement in the parasympathetic activity contributing to decrease in BP, stress and anxiety.

Conclusion

The study reported that the yoga practice may represent an effective intervention in patients with hypertension to reduce BP, stress, and anxiety. Therefore, it is considered to have positive effects on the cardiovascular system. In addition, yoga practice can be encouraged to be used as a non-pharmacological method to prevent hypertension-related complications.

Conflict

There is no conflict of interest .

References

1. CDC., Vital signs: prevalence, treatment, and control of hypertension—United States, 1999–2002 and 2005–2008. MMWR. 2011; 60: 103–8.
2. WHO., Globus status report on Hypertension, 2009.
3. WHO.,WHO News, 2013, April 3
4. Walters JD. The Art and Science of Raja Yoga: Fourteen Steps to Higher Awareness, 2012, Motilal Banarsidass, Delhi, India.
5. Brown RP, Gerbarg PL. SudarshanKriya yogic breathing in the treatment of stress, anxiety, and depression: part I— neurophysiologic model. Journal of Alternative and Complementary Medicine. 2005; 11(1): 89–201.
6. Baer RA. Mindfulness training as a clinical intervention: a conceptual and empirical review. Clinical Psychology. 2013; 10(2): 125–143.
7. Cowen VS, Adams TB. Physical and perceptual benefits of yoga asana practice: results of a pilot study. Journal of Bodywork and Movement Therapies. 2005; 9(3): 211–219.
8. Debbie.L.Cohen, LeAnne T.Bloedon, Rand L.Rothman, John.T.Farrar, et.al. Yoga Versus Enhanced Usual Care on Blood pressure in patients with Prehypertension to Stage I hypertension.
9. West J, Otte C, Geher K, Johnson J, Mohr DC. Effects ofHatha yoga and African dance on perceived stress, affect, and salivary cortisol. Annals of Behavioral Medicine. 2004; 28(2): 114–118.
10. Scime M, Cook-Cottone C. Primary prevention of eating disorders: a constructivist integration of mind and body strategies. International Journal of Eating Disorders. 2008; 41(2): 134–142.
11. Chugh-Gupta et al. A systematic review of yoga for state anxiety: considerations for occupational therapy Can J Occup Ther. 2013; 80(3): 150-70.
12. Sheng-Chia Chung, Maria M. Brooks, Madhur Rai, Judith L. Balk, and Sandeep Rai.. Effect of Sahaja Yoga Meditation on Quality of Life, Anxiety, and Blood Pressure Control, The Journal of Alternative and Complementary Medicine. 2012; 18(6): 589-596.
13. Spielberger CD. State-Trait Anxiety Inventory Menlo Park, Calif: Mind Garden, Inc.
14. Cohen S, KamarckT, Mermelstein R. 1983. A global measure of perceived stress. J Health Social Behavior. 1983; 24; 385-396.
15. Gharote ML. Hathapradipika of Svatmarama,. 2010. Lonavla Yoga Institute, Lonavla, India.
16. Kuvalayananda S. Pranayam, 1966. Michigan University, Michigan, Mich, USA; Popular Prakashan, Mumbai, India.
17. Davidson RJ. Kabat-Zinn J. Schumacher J, et al. Alterations in brain and immune function produced by mindfulness meditation. Psychosomatic Medicine. 2013; 65(4): 564–570.
18. Cramer H, et al.. A Systematic Review and Meta-Analysis of Yoga for Hypertension. Am J Hypertens. 2014.
19. Soubia Malik, Naima Afzal, Ayesha Javed and Sadaf Ahmed. BMI, BMR, waist circumference, waist to hip ratio as major indices to effect blood pressure. Indian Journal of Health & Wellbein. 2012; 1062–1065.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.6

A Descriptive Survey to Assess the Incidence of Health Indicators among the Public at Selected Area, Thrissur

Reshma V.*, Sunitha P.P., Nandini M.*****

Abstract

A descriptive survey method was carried out among 286 samples to assess the incidence of hypertension and obesity and also to compare the incidence of hypertension and obesity among males and females. The result depicts that 43.35%(124) were hypertensive, and 9.09%(26) were having obesity. While comparing the incidence of hypertension among the males and females,48.63%(71) were males and 37.85%(53) were females, and in obesity,5.47%(8) were males and 12.85%(18) females. The result concludes that hypertension is more among males than that of females and obesity is more among females when comparing to males.

E-mail: BMI;Health Indicators; Hypertension and Obesity.

Introduction

Most of our diseases are caused by life style. Chronic diseases frequently defined as a major component of non-communicable diseases usually affects the middle or old age individuals after prolong exposure to an unhealthy life style relating mainly to economic transition, rapidurbanization, tobaccouse, harmful consumption of alcohol, unhealthy fast food diet, insufficient physical activity etc. The World Health Organization (WHO) suggested that around 57 million deaths occurred worldwide in the year 2008 of which millions of deaths–almost two third-were because of non-communicable diseases involving cardiovascular disease, diabetes, cancer etc. The leading non communicable risk factor globally in terms of attributable deaths are high blood pressure, obesity, lack of physical activity. Nowadays, life style disorders are becoming more common, affecting younger population. A life style lack of physical activity often referred as sedentary life style is one of the leading cause of preventable mortality worldwide.Such type of physiologically stressed life style results in increased levels of risk factors like hypertension,diabetes,obesity so on. So it is essential to conduct awareness programme in order to reduce the preventable mortality rates [1].

Author's Affiliations: *Msc Nursing Student, **Lecturer, Department of Medical Surgical Nursing, ***Vice Principal, Professor cum HOD Child Health Nursing, Aswini College of Nursing Thrissur, Reshmav.

Corresponding Author: Reshma V., Msc Nursing Student, Department of Medical Surgical Nursing, Aswini College of Nursing, Thrissur, Kerala 680751
E-mail: reshmav.balakrishnan@gmail.com,

Statement of the Problem

A descriptive survey to assess the incidence of health indicators among the public at selected area, Thrissur.

Objectives

- To assess the incidence of hypertension among the public at selected area, Thrissur.
- To assess the incidence of obesity among the public at selected area,Thrissur.
- To compare the incidence of obesity and hypertension among males and females.
- To educate the public on awareness of prevention of hypertension and obesity.

Operational Definitions

- Health indicators: Health indicators including

screening of BMI and blood pressure of public at selected area Thrissur.

- Public: Those who visit the zoo on 12/5/16 between 10am-3pm.

Research Methodology

Research Approach

Quantitative research

Research Design

Descriptive survey method

Setting

The study was carried out in the zoo Chembukavu Thrissur.The study was conducted in relation to Nurse's day celebration.

Population

Population selected for the present study is the visitors of the zoo.

Sample Size: 286

Inclusion Criteria

- Those who are willing to participate in the study

Exclusion Criteria

- People below 18 years are excluded from the study.

Sampling technique

Non probability convenient sampling

Tools and technique

- Demographic profile consists of age, gender.
- Health parameters including BMI, blood pressure.
- Health education on prevention of hypertension and obesity.

Result

A descriptive survey method was carried out among 286 samples to assess the incidence of hypertension and obesity and also to compare the incidence of hypertension and obesity among males and females. The results will be discussed under the following headings.

Table 1: Frequency and percentage distribution of sample according to gender N=286

Age groups / Gender	Young Adult		Middle Adult		Old Adult	
Male	**N**	**F (%)**	**N**	**F (%)**	**N**	**F (%)**
	57	19.9	77	26.9	12	4.19
Female	68	23.7	55	19.2	17	5.9

N-Total number of sample, **f**- frequency percentage

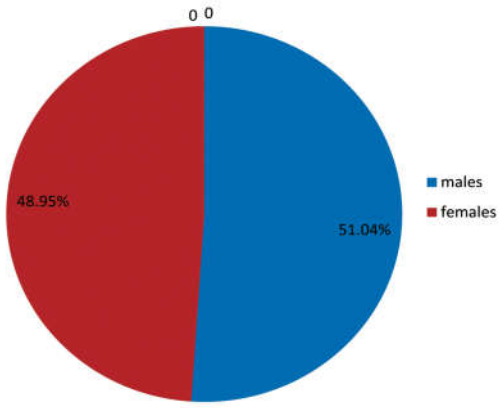


Fig. 1: Pie diagram showing distribution of sample according to gender

Table 2: Frequency and percentage distribution of sample according to arterial blood pressure N=286

Age group / Arterial Blood pressure	Gender		Young Adult	Middle Adult	Old Adult	Total
Hypotension	Males	n	7	5	2	14
		f(%)	2.44	1.74	0.69	
	Females	n	27	3	3	33
		f(%)	9.44	1.04	1.04	
Normal	Males	n	27	31	2	60
		f(%)	9.44	10.8	0.69	
	Females	n	28	20	7	55
		f(%)	9.79	6.9	2.44	
Pre hypertension	Males	n	18	21	1	40
		f(%)	6.29	7.34	0.34	
	Females	n	10	14	1	25
		f(%)	3.49	4.89	0.34	
Stage-1 Hypertension	Males	n	5	16	5	26
		f(%)	1.74	5.59	1.74	
	Females	n	3	16	6	25
		f(%)	1.04	5.59	2.09	
Stage-II Hypertension	Males	n	-	3	2	5
		f(%)		1.04	0.69	
	Females	n	-	3	-	3
		f(%)	-	1.04	-	-

N-Total number of sample, **f-**frequency percentage

Table 3: Frequeancy and percentage distribution of sample according to BMI N=286

Age group / BMI	Gender		Young Adult	Middle Adult	Old Adult	Total
Under weight	Males	n	3	1	-	4
		f(%)	1.04	0.34	-	
	Females	n	7	-	-	7
		f(%)	2.44	-	-	
Normal	Males	n	26	37	5	68
		f(%)	9.09	12.93	1.74	
	Females	n	25	19	8	52
		f(%)	8.74	6.64	2.79	
Over weight	Males	n	25	36	5	66
		f(%)	8.74	12.58	1.74	
	Females	n	29	25	9	63
		f(%)	10.13	8.74	3.14	
Obese	Males	n	3	3	2	8
		f(%)	1.04	1.04	0.69	-
	Females	n	7	11	-	18
		f(%)	2.44	3.84	-	
Morbid obese	Males	n	-	-	-	-
		f(%)	-	-	-	
	Females	n	-	-	-	-
		f(%)	-	-	-	-

N-Total number of population, **f-**frequency percentage

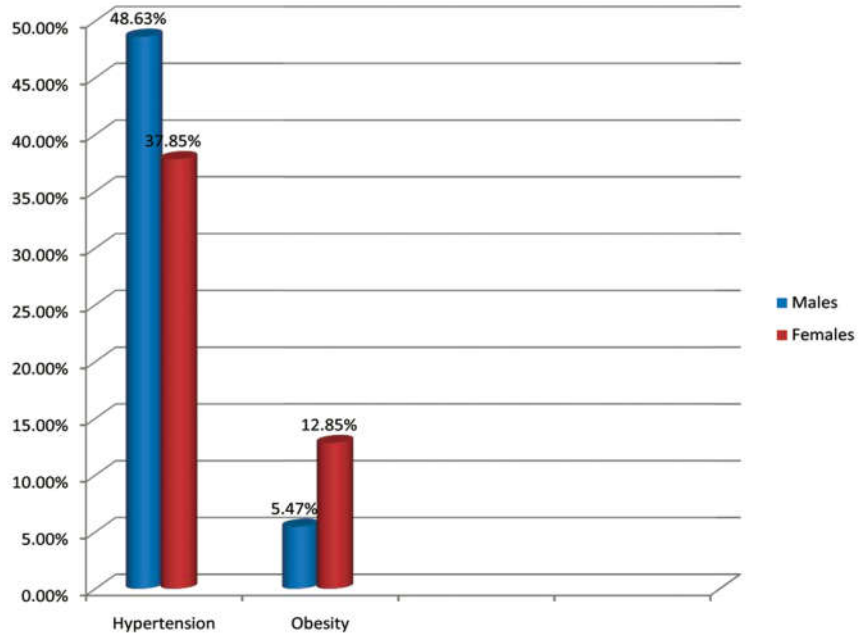


Fig. 2: Stacked cylinder diagram showing the distribution of hypertension and obesity among males and females

Based on the first objective the incidence of hypertension showed that 43.35% (124) were hypertensive, based on the second objective the result showed that 9.09% (26) were having obesity. While comparing the incidence of hypertension and obesity in males and females showed that 48.63%(71) males and 37.85% (53) females were hypertensive and 5.47% (8) males and 12.85% (18) females having obesity.

Discussion

The study showed that43.35 % (124) are hypertensive, and the result in BMI shows that 9.09%(26) are having obesity. While comparing the incidence of hypertension and obesity in males and females shows that 48.63 % (71) males and 37.85 % (53) females are hypertensive, and 5.47%(8) males and 12.85%(18) females having obesity. The result shows that the prevalence of hypertension is more among males than that of females and obesity is more among females when comparing to males. Thus the study conclude that primordial prevention is necessary to prevent the life style related diseases like obesity, hypertension etc.

Acknowledgement

I praise and thank the Almighty god for his abundant graces and blessings. I extends my sincere thanks to Prof. Nandini.M, Vice Principal, HOD Child health Nursing Aswini College Of Nursing for being the source of inspiration and providing valid suggestions. My heartfelt thanks to Mrs. Sunitha.P P, Lecturer, Aswini College Of Nursing for her guidance and suggestions.

Reference

1. Krisela Steyn, Albertino Damasceno.Life and related risk factors for chronic diseases. [SerialontheInternet].2006[cited2016Aug8]; Availablefrom: http://www.ncbi.nlm.nih.gov/NCBI/literature/bookshelf.
2. Denise F Polit, Cheryl Tatano Beck. Essentials of Nursing Research Appraising Evidence for Nursing Practice. 8thedition.Newdelhi: Wolter's Kluwer.pvt Ltd; 2013.
3. ParkK. Textbook Preventiveand Social Medicine.17th edition. Banarsidasbha not publishers. India. 2003.
4. AnsariKaur.TextBookofMedicalSurgicalNursing 2nd edition. Elsevier Publication.India.2003.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.7

Assessment of Level of Caregiver Burden among Caregivers of Elderly in Selected Village, Kancheepuram District

Arokia Infant*, M. Hemamalini**

Abstract

Family members play a major role in providing care giving assistance to elderly persons and their families. The effect of stressors on family members caring for a physically or mentally ill person has been referred to as caregiver burden. It is an important concern and will become more so with the inevitable aging of the population. Community health and home health nurses must be able to recognize those factors associated with caregiver burden to effectively render care to their clients and families. The objective of the present study was to assess the level of caregiver burden among caregivers of elderly in Maraimalai Nagar. Quantitative approach and descriptive survey design was adopted for the study. A total of 40 samples were selected using non probability purposive sampling technique in Maraimalai Nagar. The tools used for the study comprises of 2 sections, section A- demographic Data which includes age, gender, relationship with elderly, religion, occupation and income , section B ýÿ a standardized 4 point Zarit care giver burden interview schedule was used which included 20 items. The data was collected from the 40 samples and the analysis was done using descriptive and inferential statistics. The study findings reveals that among the 40 samples taken for the study, 29 (72.5%) care givers of elderly have no or little level of burden and 11 (27.5%) caregivers have mild to moderate level of burden. It is also known that there is significant association between the level of burden and the income of the caregiver.

Keyword: Caregiver; Burden; Elderly; Stress; Health Problems.

Introduction

In almost every country, the proportion of people aged over 60 years is growing faster than any other age group, as a result of both longer life expectancy and declining fertility rates [1]. The world's elderly population is expected to be 2 billion in the year 2020, most of which will be living in developing countries that can least afford the health care burden encountered by this population group [2].

Author's Affiliations: *B.sc (N) Final year **Professor, S.R.M. College of Nursing, SRM University, Kattankulathur Kancheepuram-603203, Tamil Nadu, India.

Corresponding Author: Arokia Infant, B.sc (N) Final year, S.R.M. College of Nursing, SRM University, Kattankulathur, Kancheepuram-603203, TamilNadu, India.
E-mail: arokia_infant@yahoo.com

Recent research has revealed that eighty percent of the non institutionalized elderly have one or more chronic health problems or disabilities. The shift in the provision of health care services from institutional to community based settings is translating into an increased requirement for individuals to care for family members in the home [3]. Despite the rapidly growing demands for home services, short term respite programs are extremely limited. Family members, therefore, take upon themselves the considerable responsibilities and stress associated with providing adequate care and supervision for their older relatives [4,5].

Family caregivers are essential partners in the delivery of complex health care services. Unlike professional caregivers such as physicians and nurses, informal caregivers, typically family members or friends, provide care to individuals with a variety of conditions including advanced age. This experience is commonly perceived as a chronic

stressor, and caregivers often experience negative psychological, behavioral, and physiological effects on their daily lives and health caregivers are often faced with multiple concurrent stressful events and extended, unrelenting stress, they may experience negative health effects, mediated in part by immune and autonomic dysregulation. The level of care required by the care recipient is a major factor that influences the caregiver's life and health effects [6].

Caregiver burden may result from providing care for patients with chronic illness. It can occur in any of the 43.5 million individuals providing support to midlife and older adults. Caregiver burden is frequently overlooked by clinicians [7]. Caregiver burden is identified as a state resulting from providing the necessary care to an impaired older adult but that threatens either the physical or psychological wellbeing of the caregiver [8,9]. Nevertheless, the difficulties experienced by caregivers are often considered only after the signs of burnout are apparent. These signs indicate the progression of caregiver burden to thepoint where the experience is no longer a viable or healthy option for either the caregiver or the person receiving care [8].

Informal care for the disabled elderly has proved to be a heavy burden for family caregivers in many countries, and burden has been shown to be related to the socio-demographic characteristics of both the caregiver and the recipient of care [10-12]. Factors such as activities of daily living (ADL) of the impaired elderly also influence perceived burden [13,14]. However, mitigating factors may buffer the impact of burden such as resources and social support [15,16].

This study sheds light on the relationship between the variables within a sample of urban caregivers, with the aim to assess the level of caregiver burden among the caregivers of elderly.

Materials and Methods

Quantitative approach and Non experimental descriptive survey design was adopted for the present study. The variables studied are study variable and demographic variables. Caregiver burden was the study variable and the demographic variables includes age, gender ,sex education, marital status, type of family, monthly income ,occupation and religion,.The study was conducted in urban community, Maraimalai nagar, Kancheepuram District. The sample size of the present study was 40. Non-Probability purposive sampling technique was adopted to select the samples for the study. The tool used for data collection comprises of 2 sections:

Section A: Structured questionnaire to elicit demographic data of care giver of elderly.

Section B: The Zarit Burden Inventory standard care giver style tool which consists of 22 Questions.

The content of the tools were established on the basis of opinion of nursing experts. Suggestions were incorporated in the tool. The study was approved by the dissertation committee of SRM College of Nursing, SRM University, Kattankulathur, kancheepuram District. Permission was obtained from the Dean, SRM College of Nursing and informed consent was obtained from each participant for the study before starting data collection. Assurance was given to the subjects that anonymity of each individual would be maintained and they are free to withdraw from the study at any time.

The investigator explained the objectives and methods of data collection. Data collection was done within the given period of 1 week in Maraimalai Nagar, Kancheepuram district Tamilnadu. The data collection was done during the day time. Self-introduction about the researcher and details about the study was explained to the samples and their consent was obtained. The caregiver burden was assessed among the caregivers of elderly in Maraimalai Nagar using Zarit caregiver burden Inventory The confidentiality about the data and finding were assured to the participants. The participants took 30 minutes to complete the tool and their co-operation was imperative. Statistical analysis was performed using SPSS software version 16. Chi square was used to associate the caregiver burden of the caregivers with their demographic variables.

Results

Table 1 depicts the demographic data of care givers of elderly. Considering age , majority 55% of the caregivers belong to the age group of 41-50 of caregiver. 55% of the caregivers were males. 42.5% of the caregivers are the son to the elderly. 92.5%. of the caregivers were married. 60% of the care givers were skilled worker. 65% of the care givers completed their higher secondary education. 37.5% of the caregivers monthly income was below 4555 Rs. 55% of the care givers were Hindus. 55% of the

Table 1: Frequency and percentage distribution of care givers of elderly N = 40

Demographic variables		Care givers	
		Number	%
Age	21-30	2	5
	31-40	16	40
	41-50	22	55
Gender	Male	22	55
	Female	18	45
Relationship	Son	17	42.5
	Daughter	10	25
	Brother	8	20
	Sister	5	12.5
Marital status	Married	37	92.5
	Un married	3	7.5
Educational status	No Formal Education	4	10
	Primary	10	25
	Higher secondary	26	65
Occupation	Un employed	8	20
	Un skilled	5	12.5
	Skilled	24	60
	Clerical	3	7.5
Monthly Income	<4555	15	37.5
	4555-7593	11	27.5
	>7593	14	35
Religion	Hindus	25	62.5
	Muslims	12	30
	Christians	3	7.5
Type of family	Nuclear	22	55
	Joint	18	45

Table 2: Assessment of level of caregiver burden among caregivers of elderly N=40

Caregiver burden	Frequency	Percentage
No or Little level of burden	11	27.5
Mild to Moderate level of Burden	29	72.5
Severe Burden	0	0

Table 3: Association between the level of caregiver burden of elderly with their demographic variables:

Demographic variable		Little or no burden	Mild to moderate burden	Chi square value
Age		Number	Number	
	21-30	2	0	X^2 =4.548
	31-40	14	2	P =0.103
	41-50	13	9	NS
Gender	Male	14	8	X^2 =1.926
	Female	15	3	P =0.166
				NS
Relationship	Son	11	6	X^2 =0.966
	Daughter	8	2	P =0.009
	Brother	6	2	NS
	Sister	4	1	
Marital status	Married	27	10	X^2 =0.055
	Un married	2	1	P =0814
				NS
Educational status	Non formal education	2	2	X^2 =1.302
	Primary	7	3	P =0.521
	HSS	20	6	NS
Occupation	Un employed	8	0	X^2 =3.887
	Un skilled	3	2	P =0.274
	Skilled	16	8	NS
	Clerical	2	1	
Monthly Income	<4555	13	2	X^2 =9.549
	4555-7593	10	1	P =0.008
	>7593	6	8	**Significant**
Religion	Hindus	17	9	X^2 =2.215
	Muslims	10	2	P =0.346
	Christians	2	0	NS
Type of family	Nuclear	16	6	X^2 =0.001
	Joint	13	5	P =0.972
				NS

caregivers belong to nuclear family.

Table 2 shows that among the 40 samples taken for the study, 29 (72.5%) care givers of elderly have no or little level of burden and 11 (27.5%) have mild to moderate level of burden.

Table 3 shows the association of the level of care givers burden with their demographic variables: was It was found that there was significant association with caregiver burden and their monthly income and there was no association with respect to other demographic variables.

Discussion

With the increase in health care expenses, particularly those associated with inpatient care, and given rising societal ethos emphasizing that care for aging individuals is best offered in the community, family members are increasingly finding themselves in the role of supporting and caring for their elderly or disabled relatives at home. The documented stressors to family members are vast and include expression, anxiety, grief, and overload [17]. One of the populations most vulnerable to the burden caused by providing long-term care are spouses, who often view caring as an extension of their marital commitment, and who are more likely to continue caring despite the limited support services available to them, or the emotional suffering they experience [18].

The current study findings indicated that 29 (72.5%) care givers of elderly had no or little level of burden and 11 (27.5%) had mild to moderate level of burden. It was also found that there was a significant association with caregiver burden and their monthly income.

Similar study was conducted by Cantor, Marjorie H. in 1983 on Strain among caregivers: A study of experience in the United States. Authors interviewed 111 primary caregivers (aged 20+ yrs) to elderly persons in order to investigate the process by which informal support systems act to assist older people and to examine role strain. Primary caregivers encompassed 4 types of informal supports: 33% were spouses, 36% children, 19% other relatives, and 12% friends/neighbors. The quality of relationships between the elderly and caregivers was examined, as well as required changes and adjustments in lifestyles and factors associated with strain. Results suggest that the amount of stress and disruption of daily lives of the caregivers is different for different groups of caregivers. Closer bonds make caregiving more stressful, and spouses and children appear to be priority targets for interventions to strengthen the capacity of informal supports to assist the frail elderly [19].

Sharon May Wallsten and Samuel S. Snyder in 2006 conducted a similar study on a comparison of elderly family caregivers' and noncaregivers' perceptions of stress in daily experiences Interactive factors of stress were examined by comparing a group of elderly family caregivers to a control goup of noncaregiving peers. The groups were compared on their perceptions of positive and negative aspects of daily activities as well as on the relationship between these perceptions and psychological symptoms. Caregivers rated greater negative impact in everyday experiences than did non caregivers, whether or not experiences directly related to care giving were included. The ratings of positive impact were higher than for negative impact and were similar in both groups. Negative impact scores predicted psychological symptoms for both groups, whereas positive impact scores did not [20].

Conclusion

The study concluded that, 29 (72.5%) care givers of elderly had no or little level of burden and 11 (27.5%) had mild to moderate level of burden. It was also found that there was a significant association with caregiver burden and their monthly income which implies that providing care for a chronically ill and/or disabled family member is stressful. Hence community intervention need to be designed in-home services that better meet the social needs of disabled elderly and provide more efficacious respite to caregivers.

Acknowledgement

We sincerely thank Dean, SRM college on nursing, SRM university, kattankulathur for granting permission to conduct the study and sincere thanks to for all the caregivers for their participation and cooperation.

Conflict of Interest

The authors have no conflict of interest to declare.

References

1. World Health Organization. Aging, 2011. Available from: http://www.who.int/ topics/aging/en/index.htm
2. World Health Organization. 10 facts on ageing and the life course, 2011. Available from: http:// www.who.int/features/factfiles/ageing/en/
3. Canadian Mental Health Association .Citizens for mental Health, 2004. Available from: http:// www.cmha.ca/data/1/rec_docs/194_caregiver_2.pdf
4. Arai Y, Kumamoto K, Zarit SH, et al. Japanese fear ofgrowing old. J Am Geriatric Soc 2005; 53: 1641–2.
5. Arai Y, Washio M. Burden felt by family caring for theelderly members needing care in southern Japan, Aging & Mental Health. 1999; 3(2): 158-64.
6. Margaret F. Bevans, Esther M. Sternberg, Caregiving Burden, Stress, and Health Effects Among Family Caregivers of Adult Cancer Patients JAMA. 2012 Jan 25; 307(4): 398–403. doi: 10.1001/ jama.2012.29.
7. Ronald D. Adelman etal ., Caregiver BurdenA Clinical Review,JAMA. 2014; 311(10): 1052-1060. doi:10.1001/jama.2014.304.
8. Zarit SH, Reever KE, Bach S. Relatives of the impaired elderly: Correlates of feeling of burden. The Gerontologist. 1980; 20: 649-55.
9. Zarit SH, Todd PA, Zarit JM. Subjective burden ofhusbands and wives as caregivers: A longitudinal study.The Gerontologist. 1986; 26: 260-6.
10. Cantor MH. Strain among caregivers: A study of experience in the United States. The Gerontologist. 1983; 23: 597-604.
11. Chee K, Levkoff E. Culture and dementia: Accounts by family caregivers and health professionals for dementia affected elders in South Korea. Journal of Cross-Cultural Gerontology. 2001; 16: 111-25.
12. Arai Y, Zarit SH, Sugiura M, Washio M. Patterns of outcome of caregiving for the impaired elderly: alongitudinal study in rural Japan. Aging Ment Health. 2002; 6: 39-46.
13. Barusch AS, Spaid WM. Gender differences in caregiving:Why do wives report greater burden? The Gerontologist. 1989; 29: 667-76.
14. Stull DE, Kosloski K, Kercher K. Caregiver burden and generic well-being: Opposite sides of the same coin? The Gerontologist.1994; 34: 88-94.
15. Dunkin JJ, Anderson HC. Dementia caregiver burden: A review of the literature and guidelines for assessment and intervention. Neurology. 1998; 51: S53-S60.
16. Yoon H. Factors associated with family caregivers'burden and depression in Korea. International Journal of Aging and Human Development. 2003; 57: 291-311.
17. Clyburn LD, Stones MJ, Hadjistavropoulos T, Tuokko H.Predicting caregiver burden and depression in Alzheimer'sdisease. Journals of gerontology: Series B: Psychological Sciences and Social Sciences. 2000; 55Bb(1): S2–S13.
18. Perry J, O'Connor D. Preserving personhood: remembering the spouse with dementia. Family Relations. 2002; 51: 55-62.
19. Cantor, Marjorie H. Strain among caregivers: A study of experience in the United States The Gerontologist. 983 Dec; 23(6): 597-604. http:// dx.doi.org/10.1093/geront/23.6.59.
20. Sharon May Wallsten andSamuel S. Snyder, A comparison of elderly family caregivers' and noncaregivers' perceptions of stress in daily Journal of Community Psychology. July 19. 18(3): 228–238,

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.8

A Study to Assess the Knowledge of Nursing and MBBS Students Regarding Biomedical Waste Management and to Develop an Information Booklet on Bio Medical Waste Management in a Selected University of New Delhi

Merlin Mary James*, Naseem Mancheri*, Manju Chhugani**

Abstract

The waste generated from medical activities can be hazardous, toxic and even lethal because of their high potential for disease transmission and injury that also result in environmental degradation. An adequate and appropriate knowledge of Bio Medical Waste Management among the students of MBBS & Nursing is the first step to safe disposal hazardous hospital waste. Appropriate management of health care waste is then a crucial component of environmental health protection, and it should become an integral feature of health care services.A Quantitative Non-Experimental Research using Descriptive Research Design was used. Data was collected from 100 BSc(Hons) Nursing 1st year students and MBBS 2nd year students of Jamia Hamdard, New Delhi, in the month of April 2016. Structured Knowledge Questionnaire was used to assess knowledge regarding Bio Medical Waste Management. The study findings revealed that the mean knowledge score (17.74) of MBBS 2nd year students was higher than that of the mean knowledge score (13) of BSc. (Hons.) 1st year students. Out of 50 BSc. (Hons) Nursing 1st year Students, 6 students had below average scores, 32 students had average scores and 12 students had above average scores, whereas out of 50 MBBS 2nd year students, none had below average scores, 33 students had average scores and 17 students had above average scores.

Keywords: Nursing Students; MBBS Students; Knowledge and Biomedical Waste Management.

Background

Hospitals are the centers of cure and also important centers of infectious waste generation [1]. Advances in medical facilities with the introduction of sophisticated instruments have increased the waste generation per patient in health care unit. The rapid mushrooming of hospitals has increased the quantity of hospital waste production [2].

BMW (Bio Medical Waste) is defined as the waste which is generated during the diagnosis, treatment, or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing biological [3].

Author's Affiliations: *Tutor, **Principal, Rufaida College of Nursing, Jamia Hamdard,New Delhi, Delhi 110062

Corresponding Author: Merlin Mary James, Tutor, Rufaida College of Nursing, Jamia Hamdard, New Delhi, Delhi 110062

E-mail: merlinjames1988@yahoo.com

U Ujwala Ukey, Ramasankaram Kambatla, Dash Satyanarayan, Appajirao N R Naidu and P Ved Kulkarni conducted a study to create awareness about the Biomedical Waste Management in Undergraduate Medical And Nursing Students at a teaching institute in Vizianagaram, Andhra Pradesh.The findings showed that MBBS students had a fairly better awareness regarding the subject than nursing students. Almost all study participants were aware about colour coding in segregation of biomedical waste. But when asked about which waste is to be put in which bag, correct response was given by almost half amongst them [4].

Jahanvi G and Raju P V conducted a study on the awareness and training need of bio medical waste management among undergraduate students in ASRAM Medical College in Andhra Pradesh. Total 463 under graduate students (216 males and 247 females) were the sample. Most of the students have heard about bio medical waste. Some of them were

aware that it causes health hazards. But knowledge about category of wastes, duration of wastes, Type of bag used for collection, identification of biohazard symbol was poor. There were gaps in various aspects of bio medical waste management among medical students. Appropriate training or inclusion of a topic in undergraduate curriculum can fulfill this [5].

The nurses and doctors spend maximum time with patients in the ward than any other member of the health team, increases the exposure to the hazard present in hospital environment mainly bio medical waste. They need to be well equipped with latest information, skills and practices in managing this waste besides reducing hospital acquires infections to protect their own health. They are also responsible for preventing risk due to waste to the other member of health team and community at large [6].

Inadequate and inappropriate knowledge of handling of healthcare has serious health consequences and a significant impact on the environment as well. Lack of awareness can lead to the hospitals becoming a hub of spreading disease rather than working toward eradicating them. There is a need for resource material to help administrators, doctors, nurses and paramedical staffs and sanitary workers to aid in proper and safe disposal of waste.

Hence a need was felt to assess the knowledge of BSc. (Hons) Nursing and MBBS students regarding Bio Medical Waste management and to develop and disseminate an information booklet on Biomedical Waste Management.

Aims

1. To assess the knowledge of BSc. (Hons) Nursing 1st year students regarding Bio Medical Waste management.
2. To assess the knowledge of MBBS 2nd year students regarding Bio Medical Waste management.
3. To develop and disseminate an information booklet on Bio Medical Waste management

Material and Methods

A quantitative non - experimental approach was adopted. The research Design for the following study was Descriptive Research Design.The present study was conducted in Rufaida College of Nursing and Hamdard Institute of Medical and Science Research (HIMSR), Jamia Hamdard, New Delhi.In the present study, population comprised of students of BSc. (Hons.) Nursing and MBBS Students.The samples for the present study comprised of 50BSc. (Hons) Nursing Students studying at Rufaida College of Nursing, Jamia Hamdard and 50 MBBS 2nd year students studying at HIMSR. Jamia Hamdard, New Delhi. The sampling technique used for the study was convenient sampling.

A Structured Knowledge Questionnaire developed for the collection of data. A formal administrative permission was obtained from the administrative authority to conduct the study. The study was conducted in Jamia Hamdard, New Delhi, in the month of April 2016. Informed Consent was taken from the subjects. A total of 100 students was selected using convenient sampling technique. Confidentiality of their identity and their responses was assured.Further, a Structured Knowledge Questionnaire was administered to students. Following data collection, an information guidelines regarding Bio Medical Waste Management was developed and disseminated to students. All the data was entered in the master sheet in Microsoft Excel. The data was analyzed using descriptive statistical methods.The demographic variables of the subjects were described using frequencies and percentages.The knowledge scores were assessed using mean, median and standard deviation.

Results

The demographic characteristics (Age, Religion, Previous Knowledge) of 100 BSc. (Hons) Nursing – 1st year students and MBBS 2nd year students were describe using frequencies and percentages.

Regarding the age of the students, the data revealed that out of 100 students, majority 82(82%) belonged to the age group of 19-22 years of age, 14(14%) belonged to the age group of below 18 and only 4(4%) belonged to age group of above 23. Out of 100 students, majority of the students 53 (53%) were Islam, 34(34%) were Hindu, 11(11%) were Christian, and only 2(2%) were others. Out of 100 students 76(76%) had attended any program on Bio Medical Waste Management and 24 (24%) haven't attended any such programme before.

The knowledge scores were computed using a Structured Knowledge Questionnaire. The mean, median, Standard Deviation of the knowledge scores were computed and the knowledge scores were

categorized as:

Below Average: 0 – 8

Average: 7 - 16

Above Average: 17 - 24

Table 1: Mean, Median, Standard Deviation, Possible Range of Score and Obtained Range of Knowledge Scores of BSc. (Hons) Nursing students and MBBS students N = 100

Category	Mean	Median	Standard Deviation	Possible Range of Scores	Obtained Range of Scores
BSc. (Hons) Nursing students (n_1 = 50)	13	12	6.4	0 – 24	5 - 20
MBBS students (n_2 = 50)	17. 74	18	7.10	0 – 24	10 - 22

Table 2: A Table showing Category of Knowledge Scores of BSc. (Hons) Nursing and MBBS Students N = 100

Category	BSc. (Hons) Nursing Students (n_1 = 50)	MBBS Students (n_2 = 50)
Below Average (0-8)	6	0
Average (9-16)	32	33
Above Average (17-24)	12	17

Data presented in Table 1 shows that the mean knowledge score (17.74) of MBBS 2nd year students was higher than that of the mean knowledge score (13) of BSc. (Hons.) 1st year students.

Data presented in Table 3 shows that out of 50 BSc. (Hons) Nursing 1st year Students, 6 students had below average scores, 32 students had average scores and 12 students had above average scores, whereas out of 50 MBBS 2nd year students, none had below average scores, 33 students had average scores and 17 students had above average scores, (Figure 1).

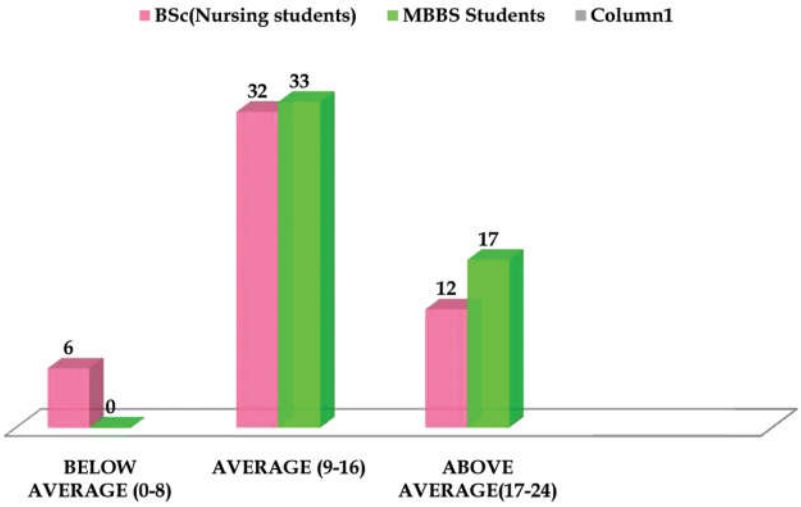


Fig. 5: A Compound Bar Diagram representing the Frequency Distribution of Category of Knowledge Scores of BSc. (Hons) Nursing and MBBS Students

Discussion

U Ujwala Ukey, Ramasankaram Kambatla, Dash Satyanarayan, Appajirao N R Naidu and P Ved Kulkarni[4]conducted a study to create awareness about the Biomedical Waste Management in Undergraduate Medical And Nursing Students at a teaching institute in Vizianagaram, Andhra Pradesh.The findings showed that MBBS students had a fairly better awareness regarding the subject than nursing students. This study finding are similar to the present study in which the The mean knowledge score (17.74) of MBBS 2nd year students was higher than that of the mean knowledge score (13) of BSc. (Hons.) 1st year students.

Gupta V, D Mohapatra and V Kumar [7] conducted

a study to assess the knowledge, attitude and practices of Biomedical Waste Management among health care personnels at Pt. B.D. Sharma PGIMS, Rohtak during the months of September and October 2013. The study participants included, interns and house officers doctors, nursing staff, laboratory technicians, sanitary workers (ward boys and sweepers) working in the institute and dealing with BMW. The study findings revealed that knowledge score as satisfactory was highest among doctors (86%), followed by nursing staff (70%) and lab technicians (46%). The practice score of BMWM was satisfactory in most doctors (90%), nursing staff (78%) and lab technician (68%) and it was poor in 62% of sanitary workers. This study finding conforms to the present study in which out of 50 BSc. (Hons) Nursing 1st year Students, 6 students had below average scores, 32 students had average scores and 12 students had above average scores, whereas out of 50 MBBS 2nd year students, none had below average scores, 33 students had average scores and 17 students had above average scores.

Conclusions

The mean knowledge score (17.74) of MBBS 2nd year students was higher than that of the mean knowledge score (13) of BSc. (Hons.) 1st year students.Majority of MBBS students (33) had Average Knowledge and 17 students had Above Average Knowledge and none had below average knowledge score, whereas In BSc(Hons) Nursing majority of students (32) had Average Knowledge, 12 students had Above Average Knowledge and 6 had Below Average.The sample size of the study, was small, thus restricting our ability to make broader generalization.Only MBBS – 2nd year & BSc(Hons) Nursing– 1st year Students were included in the study.The time period of the data collection was less.Students of MBBS & BSc(Hons) Nursing should be updated about regarding management of Bio Medical Waste.In service education programs may be conducted to update the knowledge of MBBS & BSc(Hons) Nursing students regarding management of Bio Medical Waste Management.Nursing Administrators may facilitate and support the organization and participation personnel in various continuing education programs to enhance knowledge regarding management of Bio Medical Waste.Students are future Health care workers they need to understand the importance of Bio Medical Waste Management in the work setting.The students may be educated about the causes, risk factors, hazards, and management of Bio Medical Waste.Nurses should need to collect data regarding the knowledge level of MBBS & BSc(Hons) Nursing students and further should take measures to improvise their knowledge by conducting planned teaching programmes.Further research studies can be conducted to assess the retention of knowledge after dissemination of information booklet.The study can be replicated on a larger sample and also on other health care professional. The study could be done for a larger time period as this would give more significant results.

Acknowledgement

We would like to place on records the hardwork and the tireless efforts in data collection and compilation of the thesis of BSc. (Hons) Nursing Students, Batch 2012 -2016 of Rufaida College of Nursing, Jamia Hamdard namely, Ms. Shahin, Ms. Shilpa Gaur, Ms. Teena Thomas, Ms. Tenzin Chhoyang, Ms. Ulfat Farooq and Ms. Zulaiha M Mukadaddas.

References

1. Shamim Haier, SnehaKumari, VivekKashyap, ShaliniSunderam, Shashi Bhushan Singh. A Study on Knowledge and Practice regarding Biomedical Waste Management among Staff Nurses and Nursing Students Indian Journal of Community Health. 2015; 27(1).
2. BhagyaBhaskar, HemaNidugala and Ramakrishna Avadhani. Biomedical Waste Management – Knowledge and Practices among Healthcare Providers in Mangalore. Nitte University Journal of Health Science. 2012 March; 2(1): 35-36.
3. http://www.searo.who.int/india/topics/medical_waste/en/.
4. U Ujawala Ukey, Ramasankaram Kambatla, Dash Satyanarayan, Appajirao N R Naidu, P Ved Kulkarni. A Study to Create Awareness about the Biomedical Waste Management in Undergraduate Medical And Nursing Students at a teaching institute inVizianagaram, Andhra Pradesh National Journal of Community Medicine. 2012; 3 (3): 428-432.
5. Jahnvi G and Raju PV. Awareness and Training Need of Biomedical Waste Management among Undergraduate Students in Andhra Pradesh. Indian Journal of Public Health. 2006; 5(1): 53-54.
6. Sling R, Kishore J, G Mathur, Mandal K, Puri S.

The Role of Informational Booklet on Biomedical Waste Management for Nurses. Nurisng Journal of India. 2002: 271-272.

7. Gupta V., Mohapatra D. and Kumar V. A Study to Assess the Knowledge, Attitude and Practices of Biomedical Waste Management among Health Care Personnel. International Journal of Basic and Applied Medical Sciences. 2015 May-August ; 5 (2): 102-107.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.9

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Osteoporosis among the Women Residing in Selected Rural Areas

Sinu Mosses

Abstract

A study was carried out to assess the effectiveness of planned teaching programme on knowledge regarding osteoporosis among the women residing in selected rural areas. This study was based on the quantitative approach. The samples were 60 women (30 in experimental group and 30 in control group) residing in selected rural areas during the study period. Non probability purposive sampling technique was used. In this study, the comparison of the knowledge scores of the experimental and control group reveals that the mean difference knowledge score of the experimental group was 10 and the mean difference knowledge score of the control group was 0.8. The calculated 't' value is 23.08, which is greater than the tabulated 't' value 2 at 5% level of significance. Thus it was statistically interpreted that the planned teaching programme regarding osteoporosis was effective in the women in the experimental group, and the level of knowledge is significantly increased in the experimental group than in the control group.

Keywords: Planned Teaching Programme; Osteoporosis; Women.

Introduction

Our bones support us and allow us to move. Our bones store minerals such as calcium and phosphorous, which help keep our bones strong, and release them into the body when we need them for other uses. Osteoporosis is a disease characterized by weakened and fragile bone tissue, leading to an increased risk of bone fracture. Women can lose up to 20 % of their bone mass in the five to seven years after menopause. According to World Health Organization (WHO), osteoporosis is second only to cardiovascular disease as a global healthcare problem and medical studies show a 50-year-old woman has a similar lifetime risk of dying from hip fracture as from breast cancer.

Author's Affiliations: Lecturer, VSPMs College of Nursing and Research Centre, Lata Mangeshkar Hospital, Digdoh Hills, Hingna, Nagpur.

Corresponding Author: Sinu Mosses, Lecturer, Plot No. 21, Durga Co. Opp. Hos. Soc., Vena Nagar, Duttawadi, Nagpur- 440023.
E-mail: sinumossesindia@gmail.com

Osteoporosis is a global problem. Worldwide, lifetime risk for osteoporotic fractures in women is 30-50%. In men risk is 15-30%. 1 in 3 women over 50 will suffer a fracture due to osteoporosis. Approximately 1.6 million hip fractures occur each year worldwide, the incidence is set to increase to 6.3 million by 2050. Based on 2001 census, approximately 163 million Indians are above the age of 50; this number is expected to increase to 230 million by 2015. Centre for Osteoporosis Management and Research, Sushrut Hospital, Research Centre and Postgraduate Institute of Orthopaedics, Nagpur conducted a study, revealed that 29.9% of women and 24.3% of men between the age of 20 and 79 years had low bone mass.

So, after going through the statistics, the increased incidence and risk of the osteoporosis made the researcher to conduct the planned teaching programme on knowledge regarding osteoporosis among the women, so that women become more aware of the changes that takes place in the bones as a part of ageing and will be able to take successful measures to prevent osteoporosis.

Statement of the Problem

"A study to assess the effectiveness of planned teaching programme on knowledge regarding osteoporosis among the women residing in selected rural areas."

Objectives of the Study

- To assess the pre test knowledge regarding osteoporosis among the women in the experimental and control group.

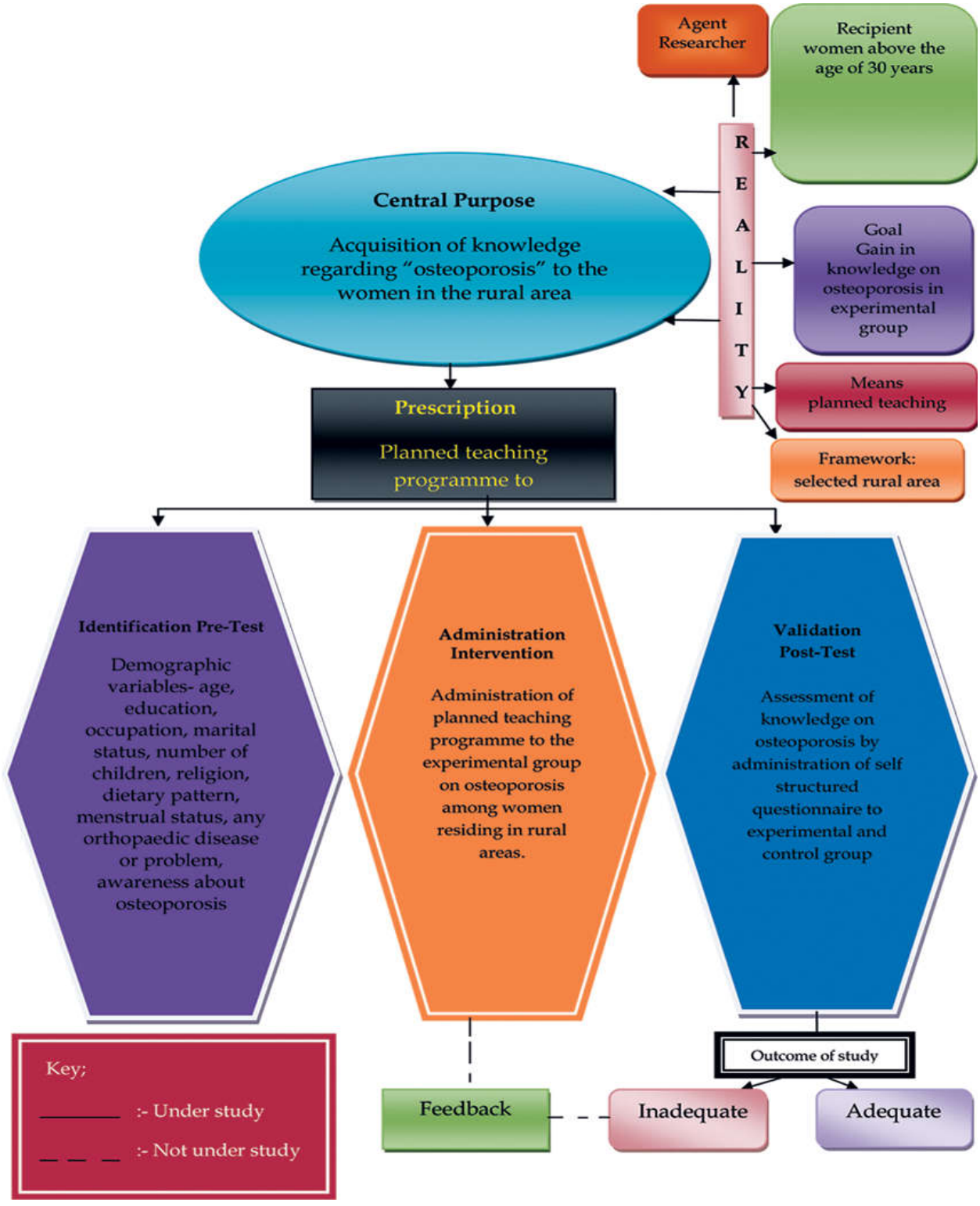


Fig. 1: Conceptual framework on Erniestiene Weidenbach's Theory

- To assess the post test knowledge regarding osteoporosis among the women in the experimental and control group.
- To compare the pre test and post test knowledge scores regarding osteoporosis among the women in the experimental and control group.
- To associate the post- test knowledge scores with selected demographic variables in the experimental and control group.

Hypothesis

Hypothesis was tested at 0.05 level of significance

- H_0 - There will be no significant difference in knowledge regarding osteoporosis among the women in the experimental and control group.
- H_1 - There will be significant increase in knowledge regarding osteoporosis among the women in the experimental group than in control group.

Ethical Aspect

The study proposal was accepted by the ethical committee of the institution. Permission was obtained by the concerned authorities before conducting the study. Consent letter was obtained by individual samples after explaining them the research process in their own language. Confidentiality regarding the samples information was maintained by using code numbers by the investigator.

Conceptual framework

Conceptual Frame Work presents logically constructed concepts to provide general explanation of the relationship between the concepts of the research study. The conceptual framework used in this study is "Ernestine Wiedenbach's prescription theory".

Review of Literature

An extensive review of, the research and the non research literature, related to the present study was done to broaden the understanding and gain insight into the selected problem. The attempt was made through Journal review, Textbooks, Medline, Pubmed, Google, Wikipedia, Mendeley, etc. in order to widen the understanding of the research problem and the methodology of the study. It helped in developing the instruments of the study and in selection of the variables to be included in the study.

In the present study, the reviewed publications have been organized and presented as follows.

1. Literature related to the knowledge on osteoporosis.
2. Literature related to the management and prevention of osteoporosis.
3. Literature related to the effectiveness of planned teaching programme.

Research Methodology

Research Approach

Quantitative approach

Design

Quasi- experimental Non- randomized control group design.

Setting

Rural area

d) Variables of the study

Independent Variable

Planned teaching programme

Dependent Variable

Knowledge regarding osteoporosis**.**

Demographic Variables

age, education, occupation, marital status, number of children, religion, dietary pattern, menstrual status, any orthopedic disease or problem, and awareness about osteoporosis

Population: women

Target Population: women in rural areas

Accessible Population: women above 30 years of age residing in selected rural areas

Sample: women above 30 years of age in selected rural areas who were available during data collection

Sample size: 60 women (30 in experimental group and 30 in control group)

Sampling Technique: Non probability purposive sampling technique

Criteria for the Sample

Inclusion Criteria

The women who are-

1. Above 30 years of age.
2. Willing to participate in the study.
3. Present at the time of data collection.

Exclusive Criteria

Women who are-

1. Not willing to participate.
2. Women who have attended similar programme earlier.
3. Women who belongs to any health profession

Tools

The tools used in this study consist of two sections:

- *Section I:* Consist of questionnaire on demographic data
- *Section II:* Consist of questionnaire on knowledge regarding osteoporosis.
- Planned teaching programme

Method of Analysis

The data obtained was analyzed and interpreted by descriptive and inferential statistics based on the objectives of the study.

Results

Table 1 (a): Table showing the percentage wise distribution of women according to their demographic characteristics n=30

Demographic Variables	Experimental Group		Control Group	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Age				
31- 40 years	15	50%	15	50%
41- 50 years	9	30%	7	23.30%
51- 60 years	4	13.30%	7	23.30%
61 years and above	2	6.70%	1	3.30%
Education				
Primary	7	23.30%	3	10%
Secondary	8	26.70%	11	36.70%
Higher secondary	13	43.30%	10	33.30%
Graduate and other	2	6.70%	6	20%
Occupation				
Government	0	0%	0	0%
Private	0	0%	2	6.70%
Business	1	3.30%	5	16.70%
Housewife	29	96.70%	23	76.70%
Marital status				
Married	27	90%	27	90%
Unmarried	0	0%	0	0%
Widow	3	10%	3	10%
Divorced	0	0%	0	0%
Number of children				
None	2	6.70%	1	3.30%
One	4	13.30%	9	30%
Two	14	46.70%	15	50%
Three and above	10	33.30%	5	16.70%
Religion				
Hindu	28	93.30%	21	70%
Muslim	0	0%	4	13.30%
Christian	2	6.70%	5	16.70%
Any other	0	0%	0	0%
Dietary pattern				
Vegetarian	21	70%	11	36.70%
Non- vegetarian	9	30%	19	63.30%

Table 1(a) shows that majority of the women 15 (50%) belonged to 31- 40 years in both the experimental and control group whereas, 2 (6.7%) in experimental and 1 (3.3%) in control group were of age 61years and above. Majority of the women 13 (43.30%) in the experimental group had higher secondary education and 11 (36.70%) in the control group had secondary education whereas, 2 (6.70%) women were graduate and other in the experimental group and 3 (10%) had primary education in the control group. Majority of the women, 29 (96. 7%) in experimental and 23 (76.7%) in control group were housewives whereas, none of the women had government occupation in the experimental and control group, and none had private occupation in the experimental group. Majority of the women, 27 (90%) in the experimental and control group were married and none of the women is unmarried or divorced in the experimental and control group. Majority of the women, 14 (46.7%) in the experimental group and 15 (50%) in the control group had two children whereas, 2 (6.7%) women in the experimental group and 1 (3.30%) woman in the control group had no child. Majority of the women, 28 (93.3%) in experimental and 21 (70%) in control group were Hindus, none of the women in the experimental group were Muslims and none of the women belonged to any other religion. Majority of the women, 21 (70%) in the experimental group were vegetarian and 19 (63.3%) in the control group were non vegetarian whereas, 11 (36.7%) in control group were vegetarian and 9 (30%) in the experimental group were non vegetarian.

Table 1 (b): Table showing the percentage wise distribution of women according to their demographic characteristics n=30

Demographic Variables	Experimental Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Menstrual status				
Menstruating	20	66.70%	18	60%
Menopausal	10	33.30%	12	40%
If menopause, specify the age of menopause				
40- 43 years	7	70%	2	16.67%
44- 47 years	0	0%	5	41.67%
48- 51 years	2	20%	4	33.33%
52 years and above	1	10%	1	8.33%
Any orthopedic disease or problem				
Yes	21	70%	16	53.30%
No	9	30%	14	46.70%
If yes, specify				
back pain	1	4.76%	5	31.25%
joint pain	7	33.33%	2	12.50%
neck pain	1	4.76%	2	12.50%
previous H/O fracture	2	9.52%	3	18.75%
back and joint pain	10	47.62%	4	25%
Are you aware of osteoporosis				
Yes	5	16.7%	10	33.33%
No	25	83.30%	20	66.70%
If yes, source of information				
Family	2	40%	1	10%
Friends	0	0%	1	10%
Relatives	0	0%	0	0%
Health worker	1	20%	3	30%
Mass media	2	40%	5	50%
Others	0	0%	0	0%

Table 1(b) shows that majority of the women, 20 (66.7%) in the experimental group and 18 (60%) in the control group were menstruating and 10 (33.3%) in the experimental group and 12 (40%) in the control group had attained menopause. Majority of the menopausal women, 7(70%) in the experimental group belonged to the age group 40- 43 years and 5 (41.67%) in the control group belonged to 44- 47 years

whereas, 0 (0%) in the experimental group belonged to 44- 47 years and 1 (8.33%) in the control group belonged to 52 years and above. Majority of the women, 21(70%) in the experimental group and 16 (53.3%) in the control group had any orthopaedic disease whereas, 9 (30%) in the experimental group and 14 (46.7%) in the control group had no orthopaedic disease. Majority of the women, 10 (47.62%) in the experimental group had back and joint pain, 5 (31.25%) in the control group had back pain whereas, 1(4.76%) in the experimental group had back pain and neck pain and 2 (12.50%) women in the control group had joint pain and neck pain. Majority of the women, 25 (83.3%) women in the experimental group and 20 (66.7%) in the control group had no awareness about osteoporosis, whereas 5 (16.7%) women in the experimental group and 10 (33.3%) in the control group had awareness about osteoporosis.

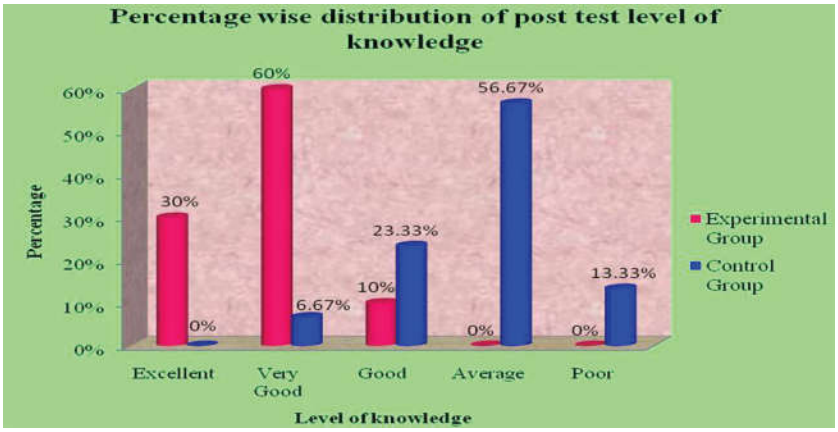


Fig. 2: Comparison of post test Level of knowledge score in the experimental and control group

Fig. 2 shows that in the experimental group, 18 (60%) women had very good knowledge, 9 (30%) had excellent knowledge, 3(10%) women had good knowledge and none of the sample 0(0%) were having average and poor knowledge. In the control group, 17(56.67%) women had average knowledge, 7 (23.33%) had good knowledge, 4(13.33%) had poor knowledge, 2(6.67%) women had very good knowledge and none of the sample 0(0%) had excellent knowledge.

Table 2: Comparison of knowledge of women regarding osteoporosis in the experimental and control group

Groups	Mean difference	S.D	Calculated t- value	DF	Table value	p- value	Significance
Experimental group	10	1.87	23.03	58	2	0.000	p<0.05
Control group	0.8	1.12					Significant

This table shows the comparison of difference in the knowledge scores of experimental and control group in the pretest and post test of the women in the selected rural areas. Mean difference and standard deviation values are compared and student's unpaired 't' was applied at 5% level of significance. The tabulated value for n=(30-1)+(30-1) i.e 58 degrees of freedom (df) was 2.00. The calculated 't' value are much higher than the tabulated value at 5% level of significance which is statistically acceptable level of significance. In addition the calculated 'p' value was <0.05 which is ideal for any population. Hence it is statistically interpreted that the research hypothesis H_1 is accepted. Thus, the planned teaching programme regarding osteoporosis was effective in the women in the experimental group, and the level of knowledge is significantly increased in the experimental group than in control group.

Analysis reveals that, in the experimental group, there is very high association of knowledge score with education, menstrual status and awareness about osteoporosis. While, in the control group, there is association of knowledge score with education and awareness about osteoporosis.

Implication of the Study

The findings of this study have implications for nursing practice, nursing education, nursing

administration, and nursing research.

Nursing Practice

- Nurses have a prime important role for patient education in community and hospital. The health care professional including the nurses should participate in educational interventions on osteoporosis in order to provide a foundation for their nursing practices to promote knowledge of osteoporosis and self-efficacy in their patients.
- Every nurse practitioner must possess a prepared planned teaching, to teach the women regarding osteoporosis in community or in hospital. Different A. V aids can be used in imparting knowledge to various categories of people.
- Nurses should collaborate with various health care disciplines including dieticians, physical therapists, physicians, social workers that would enhance and reinforce educational interventions with their knowledge and expertise.
- The findings of the study will help the nursing professionals working in community gaining the knowledge and helps in planning and implementation of health teaching.
- Student nurses and community nurses will use this information during their clinical posting and during their home visits to give health education to the women.

Nursing Education

- The present study emphasis the health education on knowledge regarding osteoporosis among the women. In order to educate the women and the community, it is essential that the nurses are competent and have sound knowledge to improve the level of understanding which can be reflected to the public through education.
- Health care personnel should be given an opportunity to update their knowledge periodically. Now days, much emphasis is given on comprehensive care in the nursing curriculum. So this study can be used by nursing teachers as an informative illustration for nursing students.
- The nurse in the community and in the hospital should be encouraged to conduct such teaching programmes.
- In the nursing curriculum, the role of the correct posture and exercises for the prevention and management of the osteoporosis should be included in the subjects like medical surgical nursing and gynaecological nursing.

Nursing Research

- In Indian studies, there is scarce literature and research done on planned teaching on osteoporosis. An untoward effect of providing knowledge is increasingly rapidly now- a days. This stresses a greater need for nursing research in these areas. So that the bone loss and osteoporotic fractures can be prevented.
- Nursing is to care the individual from womb to tomb. Research studies should be conducted to assess with respect to the knowledge. Prevention strategies should be taught to the public at their early stages of life because prevention is better than cure.
- The present study would help nurses and other health care personnel to understand the level of knowledge of women regarding osteoporosis. Based on this knowledge the nurse researchers can undertake similar studies among the adolescence, men and women.
- The findings of the study have added to the existing body of the knowledge in the osteoporosis. Other researchers may utilize the suggestions and recommendations for conducting further study. The tool and technique used has added to the body of knowledge and can be used for further references.

Nursing Administration

- Nursing administration should implement outreach teaching to make the women aware about the osteoporosis. Necessary administration support should be provided to conduct several activities in the community and in the hospitals.
- Findings of the study can be used by the Nursing Administrator in creating policies and plans for providing education to the staff nurses to promote health education programmes. It would help the nursing administrators to be planned and organized in giving continuing education to the nurses and to others for applying and updating the knowledge of osteoporosis.

Conclusion

After the detailed analysis, this study leads to

the following conclusion that the women residing in the rural areas do not have 100% knowledge regarding osteoporosis. There was a significant increase in the knowledge of subjects in the experimental group after the introduction of planned teaching. To find the effectiveness of planned teaching, 't' test was applied and t value was calculated, post test score of the experimental group was significantly very higher at 0.05 level. And in the control group also post test was higher at 0.05 level, but very less compared to the post test of experimental group. Thus it was concluded that planned teaching programme on osteoporosis was found effective as a teaching strategy.

Hence, based on the above cited findings, it was concluded undoubtedly that the written prepared material by the investigator in the form of planned teaching programme helped the women to improve their knowledge on osteoporosis.

References

1. Lewis's. Medical surgical nursing. 7th edition. Haryana: Mosby Elsevier publication. 2011; P. 1583.
2. Black. M. Joyce, Hawks Hokanson Jane. Medical surgical nursing: clinical management of positive outcome. 7th edition. New Delhi: Saunders Elseviers Publication 2009; 1: 558, 596.
3. B. Sreelekha. Diagnosing osteoporosis, Nightingale Nursing Times. 2011 September; 7(6): 17-18.
4. Nasima Khatoon. Management of osteoporosis among post- menopausal women in a selected hospital of Delhi. The Nursing Journal of India. 2013 May- June; CIV(3): 112- 116.
5. Snehlata Shrivastav, Doctors' survey on osteoporosis to help formulate national policy – Times Of India.htm; TNN. Oct 20, 2011 http://articles.timesofindia.indiatimes.com/2011-10-20/nagpur/30302022_1_tribal-women-survey-vidarbha-orthopaedic-society.
6. Pande KC, Prevalence of low bone mass in healthy Indian population. 2002 Oct;100(10): 598-600,602. http://www.ncbi.nlm.nih.gov/pubmed/12452513.
7. Briot K, Corticosteroid-induced osteoporosis. 2012 Dec; 34(5): 315-323. http://www.ncbi.nlm.nih.gov/pubmed/23238181.
8. Adler RA, Secondary fracture prevention. 2012 March; 10(1): 22-27 http://www.ncbi.nlm.nih.gov/pubmed/22307391.
9. Lv N, Brown JL, Impact of a nutrition program to increase intake of calcium- rich foods by Chinese-American women. 2011 Jan; 111(1): 143-149. http://www.ncbi.nlm.nih.gov/pubmed/21185977 on 23/ 01/ 2014.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.10

A Study to Assess the Awareness Regarding Influenza A (H1N1) Among Adults at Selected Community in Rishikesh, Uttarakand

Vasantha Kalyani*, S.K. Mohanasundari**

Abstract

Objectives: To assess the awareness regarding influenza A (H1N1) among adults at selected community in Rishikesh, Uttarakant". *Method:* The present quantitative cross-sectional, descriptive study was conducted in the month of April to June 2015 among the adult population those who visit to AIIMS OPD, Rishikesh., A total of a 400 (40%) samples was selected based on non-probability convenient sampling technique and a structured self administered questioner was prepared to collect the data's. The subjects selected for the study were contacted personally during the time period of data collection. A written consent from each subject was taken and the respondent was counselled to provide correct information. The information collected was kept strictly confidential and anonymity was maintained. A descriptive and inferential statistics was used to analyse the data. *Result:* the result shows that around 327 (81.7%) had no awareness regarding influenza A H1N1 and 73(18.3%) samples were having awareness regarding cause, spread, treatment and prevention of Influenza A (H1NI). The mean score was 8.5 with the standard deviation of 3.7. So it was concluded that adult population have no awareness regarding Influenza A (H1N1).

Keywords: Influenza A H1N1; Adult; Epidemics; Infectious Diseases; Outbreak; and Strain of Swine Flu.

Introduction

The Constitution of India makes health in India the responsibility of state governments, rather than the central federal government. It makes every state responsible for "raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties" but at present Indian government faces the challenge of a range of infectious diseases. Every fifth new tuberculosis case in the world lives in the Indian subcontinent according to the Deutsche Lepra-und-Tuberkulosehilfe. Japanese Encephalitis is present in many areas of India and has caused serious epidemics in recent years. India has been less severely affected by the HIV epidemic than many other countries, despite early predictions of disaster, but still has almost three million people living with the virus. Bacterial resistance is a growing threat because of the widespread misuse of broad-spectrum antibiotic. The outbreak of swine flu that claimed more than 1500 lives in February of 2015 may have been the result of a new mutated strain, according to the Massachusetts Institute of Technology. The H1N1 virus has begun to cause concern in India this year. Since Jan. 1, 2015, In Dec. 2014, positive cases of swine flu were first reported. Currently, more than 10 other states in India have reported H1N1 infections with a few deaths. Because India has such a dense population and since H1N1 can be spread through the air via droplets, the Indian Health Ministry has asked their state officials to ensure sanitation and hygiene in all public places and to bring about awareness to

Author's Affiliations: *Assistant Professor, College of Nursing, AIIMS, Rishikesh, Uttarankand. **Nursing Tutor, College of Nursing, AIIMS, Jodhpur, Rajasthan.

Corresponding Author: S.K. Mohanasundari, College of Nursing, AIIMS, Jodhpur, Rajasthan 342005
E-mail: roshinikrishitha@gmail.com

people about the symptoms of swine flu. The concern is that rising numbers of swine flu infections may be the beginning of another H1N1 epidemic, although the current strain may not be as deadly as the 2009 H1N1 strain.

On April 6th Critics of India's response to the 2014-2015 swine flu outbreak suggest that besides a prolonged winter, a combination of inadequate testing facilities, inadequate Tamiflu availability, and lack of private hospitals' cooperation with local governments were reasons that swine flu was not effectively contained in India. The number of deaths recorded is 2,123 while the number of infected individuals is reported to be 34,656, according to the Health Ministry. The purpose of the study is to assess the awareness of the adult population about cause spread, treatment and prevention of swine Flu.

A new strain of swine flu, (H3N2) virus was detected in 2011; it has not affected any large numbers of people in the current flu season. However, another antigenically distinct virus with the same H and N components (termed H3N2 (note no "v") has caused flu in humans; viral antigens were incorporated into the 2013-2014 seasonal flu shots and nasal spray vaccines.

The World Health Organization (WHO) is closely monitoring cases of swine flu globally to see whether this virus develops into a pandemic. Because it's a new virus, no one will have immunity to it and everyone could be at risk of catching it. This includes healthy adults as well as older people, young children and those with existing medical conditions. Tamiflu (Oseltamivir) and Ralenza (Zanamivir) can treat the H1N1 swine flu strain still which is not danger if we take some protect against it such as a wear three layer mask on nose, wash the hands after coming home, not involve at place where big crowd attended.

Objective of the Study

To assess the awareness regarding influenza A(H1N1) among adults at selected community in Rishikesh, Uttarakant"

Method

The present quantitative cross-sectional, descriptive study was conducted in the month of April to June 2015 among the adult population those who visit to AIIMS OPD, Rishikesh. Total estimated out patient's is 1000 per day as per information from the hospital Administrative office, A total of a 400 (40%) samples was selected based on non-probability convenient sampling technique and a structured self administered questioner was prepared to collect the data's, the questioner includes 10 demographic data's and 24 multiple choice questions which included cause, spread, treatment and prevention of Influenza A (H1NI). The subjects selected for the study were contacted personally during the time period of data collection. A written consent from each subject was taken and the respondent was counselled to provide correct information. The information collected was kept strictly confidential and anonymity was maintained. A descriptive and inferential statistics was used to analyse the data.

Result

The frequency and percentage distribution of the demographic variables of this current study was as follows

From the table-1 it was found that 19.8% of sample was aged below 25 years. 30.5% samples were aged between 26-35years, 19% samples were aged between 36-45 years, 15.7% samples were aged between 46-55 years And only 15% were aged above >55 years.

Around 43% of samples were male population and 57% samples are females.

Table-1 also describes the place of living of samples, that is around 59.8% sample were live in rural area, and 24.5% samples are living in urban area, were as only 15.7 % were lining is semi urban area.

From the descriptive statistics it also found that 10.8% had primary education, 44.5% samples had secondary education, 26% has completed higher secondary education, only 12.2% samples had degree, and 6.5% samples had other forms of education.

The occupational status of the samples shows that 21% sample were health care professionals, 15.7% samples were teaching professionalism, 22.2% samples were daily labour, samples with unemployment also equal to samples of teaching professionals and 25.3% samples were doing some other kind of job.

As concern with the type of family, majority were live as joint family (66.2%), only 24% were living as nuclear family, remaining samples (9.8%) were

living as other types of family.

More than half of the samples (59.8) were middle class, 14% samples were from low class, around 17.2% samples were from upper middle class, and only 9.0% samples were belongs to upper class.

As long as the we concern about the sources of health information, 34% of samples received information about influenza(H1N1) from TV, 19.8% from newspaper, 21.2% from internet, only 8.8% samples received information from Friends and neighbours, 16.2% samples received information from some other sources.

It inferential statistics shows that around 327 (81.7%) had no awareness regarding influenza A H1N1 and 73(18.3%) samples were having awareness regarding cause, spread, treatment and prevention of Influenza A (H1NI). The mean score was 8.5 with the standard deviation of 3.7. So it was concluded that adult population have no awareness regarding Influenza A (H1N1).

Table 1:

S. No	Demographic variables	Frequency	Percentage (%)
1.	Age		
	a) <25 yrs	79	19.8
	b) 26-35 yrs	122	30.5
	c) 36-45 yrs	76	19
	d) 46-55 yrs	63	15.7
	e) >55 yrs	60	15
2	Sex:		
	a) Male	172	43
	b) Female	228	57
3	Place of living		
	a) Rural area	239	59.8
	b) Urban area	98	24.5
	c) Semi urban	63	15.7
4	Educational status:		
	a) Primary	43	10.8
	b) Secondary	178	44.5
	c) Higher secondary	104	26
	d) Degree	49	12.2
	e) Others	26	6.5
5	Occupation		
	a) Health care professionals	84	21
	b) Teaching profession	63	15.7
	c) Daily Labour	89	22.2
	d) Unemployed	63	15.8
	e) Others	101	25.3
6	Types of family:		
	a) Joint family	265	66.2
	b) Nuclear family	96	24
	c) Others	39	9.8
7	Economic status:		
	a) Low class	56	14
	b) Middle class	239	59.8
	c) Upper middle class	69	17.2
	d) Upper class	36	9.0
8	Sources of health information:		
	a) News papers	79	19.8
	b) TV	136	34
	c) Internet	85	21.2
	d) Friends and neighbours	35	8.8
	e) Others	65	16.2
9	Previously affected with influenza A (H1N1):		
	a) Yes	34	8.5
	b) No	366	91.5
10	Presently affected with influenza A (H1N1):		
	a) Yes	11	2.8
	b) No	389	97.2

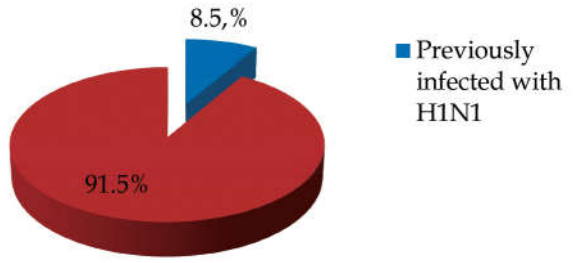


Fig. 1: Previously affected with influenza A

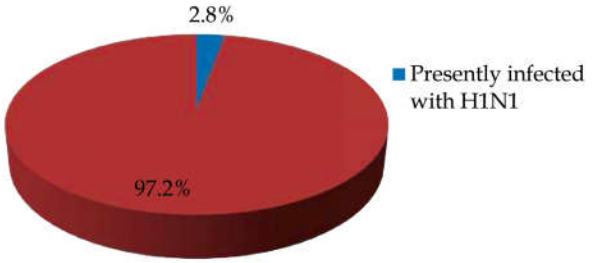


Fig. 2: Presently affected with influenza A

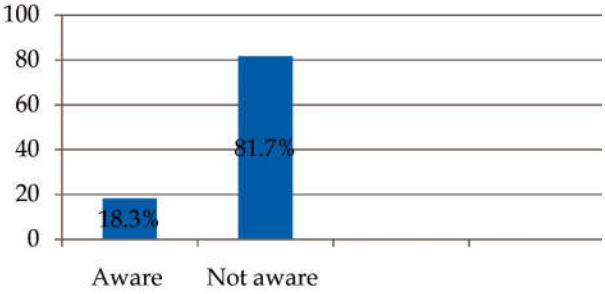


Fig. 3: Awareness regarding influenza A (H1N1)

Discussion

Influenza A viruses causes recurrent outbreaks at the local or global scale, with potentially severe consequences for human health and the global economy. Swine influenza virus infections in humans have been reported in the United States, Canada, Europe and Asia. There are no unique clinical features that distinguish swine influenza in humans from typical influenza. Although a number of the case patients have predisposing immunocompromising conditions, healthy persons are also clearly at risk for illness and death from swine influenza. Sporadic cases of swine influenza in humans, combined with seroepidemiological studies demonstrating increased risk of swine influenza in occupationally exposed workers, highlight the crucial role that this group may play in the development of new strains of influenza virus. Persons who work with swine should be considered for sentinel influenza surveillance, and may be an important group to include in pandemic planning.

Rubin *et al*. conducted a study among the general population to assess whether perceptions of the swine flu outbreak predicted changes in behaviour among members of the public in England, Scotland and Wales. Here, it had been seen that 37.8% of the participants (n=377) reported performing any recommended behaviour change over the past 4 days because of swine flu.

A cross-sectional (descriptive) study was conducted in, 2009 among the doctors and nurses working at Guru Teg Bahadur Hospital associated to UCMS, Delhi. To study the knowledge and practices regarding swine flu and to study the attitudes and practices of health care providers toward the prevention of the swine flu epidemic. Around 75% of the health care providers were aware about the symptoms of swine flu. Mostly, all study subjects were aware that it is transmitted through droplet infection. Correct knowledge of the incubation period of swine flu was known to 80% of the doctors and 69% of the nurses. Knowledge about high-risk groups (contacts, travellers, health care providers) was observed among 88% of the doctors and 78.8% of the nurses. Practice of wearing mask during duty hours was observed among 82.6% of doctors and 85% of nurses, whereas of the total study population, only 40% were correctly using mask during duty hours. Behaviour modification is an important preventive strategy to contain the spread of H1N1 infection was demonstrated by a majority of the health care providers. Statistically significant differences were observed among doctors and nurses regarding knowledge of mode of spread of infection, PPEs, medicine for swine flu treatment and availability of vaccine ($P < 0.001$).

In the present study, 81.7 % samples had no awareness and 18.3 % samples were awareness regarding influenza A (H1N1).

Conclusion

significant gaps observed among adult population regarding swine flu need to be filled by appropriate awareness programmes. Data indicates that samples were having inadequate knowledge and poor awareness.

Reference

1. Aledort JE, Lurie N, Wasserman J, Bozzette SA. Non-pharmaceutical public health interventions for

pandemic influenza: An evaluation of the evidence base. BMC Public Health. 2007; 7: 208.

2. Centers for Disease Control and Prevention, accine against 2009 H1N1 Influenza Virus
3. Christian Nordqvist, Top 20 Questions and Answers on swiner flu, Medical News Today.Com, Tuesday 28 April 2009.
4. Cutler J, Schleihauf E, Hatchette TF, Billard B, Watson-Creed G, Davidson R, et al. Investigation of the first cases of human-to-human infection with the new swine-origin influenza A (H1N1) virus in Canada. CMAJ. 2009; 181: 159–63
5. Michaelis M, Doerr HW, Cinatl J., Jr An influenza A H1N1 virus revival - pandemic H1N1/09 virus. Infection. 2009; 37: 381–9.
6. Om Prakash Rajoura, Rupali Roy, Paras Agarwal, and Anjur Tupil Kannan A Study of the Swine Flu (H1N1) Epidemic Among Health Care Providers of a Medical College Hospital of Delhi, Indian J Community Med. 2011 Jul-Sep; 36(3): 187–190.

Subscription Form

I want to renew/subscribe international class journal **"Community and Public Health Nursing"** of Red Flower Publication Pvt. Ltd.

Subscription Rates:
- Institutional: INR5000/USD500
- Individual: Contact us

Name and complete address (in capitals):

Payment detail:
Demand Draft No.
Date of DD
Amount paid Rs./USD

1. Advance payment required by Demand Draft payable to Red Flower Publicaion Pvt. Ltd. payable at Delhi.
2. Cancellation not allowed except for duplicate payment.
3. Agents allowed 10% discount.
4. Claim must be made within six months from issue date.

Mail all orders to
Red Flower Publication Pvt. Ltd.
48/41-42, DSIDC, Pocket-II
Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-45796900, 22754205, 22756995, Fax: 91-11-22754205
E-mail: customer@rfppl.co.in, customer.rfp@gmail.com
Website: www.rfppl.co.in

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.11

Level of Practice on Protein Rich Diet

S.K. Mohanasundari*, Joyce Joseph*, Sanjeeta Dara*

Abstract

A quantitative research approach and descriptive study design was followed for this present study. Non-random purposive sampling technique was followed to select 60 samples from the target population. Around 20 practice related Questionnaire wasprepared along with demographic variables, the score and interpretation was 0-8 indicated poor practice, 9-14 indicated good/average practice and 15-20 indicates very good practice. Pilot study was conducted with 6 samples. The actual data was collected with over a period of one month. The data was compiled and analysed with help of descriptive and inferential statistics. The result shows that around20% of samples were having poor practice in providing protein rich diet to their under-five children, Where as 46.7% of mothers are having satisfactory level of practice and 33.3% samples were having excellent practice. The mean score is 12.4 with the standard deviation of 4.1. It is clear that most of the mother were having good practice in providing protein rich diet to their under-five children. There is no association exit between demographic variables and level of practice.

Keywords: Protein; Under-Five Children; Amino Acid; Nutrition; Growth and Development.

Introduction

The latest edition of the Global Nutrition Report 2015 by the International Food Policy Research Institute, revealed that 29.4 per cent of children (aged less than three years) to be underweight (low in weight for their age), while 15 per cent were wasted (low weight for their height) and 38.7 per cent were stunted (low in height for age). On the face of it, this compares well with the NFHS-3 data, in which the corresponding figures were 40.4 per cent (underweight), 22.9 per cent (wasted) and 44.9 per cent (stunted). But in absolute terms, the current levels of underweight and stunted children are abysmally high [1].

During the period between NFHS 2 (1998-99) & NFHS 3 (2005-06), decline has been observed for stunting and underweight among children under 3 years of age, whereas the percentage of children wasted has increased. However, it may be noted that, the degree of decline was very low for both categories of children (< 3 years) reported stunting and underweight as the per year decline were less than one percentage point in both cases. Further, the increase in the percentage of children wasted over years indicates a worsening situation, though the per year increase was less than one percentage point. Parents want a great start in life for their children. Education, security, health—these are the foundations for a strong beginning. And nutrition, including adequate protein, plays an important role for both physical and cognitive health of the child [2].

Proteins are one of the most amazing group of molecules in the human body. They are complex combinations of smaller chemical compounds called amino acids. These are like the bricks or building blocks of a building.Adequate protein is essential for maintaining the body's protein stores and keeping many bodily functions running smoothly. Due to

Author's Affiliations: *Nursing Tutors, College of Nursing, AIIMS Jodhpur, 342005 Rajasthan.

Corresponding Author: S.K. Mohanasundari, Nursing Tutors, College of Nursing, AIIMS Jodhpur, 342005 Rajasthan.
E-mail: roshinikrishitha@gmail.com

the demands of growth and development, getting adequate protein is particularly important during infancy, childhood, and adolescence. Babies and toddlers are growing rapidly, so they need more protein per pound of body weight than older kids and adults [3].

Protein is important for infants because the body weight of a baby doubles by 6 months. Breast milk or formula supplies all the protein a baby needs until 4 to 6 months; protein-rich solid foods should supplement breast milk beginning at 6 to 8 months. Ohio State University Extension recommends feeding infants strained or chopped meats and mashed beans at 6 to 8 months and mashed egg yolks, cottage cheese and yogurt at 8 to 10 months. At 10 to 12 months, babies can eat the same protein-rich foods the rest of the family eats, though they should be soft and in small pieces. Babies should get protein every day because the body doesn't store protein the way it stores fat and carbohydrates.

Protein is important for toddlers because walking requires protein to power muscles, and brain cells need this nutrient to learn speech and language skills. Healthy 1- to 3-year-olds need 0.55 grams of protein per pound daily, which means the average 29-pound toddler should get 16 grams of protein each day. A cup of milk has 8 grams of protein, 3 ounces of meat have 21 grams, a cup of dry beans has 16 grams, an 8-ounce container of yogurt has 11 grams and 2 tablespoons of peanut butter have 7 grams of protein. Many plant foods have incomplete proteins, but certain combinations can make up complete proteins that provide all the essential amino acids toddlers need [3].

Skipping on protein can retard growth and development, decrease immunity, weaken the heart and lungs and sap the energy that babies and toddlers need to play and learn. Every cell in the body contains protein, it makes up enzymes needed for chemical reactions and 10 percent of a child's energy comes from protein. Dietary proteins are digested into amino acids that are used to make body proteins to grow and maintain the bones, muscles, blood, skin, hair and organs. Of the 22 amino acids, babies and toddlers can make 13 and must get the others from protein-rich foods, such as breast milk, formula, meat, eggs, dairy products and beans. This present study is focusing on mothers practice on providing protein rich diet to their under-five children [4].

Objectives

1. To assess the level of practice among mothers of under-five children regarding protein rich diet in selected community at Jodhpur, Rajasthan.
2. To associate the selected demographic variables with level of practice among mothers of under-five children regarding protein rich diet.

Methods

A quantitative research approach and descriptive study design was followed for this present study with the target population of mothers of under-five children. The accessible population was mothers living in Jodhpur. Total sample was 60. Non-random purposive sampling technique was followed to select 60 samples from the population after getting concern. Questionaire was prepared after extensive review, it includes 2 sections. Section I is demographic variables and section II is 20 questions on practice of giving protein rich diet. Reliability and validity of the tool was tested. The score and interpretation was 0-8 indicated poor practice, 9-14 indicated satisfactory and 15-20 indicates excellent practice. Pilot study was conducted with 10 percentage of sample. And feasibility of the study was assessed. It was found feasible. The actual data was collected with over a period of one month. The date was compiled and analysed with help of descriptive and inferential statistics.

Result

Table 1 shows that around 46.7% of mothers are having good practice and 33.3% samples were having very good practice. Only 20% of samples were having poor practice in providing protein rich diet to their under-five children. The mean score is 12.4 with the standard deviation of 4.1.it is clear that most of the mother were having good practice in providing protein rich diet to their under-five children.

Table 2 shows the frequency and percentage distribution of the samples. Regarding are there are 6.7% of samples are < 21 years and >35 years of age independently, around 36.7% samples were aged between 21-25 years, majority of the samples were (38.3) aged between 26-30 years, and 11.6 samples were aged between 31-35 yrs. The X^2 is 1.55 and not significant

Majority of the mothers are having single children (43.4%), Very few samples like 3.3% were having 4 and above children. The X^2 is 0.14 and not significant

Around 36.7 % of samples were having primary

Table 1: Interpretation of result

Level of practice	Score	Frequency	%	Mean	Median	SD
Poor	0-8	12	20	12.4	13	4.1
Satisfactory	9-14	28	46.7			
Excellent	15-20	20	33.3			

Table 2: Frequency and percentage distribution of demographic variables:

Demographic Variables	Frequency	Percentage	"P'	X^2
AGE:				
a) <21 Yrs	4	6.7		
b) 21-25 Yrs	22	36.7	15.51	1.55
c) 26-30 Yrs	23	38.3		
d) 31-35 Yrs	7	11.6		
e) >35 Yrs	4	6.7		
No of Children:				
a) 1	26	43.4		
b) 2	27	45	12.59	0.14
c) 3	5	8.3		
d) 4 and above	2	3.3		
Education				
a) Uneducated	1	1.6		
b) Primary	22	36.7		
c) Secondary	15	25	15.51	11.26
d) High Sec	5	8.3		
e) UG	17	28.4		
Place of Living				
a) Rural	21	35		
b) Urban	33	55	9.49	0.22
c) Sub Urban	6	10		
Religion				
a) Hindu	49	81.7		
b) Muslim	10	16.7	9.49	0.617
c) Christian	1	1.6		
Family Income Per Month				
a) 5000 Rs And Below	3	5		
b) 5001-15000 Rs	35	58.3		
c) 15001-25000rs	7	11.7	15.51	0.33
d) 25001-35000rs	9	15		
e) >35000 Rs	6	10		
Occupation				
a) House Wife	49	81.7		
b) Teacher	5	8.3	12.59	0.35
c) Health Care Professional	5	8.3		
d) Others	1	1.6		

Fig. 1

education, only 1.6 % of mothers were uneducated. Remaining samples were having secondary, higher secondary and under graduate educations. The X^2 is 11.26 and not significant.

Regarding place of living most of the samples were belongs to urban area(55%), only 10% of samples live in semi urban area and around 35% of samples are living is rural area. The X^2 is 0.22 and not significant.

Regarding religion Hindu are found to be more

like 81.7%. Muslims are 16.7% and minority of sample belongs to Christian. (1.6). The X^2 is 0.617 and not significant.

Regarding the income of family per month majority of family income (58.3% is between 5001-15000 Rs/months. The X^2 is 0.33 and not significant.

Pertaining to occupation of the mothers most of the mothers were house wife (81.7%). Remaining samples were doing job. The X^2 is 0.35 and not significant.

The association between the demographic variables were found non-significant.

Discussion

A Studies on the nutritional status of children aged 0-5 years in a drought-affected desert area of western Rajasthan, India revealed growth retardation. The study was carried out in 24 villages belonging to six tehsils (sub-units of district) of Jodhpur District, a drought-affected desert district of western Rajasthan, during a drought in 2003. Stunting (malnutrition of long duration) was observed in 53% of children and underweight in 60%. Wasting, an indicator of short-duration malnutrition, was present in 28% of children. The extent of malnutrition was significantly higher in girls than boys ($P<0.05$). Vitamin A and B complex deficiencies were found in 0.7 and 3.0% of children, respectively. Prevalence of marasmus (protein-energy malnutrition, PEM) was 1.7% (2.3% in boys and 1.1% in girls). Overall deficits in mean energy and protein intakes were very high (76 and 54%, respectively). Comparison of the present drought results with earlier studies in desert normal and desert drought conditions showed higher prevalence of PEM and higher dietary energy and protein deficiencies [5].

Our present study focused on assessing the level of practice among the mothers of under-five children. This study help us to predict the prevalence of PEM among under-five children in Jodhpur. The present study revealed, that around 46.7% of mothers are having satisfactory in their practice and 33.3% samples were having excellent practice. Only 20% of samples were having poor practice in providing protein rich diet to their under-five children. The mean score is 12.4 with the standard deviation of 4.1.it is clear that most of the mother were having satisfactory level in providing protein rich diet to their under-five children.

Conclusion

Giving children the best start in life requires offering nutrient-rich foods, including protein. People of all ages have food preferences specific to taste, texture, and aroma—children are no exception. Although motivated by different factors in each stage of childhood, picky eating is a hallmark of the toddler years. These childhood food preferences are important to consider along with the high physiological need for protein and other nutrients. The ups and downs of children's eating behaviours may seem like a roller coaster ride for caregivers. Feeding children requires balancing efforts to ensure nutritional adequacy, to encourage appreciation of a wide variety of flavours and textures, and to respect preferences. Protein needs, however, are based on body weight and may not increase with higher activity levels. Therefore, focus on variety from all food groups, protein choices at both meals and snacks, and encouraging children to eat enough to satisfy hunger. Promoting physical activity is important, and children need fuel to play. Parents are their children's role models and children learn how to eat well and in the right quantities by observing their parent's healthful behaviours. When children are offered a diversity of healthful foods, they will likely choose many of those foods. It is responsibility of parents to find right food to their children and children are taught to eat when they are hungry and stop when full to obtain optimum growth.

Reference

1. India's Malnutrition Shame" Centre of Social Medicine and Community Health"Jawaharlal Nehru University, Delhi.
2. A Statistical Appraisal Children In India. Family Health Survey, National Ministry of Health and Family Welfare. 2012.
3. Academy of nutrition and dietetics. Nutrition Guidance for Healthy Children Ages 2 to 11 Years. 2014 August; 114(8): 1257-1276.
4. Rolland-Cachera MF, Deheeger M, Akrout M, Bellisle F. Influence of macronutrients on adiposity development: a follow up study of nutrition and growth from 10 months to 8 years of age. Int J ObesRelMetabol Dis. 1995; 19: 573–8.
5. Singh MB, Fotedar R, Lakshminarayana J, Anand PK. Studies on the nutritional status of children aged 0-5 years in a drought-affected desert area of western Rajasthan, India.Public Health

Nutrition.2006 Dec; 9(8): 961-7.

6. Gunnarsdottir I, Thorsdottir I. Relationship between growth and feeding in infancy and body mass index at the age of 6 years. Int J ObesRelMetabol Dis. 2003; 27: 1527.
7. Parul data "paediatric nursing" 3rd edition. Jaypee publication. Pg. No: 46.
8. Marlow & Redding "Textbook of paediatric nursing" south Asian edition. Pg. No: 128.
9. Park K. Parks Textbook of Preventive and Social Medicine. 19th ed. Jabalpur: BanarsidasBhanot; 2007. Nutrition and health; p. 507.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.12

Effectiveness of Planned Teaching Programme (PTP) on Knowledge regarding Tuberculosis and RNTCP among Student Nurses at selected Nursing Colleges of Hubli, Karnataka

Somashekarayya Kalmath* , Suresh Patil**

Abstract

A pre experimental study was conducted to evaluate the effectiveness of planned teaching programme on knowledge regarding tuberculosis and RNTCP among student nurses at selected Nursing colleges of Hubballi. Totally 50 student nurses were selected by probability simple random sampling technique. The knowledge was assessed by using structured knowledge Questionnaire. The study results reveal that, 27 (54%) had an average knowledge, 14(28%) had good knowledge and 09 (18%) had poor knowledge, where as in post test majority of Subjects 44 (88%) had good knowledge and 06 (12%) of them had average knowledge. Paired 't' test value 32.64 in knowledge scores revealed that there is a gain in knowledge regarding tuberculosis and RNTCP after administrating planned teaching programme at 0.05 level of significance. The study findings concluded that the planned teaching programme was effective in improving the knowledge of student nurses regarding tuberculosis and RNTCP.

Keywords: Planned Teaching Programme; Tuberculosis; RNTCP; Student Nurses.

Introduction

Tuberculosis (TB) remains as an important public health problem in India. More than eight million people develop active tuberculosis annually and most of the cases are detected in the developing world. About one-third of the global population is infected with Mycobacterium tuberculosis and at risk of developing the disease. More than eight million people develop active tuberculosis annually, with more than 90% of deaths occurring in the developing world making tuberculosis still one of the most important global public health threats.

Early detection and adequate treatment are critical measures for disease control. The World Health Organization (WHO) has published guidelines for tuberculosis control in low-income countries [6,7]. However, inadequate case detection and poor treatment continue to be some of the major factors for the increasing burden of tuberculosis globally [8,9]. Since the inception of Directly Observed Treatment Short Course (DOTS), the awareness, diagnosis, and treatment of tuberculosis have improved considerably.

Tuberculosis remains a major public health problem in India. Over 2 million people die of tuberculosis worldwide each year and 4 lakh of them die in India alone. Tuberculosis represents 3.75 of India disease burden, 11 times that of malaria and is leading cause of death in the 15-45 year group.

Some studies have documented inadequate tuberculosis knowledge and poor compliance with tuberculosis treatment guidelines among practicing physicians, and other health professionals. Such studies need to be conducted regularly to check the compliance about Revised National Tuberculosis Control Programme (RNTCP) and the need for modifying the tuberculosis control program. Hence study was undertaken to evaluate the effectiveness of planned teaching programme on knowledge

Author's Affiliations: *Assistant Professor & H.O.D of Paediatric Nursing, **Assistant Professor & H.O.D of Psychiatric Nursing, KLES Institute of Nursing Sciences, Hubli–580 031 (Karnataka), India.

Corresponding Author: Somashekarayya Kalmath, Assistant Professor & H.O.D, Dept. of Paediatric Nursing, KLES Institute of Nursing Sciences, Hubli - 580031 Karnataka.
E-mail: somu_1100@yahoo.co.in

regarding tuberculosis and RNTCP among student nurses.

Objectives

1. To assess the knowledge regarding tuberculosis and RNTCP among student nurses.
2. To evaluate the effectiveness of Planned Teaching Programme (PTP) on knowledge regarding tuberculosis and RNTCP among student nurses in terms of gain in knowledge scores.
3. To find out an association between pre-test knowledge scores and their selected socio-demographic variables.

Methodology

Research Approach

Evaluative Research Approach

Research Design

Pre-Experimental; one group pretest post test design

Sampling Technique

Probability; Simple Random Sampling Technique

Sample Size: 50

Setting of Study

Selected Nursing Colleges of Hubli.

Tool used

Structured Knowledge Questionnaire to assess knowledge regarding tuberculosis and RNTCP among student nurses.

Section I: Socio-demographic variables of subjects.

Section II: Knowledge items on tuberculosis and RNTCP.

Procedure of Data Collection

The formal permission was obtained from the principal of selected nursing colleges of Hubli. The written consent was obtained by the subjects. The pre-test includes structured knowledge questionnaire to assess knowledge of subjects regarding tuberculosis and RNTCP. Planned Teaching Programme (PTP) was administered at the end of the pre-test. The post-test of the study was carried out 7 days later, using the same tool as the pre-test. Data collected was then tabulated and analyzed.

Results

The Findings Related to Socio-Demographic Variables of Subjects

The majority of the subjects 45 (90%) belonged to age group 20-22years, while minimum number 5 (10%) belonged to the age group of 22 years & above. In terms of gender, the maximum number of subjects 34 (68%) were females where as the minimum number 16 (32%) were males. The maximum number of subjects 32 (64%) were Christians, 12 (24%) were Hindu and the minimum number 6 (12%) were belongs to Muslim religion. The majority of the subjects 28 (56%) belonged to rural and while minimum number 22 (44%) belonged to the urban area. There was no exposure to any training programme on Tuberculosis and RNTCP.

Analysis and Interpretation of Knowledge Scores of Student Nurses Regarding Tuberculosis and RNTCP

Table 1: Pre-test and post-test percentage of knowledge scores of subjects in different items of Tuberculosis and RNTCP.

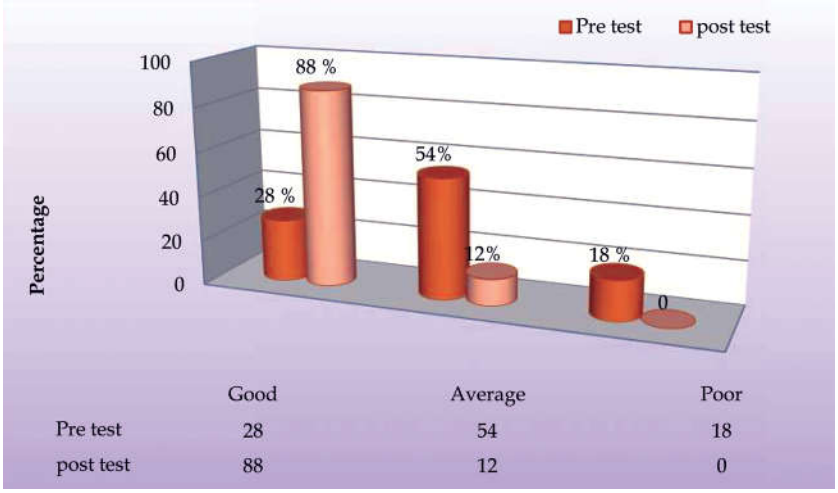
Sl. No	Items on Tuberculosis & RNTCP	Total score	Mean % of knowledge scores of subjects		
			Pre-test(x)	Post-test(y)	Gain in knowledge
1	Anatomy & physiology of respiratory system	1000	58.64	87.28	28.64
2	Tuberculosis	1250	42.62	81.96	39.34
3	RNTCP	750	39.48	74.82	35.34

Table 1 reveals that the percentage of gain in knowledge scores in the area of anatomy and physiology of respiratory system was 28.64, Tuberculosis was 39.34% and RNTCP was 35.34%.

Table 2: Frequency and percentage distribution of knowledge scores of subjects regarding Tuberculosis and RNTCP

Knowledge score	Pre test		Post test	
	Freq	%	Freq	%
Good	14	28	44	88
Average	27	54	06	12
Poor	09	18	00	00

Table 2 reveals that in pre-test majority of subjects 27 (54%) had an average knowledge,14(28%) had good knowledge and 09 (18%) had poor knowledge, where as in post test majority of Subjects 44 (88%) had good knowledge and 06 (12%) of them had average knowledge.



Graph 1: Percentage distribution of knowledge scores of subjects regarding Tuberculosis and RNTCP

Findings Related to Evaluation of Effectiveness of Planned Teaching Programme

Table 3: Mean difference($\bar{d}$) Standard Error of difference (SED) and paired't' values of knowledge scores of subjects regarding Tuberculosis and RNTCP

Domains	Mean difference ($\bar{d}$)	Standard Error of difference (SED)	Paired 't' values	
			Calculated	Tabulated
Knowledge	5.93	0.7	32.64	1.960

Table 3 depicts that the calculated paired 't' test values in knowledge was greater than the tabulated value i.e 32.64 > 1.960. Hence $H_1$is accepted. Hence planned teaching programme was effective in improving knowledge of student nurses regarding Tuberculosis and RNTCP.

Analysis and Interpretation of Data to Find Out Association between Pretest Knowledge and Selected Socio Demographic Variables

Since c^2_{cal} value < c^2_{tab} value. These Probability values of c^2 contingency revealed that the gain in knowledge scores and socio demographic variables are independent. This means that gain in knowledge scores has nothing to do with socio demographic variables of student nurses. Hence there is no association between pre-test knowledge and selected demographic variables.

Conclusion

Overall pre-test knowledge scores regarding Tuberculosis and RNTCP was average. There was a need for planned teaching programme for student nurses regarding Tuberculosis and RNTCP. Post test results showed significant improvement in the level of knowledge on Tuberculosis and RNTCP. Thus, it can be concluded that planned teaching programme (PTP) was effective specialised tool for student nurses to increase and update their knowledge on Tuberculosis and RNTCP. The results revealed that there was no association between pre-test knowledge and sociodemographic variables.

References

1. Dye C, Scheele S, Dolin P, Pathania V, Raviglione MC. Consensus statement. Global burden of tuberculosis: Estimated incidence, prevalence, and mortality by country. WHO Global Surveillance and Monitoring Project. JAMA. 1999; 282: 677-86.
2. Frieden TR, Sterling TR, Munsiff SS, Watt CJ, Dye C. Tuberculosis. Lancet. 2003; 362: 887-99.
3. Ahlburg D. The economic impact of tuberculosis. Geneva: World Health Organization; 2000.
4. Maher D, Raviglione M. Global epidemiology of tuberculosis. Clin Chest Med. 2005; 26: 167-82.
5. Gupta R, Espinal MA, Ravigilone MC. Tuberculosis as a major global health problem in the 21st century: A WHO perspective. Semin Respir Crit Care Med. 2004; 25: 245-53.
6. Enarson DA, Rieder HL, Arnaothr T, Trebucq A. Management of tuberculosis: A guide for low-income countries. 5 th ed. Paris: International Union Against Tuberculosis and Lung Disease; 2000.
7. Treatment of tuberculosis: Guidelines for national programmes, 3 rd ed. Geneva: World Health Organization; 2003.
8. Espinal MA, Laszlo A, Simonsen L. Global trends in resistance to antituberculosis drugs. N Eng J Med. 2001; 184: 473-8.
9. Mahmoudi A, Iseman MD. Pitfalls in the care of patients with tuberculosis: Common errors and their association with the acquisition of drug resistance. JAMA. 1993; 270: 65-8.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.13

Smokeless Tobacco use can be Fatal

Jinu K. Rajan

Abstract

Smokeless tobacco products are addictive and may also increase the risk of fatal heart attack, fatal stroke and certain cancers. Smokeless tobacco products have taken a backseat to smoking for decades, but are recently gaining ground in overall usage and use among young people due to aggressive marketing and new product development. Smokeless tobacco includes chew, spit, dip, snuff and a host of new dissolvable products. They are simply not a safe alternative to smoking and they can be as addictive as, or more addictive than cigarettes. Smokeless tobacco causes many significant health problems, including several types of cancer.

Keyword: Smokeless Tobacco; Fatal.

Introduction

According to WHO estimates, about 194 million men and 45 million women use tobacco in smoked or smokeless form in India[1].There are approximately 5 million deaths due to tobacco consumption annually which is expected to reach 10 million by 2025. Currently over 20% of worldwide tobacco related mortality occurs in India [2].

Over time, smokeless tobacco products have gained popularity in the throughout the world. Smokeless tobacco is consumed without burning the product, and can be used orally or nasally. Oral smokeless tobacco products are placed in the mouth, cheek or lip and sucked (dipped) or chewed. Tobacco pastes or powders are used in a similar manner and placed on the gums or teeth. Fine tobacco powder mixtures are usually inhaled and absorbed in the nasal passages [3].

Author's Affiliations: Assistant Professor, Majmaah University, Kingdom of Saudi Arabia.

Corresponding Author: Jinu K. Rajan, Room Number-7B1, SFS, Symphony Apartment, Opposite All India Radio, Vazhuthacaud, Trivandrum, Kerala, Pin 695014.
E-mail: jinukrajan@rediffmail.com

The nature of chewable areca nut and tobacco consumption in India has undergone a rapid transformation with the introduction of Pan masala and Gutka. These products are conveniently packed and aggressively advertised and marketed. Smokeless tobacco consumption, in India, shows a wide variation in different geographical areas and socioeconomic groups [1].

Easy affordability, lesser cost and misconceptions regarding its useful health effects are important contributory factors for increased smokeless tobacco consumption [4].

The prevalence of and dependence on areca nut use in India is increasing rapidly, in the form of consumption of pan masala, especially by the youth. This is in contrast to earlier forms of use with betel quid and mainly on social occasions. Pan masala is easily available in both rural and urban areas, and there are no age bars to the purchase and use of this substance [5].

Types of Smokeless Tobacco

Presently there are two chief kinds of smokeless tobacco that are available, namely chewing tobacco and snuff. Chewing tobacco is obtainable as loose leaf, plug, or twist. Snuff is available in the form of finely crushed tobacco that can be dry, moist, or in

sachets that resemble tea bag-like pouches. Generally, certain types of snuff can be made use of through sniffing or inhaling into the nose. However the majority of smokeless tobacco users put the substance in their cheek or between their gum and cheek. After sucking on, the tobacco users spit out the tobacco juices [6].

Health Problems of Smokeless Tobacco

Some people have the habit of chewing tobacco frequently, while most people practice cigarette smoking. Both the forms of tobacco use cause many dangerous health problems. In the United States, the use of tobacco accounts for one in five deaths from lung cancer, cardiovascular and respiratory diseases.

The smoking facts reveal that tobacco smoke increases the risk of cardiovascular diseases. It consists of a high amount of carbon monoxide, which decreases the level of oxygen in the blood. The vital organs like brain, heart and lungs are deprived of sufficient oxygen, which affects their functioning.

People addicted to smoking are at a higher risk of high blood pressure, heart attack, aortic aneurysm, blood clots, hemorrhages and other cardiovascular diseases. Cigarette smoking increases the levels of triglycerides and clotting factors and reduces the levels of HDL cholesterol in the blood, leading to coronary heart diseases, stroke, cerebrovascular diseases and atherosclerotic peripheral vascular diseases.

Chewing tobacco increases the risk of oral health problems such as periodontal disease, mouth ulcers, candidiasis, oral lesions, oral leukoplakia, gingivitis, brown staining and sticky tar deposits in teeth, tooth decay, tooth abrasion, altered taste and bad breath. It can also lead to lip cancer, sore throat as well as a burning sensation on the tongue and lips [7].

Chronic obstructive pulmonary diseases (COPD) such as chronic bronchitis and emphysema can also result from smoking. Some other diseases caused by tobacco are peptic ulcers, asthma, pneumonia, diabetes, cataracts, acute myeloid leukemia, chest infections, tuberculosis, Crohn's disease, multiple sclerosis and diabetic retinopathy. Due to smoking, the level of vitamin A in the body is reduced, which can lead to early aging [8].

Tobacco use during pregnancy causes hazardous effects on the health of both, the pregnant woman and her baby. There is an increased risk of miscarriages as well as pregnancy-related complications like ectopic pregnancy, bleeding and premature birth. There is also a possibility of low birth weight baby or stillbirth [9]. People, especially infants and children who come in contact with the smokers may also suffer from the passive effects of smoking. They may become more susceptible to respiratory problems like asthma and various infections of the throat and nose. There is also a higher risk of sudden infant death syndrome [10].

Besides These, Smokeless Tobacco Leads to the Following Problems

a. *Erodes Tooth:* The ingredients of tobacco consist of gravels, sand, and other harmful chemicals that erode the enamel of tooth. Continuous chewing leads to early loss of tooth.
b. *Early Decay of Tooth*: Chewing leaves small particles in tooth that forms bacteria and plaque, it harms enamel and gums, which leads to decay of tooth.
c. *Gum slump*:Chewing leads to decomposing of gums, the gums get infected and the grip on tooth loosens which exposes the sensitive area of tooth.
d. *Bad Breadth*:There is nothing as bad as bad breadth of a person they are major turn off for people around them. The long-term habit of chewing and spitting is unacceptable and looks indecent.
e. *Affects Eating Habit*: Eating habit of people who chews tobacco tends to be unhealthy, continuous chewing affects the taste bud and the sensitivity of them decreases. This leads to an increase in intake of more salt, sugar and spices in food as he feels a bland taste in his mouth[11].
f. *Spitting/drooling*: Because of the smokeless tobacco, the mouth makes saliva and needs to spit tobacco out the tobacco juice from time to time.
g. *Tooth stains*: While not all smokeless tobacco users get bad tooth stains, many have stained teeth in the area where they hold smokeless tobacco in their mouth[11].

Smokeless Tobacco Not an Alternative to Cigarettes

Smokeless tobacco is a major health hazard, and is not considered a reliable alternative for smoking cigarettes. Twenty eight cancer-causing agents, also referred to as carcinogens, are present in smokeless tobacco. They enhance the threat of cancer of the oral cavity. Complications related to oral health are closely connected with smokeless tobacco use such

as leukoplakia, a lesion of the soft tissue that comprises a white patch or plaque that cannot be scraped off, and extensive damage to the gums. Smokeless tobacco use can result in addiction to nicotine and dependence on it. Adolescents who are hooked to smokeless tobacco are more prone to become cigarette smokers [12].

Anti Tobacco Chewing Measures and Campaigns

There has been a wave worldwide against the use of tobacco. There are various forums, centers, associations and organizations that are fighting against the use of tobacco. These institutions campaign against it and spread awareness among people who are addicted to them. These campaigns are very helpful in spreading the information about tobacco and its fatal effect. There has been an effective measure taken against tobacco, which comprises:

- Tobacco in any form is banned at public places
- Advertisements of tobacco and tobacco carrying product reduced or banned
- Rules and regulations on the use of harmful chemicals in tobacco
- Increase tax on them
- Restrict sale of tobacco to minors
- Put warnings and dangers on the tobacco products
- Ban of smoking in movies and TV
- Display of pictures and case study of people who suffered from effects at public places and forums.
- Health conferences at schools, colleges and offices for anti tobacco campaign informing about facts about tobacco [13].

Anti Tobacco Drugs

There has been various drugs introduced in the market that can help people to stop chewing tobacco, they are said to be very effective and safe to use. Chewing is not a simple habit that one can stop in a day it takes some time. The drugs reduce the urge to chew tobacco and works as substitutes without the harmful effects [14].

Conclusion

The tobacco use is becoming a potential health threat that will affect the younger generation in India. Existing tobacco control programs are a good medium to incorporate education related to the risks of tobacco use. The challenge will be to make the prevention programs for pan masala as catchy and attractive as the advertisements that propagate them.

References

1. World Health Organization: Making a Difference. In World Health Report. World Health Organization: Geneva. 1999..
2. Gupta PC, Ball K: India: Tobacco Tragedy. Lancet. 1990; 335-595.
3. Alexander V. Prokhorov, Jonathan P. Winickoff, Jasjit S. Ahluwalia, Deborah Ossipklein, Susanne Tanski, Harry A. Lando, Eric T. Moolchan, Myra Muramoto, Jonathan D. Klein, Michael Weitzman, Kentya H. Ford, Youth Tobacco Use: A Global Perspective for Child Health Care Clinicians. American Academy of Pediatrics Center for Child Health Research Pediatrics. 2006;118; e890-e903
4. Ambarish Pandey, Nivedita Patni, Sasmit Sarangi, Mansher Singh, Kartavya Sharma, Ananth K Vellimana and Somdutta Patra, Association of exclusive smokeless tobacco consumption with hypertension in an adult male rural population of India, New Delhi,Indian Journal of Medical Sciences. 2007 June; 61(6): 319-321
5. Chandra Prabha S, Mulla Uzma. Areca nut : The hidden Indian 'gateway' to future tobacco use and oral cancers among youth.http://smoking.ygoy.com/is-smokeless-tobacco-a-healthier-alternative-for-cigarettes/ 26 May 2010
6. http://smoking.ygoy.com/is-smokeless-tobacco-a-healthier-alternative-for-cigarettes// 26 May 2010
7. http://www.buzzle.com/articles/diseases-caused-by-tobacco.html
8. http://www.ehow.com/about_5388031_smoking-diseases.html
9. http://www.netwellness.org/healthtopics/pregnancy/faq5.cfm
10. http://mens-health.health-cares.net/passive-smoking-hazards.php
11. http://cancercontrol.cancer.gov/tcrb/less_effects.html

12. Gupta PC, Ball K: India: Tobacco Tragedy. Lancet. 1990; 335-595.
13. http://www.notosmoke.com/herbal-smoking-articles/quit-chewing-tobacco.htm
14. BMJ-British Medical Journal. "Smokeless Tobacco Increases Risk Of Heart Attack And Stroke, Research Finds." Science Daily. Science Daily, 24 August 2009. <www.sciencedaily.com/releases/2009/08/090820124036.htm>.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.14

Abuse & Neglect among Mentally Disabled

Xavier Belsiyal C.

Abstract

There is lot of stigma attached to mental illnesses which often leads to increased risk of physical abuse, verbal abuse, sexual abuse and social neglect among patients suffering with mental illness. The mentally ill persons experience stigma from variety of sources like families, communities, co workers and mental health care givers. This review is intended to create awareness among health care professionals to educate regarding abuse and neglect among mentally disabled.

Keywords: Abuse; Neglect; Mentally Ill.

Introduction

Discarded by families or wandering further and further away from home, their real selves are lost and submerged under layers of dirt and idiosyncrasies. They become non persons, consciously ignored or worse, paid unhealthy attention. The mentally ill destitute comprise a largely forgotten and un thought of section of the homeless [1].

Definition of Terms

Abuse

The term abuse is used in mental health nursing to describe behaviors in which an individual misuses, attacks, or injures another individual. Neglect is also a form of abuse. This means any act or failure to act by an employee of a facility rendering care or treatment which was performed, or which was failed to be performed, knowingly, recklessly, or intentionally, and which caused, or may have caused, injury or death to an individual with mental illness [2].

Neglect

It means a negligent act or omission by an individual responsible for providing services in a facility rendering care or treatment which caused or may have caused injury or death to an individual with mental illness or which placed an individual with mental illness at risk of injury or death, and includes, but is not limited to, acts or omissions such as failure to: establish or carry out an appropriate individual program or treatment plan (including a discharge plan); provide adequate nutrition, clothing, or health care; and the failure to provide a safe environment which also includes failure to maintain adequate numbers of appropriately trained staff [2]."

Abuse & Neglect in Psychiatric in -Patients

Since 2005 over 70 employees of 10 state mental hospitals at Texas' in USA, have been fired while dozens more have been disciplined for alleged physical abuse, including brutal beatings in some cases. In 2007, the same state confirmed 137 cases of abuse against patients. Hundreds of other employees have been fired for other violations, including sleeping on the job and overmedicating

Author's Affiliations: Assistant Professor, College of Nursing, AIIMS, Rishikesh.

Corresponding Author: Xavier Belsiyal C., Assistant Professor, College of Nursing, All India Institute of Medical Sciences AIIMS, Rishikesh – 249201 Uttrakhand.
E-mail: jinbelsi@gmail.com

patients.

Many mental hospitals in India also continue to be shadowy prisons for the forgotten and wretched. Patients in many hospitals are found to suffer brutal treatment, violence, abuse, or neglect at the hands of untrained medical, nursing and orderly staff. There is excessive regimentalisation, and a regime of fear, and opacity.

Regardless of where the persons with mental illness live, it is their right to be treated with respect and to live free from abuse and neglect. Some of the abuse and neglect by the mental health professional include:

- Verbal abuse
- Physical abuse
- Emotional abuse
- Sexual abuse

Physical Abuse

This occurs when they are hit, kicked, slapped, beaten, punched, intentionally burned or physically hurt in some other way. Physical abuse also occurs when

- They are over-medicated.
- They are forced to take medication in a psychiatric hospital without consent, except in an emergency (immediate danger to self or others). In the community they have the absolute right to refuse medication, and cannot be forced to take it for any reason.
- Too much force is used during restraint.
- Restraints or seclusion are used in a psychiatric hospital when they are not an immediate danger to themselves or another person.

Sexual Abuse

Sexual abuse is any unwanted or forced sexual touching, words or activity, including rape and incest. Infants, young and older people have been victimized. Men and boys, as well as women and girls, can be victims.

Emotional Abuse

Emotional abuse occurs when words or actions result in fear or a break-down of a person's self-esteem. Examples of emotional abuse are acts which:

- Terrorize
- Intimidate
- Make fun of
- Ignore
- Threaten
- Coerce
- Reject
- Harass

Coercion happens when a person uses power or authority to make the patients do something that they don't want to do. Coercion is often used in assaults to ensure secrecy. Example; an abusive staff member who says she/he'll be punished or will take away their privileges if they don't keep silent about the abuse.

Neglect

It is deliberate lack of care so that the inpatients basic rights to shelter, clothing, food, health services or companionship are not met. Some of the neglectful acts are:

- People are restrained with rusting metal shackles, kept in caged beds, and subject to other inhumane treatment
- People live in filthy living conditions, lacking clothes, clean water, food, heating, proper bedding or hygiene facilities
- People are kept in seclusion for lengthy periods
- People are often detained in large institutions, isolated from society and far from families and loved ones [3,4].

Few Evidences of Abuse &Neglect In Indian Psychiatric Institutions

Erwadi, an Incurable Malady

Erwadi, a smouldering volcano, is not the only place in the country where one can find the mentally ill or the mentally challenged under the same roof. There are similar systems in other places as well. Twenty five patients with mental illness were chained at the Darga of Erwadi and unfortunately burnt to death when a fire broke out [6].

Neglect of services in Institute of Mental Health

There seems to be no real deliverance for the 571 mentally challenged people rescued from the 15 so-called mental homes in Erwadi in Tamil Nadu's Ramanathapuram district in August 2001. They

had come under the Tamil Nadu government's care after all the "mental homes" in Erwadi were closed down following a fire in the Moideen Badusha Mental Home on August 6, which killed 28 inmates who were chained to their positions. Of the 571 persons who were rescued, 152 were sent to the Government Institute of Mental Health (IMH) in Chennai, while 11 patients who had violent tendencies were admitted to the Ramanathapuram Government Hospital. The rest were returned to the care of their families [6].

Others Include

Inadequate medical facilities for ailments of the body, combined with abysmal living conditions, leads to illness and even tragic deaths of patients from entirely preventable non-psychiatric ailments.

There are still reports of brutal and indiscriminate application of ECT, or the controversial application of electrical current, without anesthesia.

In many hospitals, patients can rarely meet their families, and several families abandon the patients.

There is almost exclusive reliance on pharmacological remedies, with little or no psychotherapies, counseling, or alternative therapies.

To make matters worse, there is little done to prepare the patients to resume life after discharge. Neither they nor their family members are counseled even about the need for regular medicines, even less are they prepared for the emotional stresses of re-integrating with their families, and resuming interrupted professions or educational careers. It is not surprising therefore that the patients who are discharged frequently return to the mental hospitals, for longer and longer periods, with less and less hope [7].

Reasons for Not Reporting Abuse & Neglect

People may not report because they

- Fear punishment (increased medication, move to more restrictive ward, loss of privileges, etc.);
- Fear that no one will believe them or have already experienced not being believed;
- Fear or have experienced staff labeling their report as manipulative, delusional or a symptom of illness;
- Fear further or more severe abuse;
- Fear that alternatives to the present abusive situation may be worse than living with the abuse;
- Feel guilty or believe the abuse was their fault;
- Feel emotionally or financially dependent on the victimizer;
- Feel embarrassed, especially in cases of sexual assault;
- Love or care about the abuser, and don't want him/her to go to jail or lose a job;
- Don't know that the abuse is a crime and/or a violation of rights;
- Believe that the abuse is a private event and should not be reported [4].

Role of the National Human Rights Commission to Protect the Mentally Ill

- The National Human Rights Commission has described the state of mental hospitals throughout the country as "appalling" and initiated several steps, including a research project on "quality assurance of mental hospitals," to improve the situation. The NHRC said most of the mental hospitals in the country were overcrowded, and serve as "dumping grounds" for desperate relatives, who don't realize that patients can return home after appropriate treatment. Some mental hospitals in India lack even basic amenities and do little to alleviate the ignorance of relatives about the illness, medication and possible rehabilitation of their mentally ill kin.
- The interventions of committed professionals, organizations of patients and their families, civil society groups, judicial activism and the NHRC have initiated heartening reforms in many hospitals, in which patients are encouraged to stay for short periods with their families, and then get discharged. But within the walls of several mental hospitals, not enough has changed for people living with mental illness, especially those who are further disadvantaged because of gender, caste or poverty.
- The NHRC is mandated under Section 12 of the Protection of Human Rights Act, 1993 to visit Government run mental health institutions to 'study the living conditions of inmates and make recommendations thereon.' Besides discharging this specific responsibility, the Commission has been, right from its inception, giving special attention to the human rights of mentally ill persons because of their vulnerability and need for special protection.

Through regular visits the Commission was astonished to find that old and even primitive ways of diagnosis and treatment were being practiced at most places. Because of the absence of psychological and psycho-social facilities, control of aggressive patients is achieved by combination of drug therapy, physical restraint and seclusion.

As per The Mental Health Act of India, 1987 predates the human rights emphasis in the nineties. It can be described as a civil rights legislation as it aims to regulate standards in mental health institutions and to make provisions with respect to their property and affairs. From a human rights perspective, the provision under Section 81 is of particular importance. It says,

1. No mentally ill person shall be subjected during treatment to any indignity (whether physical or mental) or cruelty.
2. No mentally ill person under treatment shall be used for purposes of research, unless-

Such research is of direct benefit to him for purposes of diagnosis or treatment, or

Such persons, being a voluntary patient has given his consent in writing or where such person (whether or not a voluntary patient) is incompetent by reason of minority or otherwise, to give valid consent, the guardian or other person competent to give consent on his behalf, has given his consent in writing for such research.

Mental Health Act, 1987 is still not being implemented in many psychiatric institutions. Hopefully Mental Health Care Bill 2010 will address this issue.

As per the United Nations High Commission for Human Rights, the responsibility for special care and attention lies with the care givers and the institution which includes;

In the Treatment Setting

- No individual should be handcuffed or tied with ropes while being brought to the hospital or as an inpatient;
- There should be facilities for sedating disturbed individuals in the outpatient (OPD) setting;
- The OPD should comprise a large hall with sufficient number of chairs to seat persons seeking consultation and accompanying family members;
- The OPD hall should be well lit and ventilated with provision of potable water, toilet, newspaper stand and a television;
- A hospital canteen should be available nearby as waiting in the OPD may go up to 2 to 4 hrs depending on the average turnout of patients and the number of treating professionals available;
- At the OPD there should be sufficient number of registration counters to cater to the needs of people in different age groups (adults, adolescents, elderly and the children) as also women and men.
- The people at the registration counter should be given orientation and training to be civil, courteous, considerate to everyone seeking care, particularly the elderly;
- No mentally ill person or their caregivers should be subjected to any abuse or offensive treatment or treatment that borders on cruelty or torture; instead they should be treated with utmost civility, courtesy and consideration;
- No person seeking help for mental distress or illness should be refused examination at the OPD on any ground whatsoever;
- Similarly, no patient should be refused admission as an inpatient if the same is considered absolutely necessary by the physician examining him/her.

Once a Decision is Taken that a Patient Requires Inpatient Care, Certain other Rights Accrue to the Admitted Person Such as:

- Right to potable water;
- Right to environmental sanitation including clean toilets;
- Right to personal hygiene; periodicals and newspapers in their language;
- Right to recreation (television in the room, dance, drama, music, other cultural activities, games and sports);
- Right to food is further elaborated.

Right to Food Includes

- Preparation of food in the kitchen in a neat, orderly and tidy manner;
- Serving food courteously;
- Ensuring that the food is wholesome and nutritious;

- Making the hospital self-sufficient by developing a farm/kitchen garden to minimize dependence on market and ward off scarcity [7,8].

Steps to be Followed in Safeguarding the Mentally ill from Abuse:

- Abuse of the mentally ill can take place in any part of society. The mentally ill cannot always tell you about the abuse. Mentally ill people may be abused at home, in an assisted living facility or in an institution. Abuse is a situation that no one should have to live with and it is up to others to protect the mentally ill from being abused.
- Watch the mentally ill person that you suspect suffers from abuse. Look for any marks or bruising. Look for signs of neglect such as the mentally ill person wearing the same clothes for more than one day or acting as if she has not eaten anything for a while. The mentally ill person might not be able to verbally tell people when abuse occurs and depends on the people around her to report the situation. Protect the person by reporting the abuse if it happens.
- Report abuse that happens in an assistant living facility to the manger of the facility.
- If you think that the manager will not take action you can report it to their supervisors. The mentally ill cannot always tell the aides or residents that they live and work with about abuse. If abuse occurs in the institution you can report the abuse to the head of the institution.
- Talk to the mentally ill person if they can communicate and ask them if they know what abuse is. Have a discussion with the mentally ill person and ask about the abuse. Sometimes the mentally ill are not firmly attached to reality and may misconstrue your conversation. Make sure that you have this conversation with someone else in the room to protect yourself and the mentally ill person.

Abuse & Neglect in Vulnerable Groups

Abuse and neglect is not uncommon among the vulnerable sections of the society .There are three elements that generally create the environment for an incident of abuse to occur: the abuser or perpetrator, the abused, and a crisis.

The Abuser

The abuser is usually an individual who grew up in an abusive family. Research findings indicate that children, who observed or were victims of beatings and violence when young, believe that abuse is normal behavior and will reenact these behaviors later as adults. Abusive individuals usually are young and select a mate who is indifferent, passive, or of little help to them. Generally, abusers keep to themselves and may move from place to place. Other common characteristics include low self-concept, immaturity, fear of authority, lack of skills to meet their own emotional needs, belief in harsh physical discipline, fear of spoiling a child, poor impulse control, and unreasonable expectations from a child. Abusers often use alcohol or other substances to cope with stress. The mate, who usually knows about the abuse, either ignores it or may even participate in it.

The Abused

Abused individuals often demonstrate a pattern of learned helplessness, manifest characteristics of low-self esteem and shame, and often experience feelings of increased dependence, isolation, guilt, and entrapment.

A Crisis

A crisis (e.g., loss of job, divorce, illness, or death in the family) is usually the precipitating event that sets the abusive person into action. The individual overreacts because he or she is unable to cope with numerous or complex stressors. The person becomes frustrated and anxious and suddenly loses control [10].

Abuse & Neglect among Children

- ✓ Child abuse is considered an act of commission in which intentional physical, mental, or emotional harm is inflicted on a child by a parent or other person. It may include repeated injuries or unexplained cuts, bruises, fractures, burns, or scars; harsh punishment; or sexual abuse or exploitation. Child abuse is not to be confused with discipline. Discipline is a purposeful action to restrain or correct a child's behavior. It is done to teach, not to punish, and it is not designed to hurt the child or result in injury [3].
- ✓ Children are also victims of family violence (e.g., one parent kills the other), school violence (e.g., a child brings a gun to school and kills a teacher), or public violence (e.g., the terrorist

attack on the World Trade Center).

- ✓ The term 'Child Abuse' may have different connotations in different cultural milieu and socio-economic situations. A universal definition of child abuse in the Indian context does not exist and has yet to be defined. The WHO subcategorizes child abuse into physical abuse, physical neglect or abandonment, emotional abuse, and sexual abuse including commercial or other forms of exploitation that cause actual or potential harm to the child's health, survival, development, or dignity [8].

Abuse & Neglect among Senior Citizens

Elder abuse is a general term used to describe certain types of harm to older adults. Other terms commonly used include: "elder mistreatment", "senior abuse", "abuse in later life", "abuse of older adults", "abuse of older women", and "abuse of older men".

One of the more commonly accepted definitions of elder abuse is "a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person [12].

According to Help Age India, most elders are ill-treated by their own children, who have emerged as the largest group of perpetrators at 47.3 per cent. Spouses follow next at 19.3 per cent. Other relatives and grandchildren follow at 8.8 per cent and 8.6 per cent respectively. Neglect is the most common form of abuse at 48.7 per cent followed by emotional/ psychological, financial exploitation physical abuse and abandonment respectively. There is growing number of insecurity, injustice and abuse in Elderly in India [13].

Abuse & Neglect among Women

Domestic violence is the single greatest cause of injury to women. Although exact numbers of domestic violence incidents differ because this is such an underreported crime [1,5].

Domestic Violence is a family violence, and a pattern of coercive behaviors that may include repeated battering and injury, psychological abuse, sexual assault, progressive social isolation, deprivation, and intimidation. Someone (e.g., spouse, ex-spouse, or significant other) who is or was involved in an intimate relationship with the victim perpetrates these behaviors. Although 95% of domestic violence is directed at women who are emotionally involved with the batterer, children, siblings, parents, and the elderly are also at risk [5]. The behaviors of domestic violence include [14]:

- Intimidation (e.g., using looks, action, or gestures to instill fear in the victim)
- Threats (e.g., threatening to do something harmful to the children, a pet, or self)
- Sexual abuse (e.g., forcing unwanted sexual activity on the victim)
- Isolation (e.g., controlling the victim's contacts and activities)
- Emotional abuse (e.g., using put-downs or attacking the abused victim's self-confidence)
- Use of children (e.g., using custody/visitation rights as a way to control or harass the victim)
- Male privilege (e.g., expecting to be waited on by the victim)
- Economic abuse (e.g., refusing to share money with or provide financial support for the victim)

Abuse & Neglect among Challenged

Disabled people experiences neglect in many instances. Disabled children are neglected in education, play grounds, sports, leisure, love, support, health and decision making processes like selecting their own food or dress. Like wise disabled adults also suffer from neglect in the areas of employment, active participation in society, family life, health including reproductive health care and marriage, property rights, decision making process etc. Disabled people are often neglected of their material, financial, emotional requirements.

Prevention of Abuse and Neglect

The nurse may help prevent abuse by recognizing early signs of abuse, supporting and working for legislation to interrupt the abuse syndrome, promoting educational courses on family interpersonal relationships and childrearing practices, promoting community awareness programs, participating in continuing-education courses, and participating in nursing research of child abuse and effective treatment measures. In US, certain professionals are required by law to report suspected child abuse, neglect, or sexual abuse. Even if the law does not require nurses to report such a case, they have an ethical obligation to protect a child from harm. It is not the intent of the law to remove a child from his or her home

unless the child is in danger. Parents are not punished unless undue harm has occurred. In most situations, the family is helped so that the parents and child can stay together. When reporting abuse, the report may be made by telephone, in person, or in writing to a local welfare department or to the local police department. The following information is stated [9]:

- Name and address of the suspected victim
- Age
- Name and address of the parent or caretaker
- Name of the person suspected of abusing or neglecting the person
- Why abuse or neglect is suspected
- Any other helpful information
- Nurse's name, if she or he wishes (some states require a signature)

Nursing Interventions for Victims of Physical Abuse and Violence

The assessment of victims of abuse or violence requires the nurse to display sensitivity, empathy, and confidentiality. Privacy is essential when collecting data. Important interventions focus on providing a safe environment, including emergency medical care when necessary; empowering the victim through supportive therapies; and exploring continuum of care to assist the victim to regain control of his or her own life. Each victim's situation is unique and the decision to take action varies among individuals.

Safe Environment

After the client's medical condition is stabilized, often a referral to a local domestic-violence shelter may be made to ensure a safe environment and to assist the victim and the victim's family. If the situation is acute, law-enforcement officials should be notified immediately. However, some victims may refuse help or refuse to press charges due to fear of retaliation by the perpetrator. If an in-depth formal interview is planned, arrange for someone to stay with the victim. Inform the victim of his or her rights. Make arrangements so that the victim only needs to tell the story once in detail. This way the victim does not have to re-live the incident psychologically over and over again by repeating the story.

Supportive Therapies

Crisis counseling is provided to reduce anxiety and provide supportive care. Medication may be prescribed for symptoms of depression, anxiety, insomnia, agitation, or the presence of nightmares. Displaying a nonjudgmental attitude is essential while encouraging the client to verbalize feelings, allowing for the expression of both anger and possible affection toward the perpetrator or batterer. Past coping responses and adaptations to battering are discussed. Emphasis is placed on helping the victim develop a realistic and rational perception of the battering situation and to provide the victim with the information necessary to make an informed decision. Interactive therapies that are available include individual, couples, and family therapy. Additionally, referrals may be made to self-help groups and a community mental health social worker who is familiar with additional services that are available.

Continuum of Care

If the victim prefers to return home, an action plan is developed in the event that the violence recurs. The victim also is given emergency telephone numbers and informed of available options. They include:

- Legal assistance to obtain a restraining or protection order
- Temporary custody of minor children
- Emergency financial assistance
- Temporary emergency housing
- Assistance from local women's organizations
- Advocacy services
- Community counseling services
- Vocational counseling
- Legal-aid services

If the victim is an older adult, additional service such as alternate housing, nursing care by the visiting nurse, food from Meals on Wheels, assistance from a visiting homemaker program, visits by persons involved in a foster grandparent program, and transportation for the elderly provided by community organizations may be helpful [9,10].

Research Abstracts

Ammerman et al (1989) studied the Medical charts of 150 consecutive admissions of multihandicapped children to a psychiatric hospital, to determine the

extent and characteristics of abuse and neglect. Results indicated that 39% of the sample experienced or had a history that warranted suspicion of past and/or current maltreatment. Physical abuse was the most frequent type of maltreatment, followed by neglect and sexual abuse. Maltreated multihandicapped patients admitted to the psychiatric unit were less likely to receive diagnoses of organic brain syndrome or profound mental retardation than nonmaltreated multihandicapped counterparts on the same unit. Moreover, data indicated that less severely impaired patients were more likely to be maltreated than were the more severely impaired. Particularly striking was the severity of maltreatment in this multihandicapped sample and the relatively high percentage (40%) of sexually abused patients who were assaulted by multiple perpetrators [24].

Chandra, P.S et al (2003) used qualitative research methods to investigate the problem of sexual coercion among female psychiatric patients in India. Consecutive female admissions (n = 146) to the inpatient unit of a psychiatric hospital in southern India were screened regarding coercive sexual experiences. Women who reported coercion (n = 50; 34%) participated in a semi-structured interview to learn more about their experiences. Among these women, 24 (48%) reported that the perpetrator was their spouse, 13 (26%) identified a friend or acquaintance, and 10 (20%) identified a relative such as an uncle or cousin. Most experiences occurred in the women's homes. Thirty of the 50 coerced women (60%) reported that they had not disclosed their experience to anyone, and that they had not sought help. Women revealed a sense of helplessness, fear, and secrecy related to their experiences. The problem of sexual coercion is seldom addressed in mental health care in India; the prevalence and severity of such experiences warrant immediate clinical attention and continued research [11].

Sailaxmi Gandhi & Reddemma K (2009) conducted a study to assess abuse in psychiatric patients. Data was collected from the files of inpatients at NIMHANS, Bangalore over a period of one year. Among a total of 119 patients, seven patients' were found to have a history of abuse (physical and sexual). Out of seven patients, one (Mrs. X) had Post Traumatic Stress Disorder and severe depression with psychotic symptoms. Mrs. X underwent structured activity program such as exercises, meditation, laughter therapy, music therapy and was encouraged to practice under supervision. Findings from the study revealed that she had extreme stress perception (78) in PTSD checklist before the intervention which reduced to mild stress (30) following intervention. Similarly; there was decrease in the scores on the Hamilton Anxiety Rating Score after the specific intervention [1].

Sebastian D & Sekher, T. V., (2010) conducted a study based on interviews with 300 elderly (age 60 years and above) living in households from Pathanamthitta district of Kerala state. The extent of elder abuse and neglect were assessed by using the Hwalek Sengstock Elder Abuse Screening Test (EAST), which was modified and adapted to Indian situation. Nearly 60 percent of the respondents experienced either mild or severe forms of abuse in their households. The extent of severe abuse among the females was almost 2.7 times higher than the male elderly. Neglect and verbal abuse were the most commonly reported forms of mistreatment followed by physical abuse and material exploitation. The main perpetrators were sons; son-in–law and daughter-in-law. The study revealed that abuse and neglect of elderly exists in Indian families. It also indicates that female elderly, especially widows, those in oldest-old age group (80+ years) and physically immobile, were more vulnerable to abuse than others. Not only the poor, even the rich are susceptible to neglect and abuse in many families [19].

Conclusion

Since the dawn of human civilization, mentally ill patients have received the scant care and concern of the community because of their unproductive value in the socio-economic value system. They have not only been neglected but received step motherly treatment from the health planners especially in the developing countries. It was only after the plea of progressive incorporation of the norms of human rights and liberal jurisprudence in the respective legal system of nation states that has created the urgency and necessity of initiating appropriate steps for the care and treatment of mentally ill persons. Thus as a result of the growth of humanistic values it is now admitted on all hands that a mentally ill person needs more care and concern for his treatment and well being.

"*Protect, preserve and promote human life and its essence and do not destroy it (or its essence) for once destroyed it cannot be recreated*".

References

1. Gandhi S, Reddemma K. Abuse in Psychiatric Patients' Scientific Study. Indian Journal of Psychiatric Nursing. 2009; 12-15.
2. Shives, Rebraca L., Basic Concepts of Psychiatric-Mental Health Nursing, 6th Edition Lippincott Williams & Wilkins. 2005; 1293-1351.
3. http://www.olrs.ohio.gov/abuse-neglect-mi
4. http://psychcentral.com/news/2008/05/05/texas-mental-hospitals-a-haven-for-abuse/2224.html
5. Reddemma K, Sailaxmi Gandhi, Kalaivani & Leema Rosemary. Booklet on Forensic Psychiatric nursing.Bangalore:A.N.P.Enterprises. 2011; 26-31.
6. http://www.thehindu.com/opinion/columns/Harsh_Mander/article447214.ece
7. http://bhrc.bih.nic.in/Docs/Mental-HealthCare-and-Human-Rights.pdf
8. Articles on Disability and Mental Health retrieved from http://nhrc.nic.in/library/disability% 20 mental %20health/article.htm
9. Townsend M C Psychiatric Mental Health Nursing-concepts of care. 4th edition. Philadelphia: F.A Dais Company; 2008; 561-77.
10. Keltner LN, Schwecke L H, Bostrom CE. Psychiatric nursing 4th edition. Philadelphia: Mosby publications; 1999.
11. Schultz JM.Videback SL. Psychiatric Mental Health Nursing.6th edition. Philadelphia: Lippincott Williams & Wilkins; 2002; 210-25.
12. Stuart GW, Laria MT. Principles and Practices of Psychiatric Nursing. Philadelphia: Mosby Publishers; 2001.
13. Chandra, P.S, Deepthivarma, Carey, M.P., Carey, Shalinianant, A Cry from the Darkness: Women with Severe Mental Illness in India Reveal Their Experiences with Sexual Coercion. Indian Journal of Psychiatry. 2003; 66(4): 323–334.
14. http://wcd.nic.in/childabuse.pdf
15. http://www.imf.org/external/pubs/ft/survey/so/2011/new061011a.htm
16. http://articles.timesofindia.indiatimes.com/2007-04-10/india/27883340_1_child-abuse-sexual-abuse-corporal-punishment
17. http://www.jagranjosh.com/current-affairs/Child-Abuse-in-India-Increased-According-to-the-Report-of-NCPCR-1294323027-1
18. http://www.nationalchildrensalliance.org/NCANationalStatistics
19. http://en.wikipedia.org
20. Soneja, Shubha. Elder abuse in India: country report for World Health Organization. New Delhi: Help Age India (unpublished, undated).
21. Reinholz A. How to Protect a Mentally Ill Person From Abuse | eHow.com, http://www.ehow.com/how_6531720_protect-mentally-ill-person-abuse.
22. htmlhttp://www.who.int/ageing/projects/elder_abuse/alc_ea_ind.pdf
23. http://silverinnings.blogspot.com/2008/09/vital-statistics-of-senior-citizens.html
24. World Health Organization. World report on violence and health. Geneva; 2002; 134.
25. http://www.searo.who.int/LinkFiles/Disability,_Injury_Prevention_&Rehabilitation_abuse.pdf
26. Sebastian, D, Sekher. T. V, Abuse and Neglect of Elderly in Indian Families: Findings of Elder Abuse Screening Test in Kerala. Journal of The Indian Academy of Geriatrics. 2010; 6: 54-60.
27. Ammerman et al (1989). Abuse and Neglect in Psychiatrically Hospitalized Multihandicapped Children. Neglect. The International Journal. 1989; 13(3): 335–343.
28. http://www.hivaidsonline.in/index.php/Vulnerable-Groups/violence-against-women-and-hivaids.html.

Instructions to Authors

Submission to the journal must comply with the Guidelines for Authors.

Non-compliant submission will be returned to the author for correction.

To access the online submission system and for the most up-to-date version of the Guide for Authors please visit:

http://www.rfppl.co.in

Technical problems or general questions on publishing with CPHN are supported by Red Flower Publication Pvt. Ltd's Author Support team (http://www.rfppl.co.in)

Alternatively, please contact the Journal's Editorial Office for further assistance.

Editorial Manager
Red Flower Publication Pvt. Ltd.
48/41-42, DSIDC, Pocket-II
Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-22754205, 45796900, 22756995
E-mail: author@rfppl.co.in

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.15

Diphtheria

Shessy Johnson*, Resmi C.R.**

Abstract

Diphtheria is a serious bacterial infection affecting the mucous membranes of the nose and throat of preschool children, caused by the bacterium corynebacterium diphtheria. Sore throat, fever, swollen glands and weakness are the main symptoms of diphtheria. But the hallmark sign is a sheet of thick, gray material covering the back of the throat. Schick test is the test used to identify the diphtheria. Prevention of occurrance of disease is by immunization with DPT vaccination and treatment of the disease is by broad spectrum antibiotics.

Keywords: Bacteria; Corynebacterium Diphtheria; Diphtheria; Immunization; Infection; Preschool Children; Schick Test; Transmission; Vaccines.

Introduction

Diphtheria is a serious bacterial infection that affects the mucous membranes of the throat and nose. Although it spreads easily from one person to another, diphtheria can be prevented through the use of vaccines. If it's left untreated, diphtheria can cause severe damage to your kidneys, nervous system, and heart. It's fatal in about 3% of cases. Diphtheria is one of the major killer diseases of under- five children, known to be existing even much before Christ was born.

Incidence

Diphtheria Outbreaks, though very rare, still occur worldwide, including in developed nations, such as Germany among non-vaccinated children, and Canada after the breakup of the former Soviet Union in the early 1990s, vaccination rates in its constituent countries fell so low that there was an explosion of diphtheria cases. In 1991, there were 2,000 cases of diphtheria in the USSR. By 1998, according to red cross estimates, there were as many as 200,000 cases in the commonwealth of independent states, with 5,000 deaths. India witnessed 4,071 cases of diphtheria and 104 deaths in 2014, while among the states, Delhi had the highest number of cases at 1,418 and also the highest number of deaths at 60. After a break of one year, diphtheria cases have been reported in Kerala's Malappuram district again. Two diphtheria deaths were reported, taking the total confirmed cases this year to five. In 2013, the district reported 11 cases, with one death, but last year there were no reports of any diphtheria cases.

Author's Affiliations: *Msc Nursing Student **Assistant Professor, Dept. of Community Health Nursing, Aswini College of Nursing, Thrissur, Kerala.

Corresponding Author: Shessy Johnson, Msc Nursing Student, Aswini College of Nursing, Thrissur, Kerala 680751.
E-mail: shessyjoby@gmail.com

Definition

Diphtheria is a serious bacterial infection caused by Corynebacterium diphtheria that affects the mucous membranes of the throat and nose.

Risk Factors for Diphtheria

- Improper intake of vaccinations.
- Travelling to a country that doesn't provide immunizations.
- Immune system disorders, such as AIDS.

- Live in unclean or crowded conditions.

Epidemiology of Diptheria

Agent Factors

- A type of bacteria named Corynebacterium diphtheria causes diphtheria.
- Reservoir of infection: man

Host Factors

Age: Particularly effecting children aged 1 to 5.

Sex: Both sexes are affected.

Immunity: Active immunity through in apparent Infections.

Environmental Factors

Cases occurs in all seasons, although winter season favour the spread of infection

Mode of Transmission

- Droplet infection.
- By direct contact.
- Indirect transmission like contaminated fomities used by the patients.
- Transmission through animal milk.

Portal of Entry

- Respiratory route
- Non respiratory routes such as through skin cut, wounds and ulcers.

Incubation Period

2 to 6 days, occasionally longer.

Symptoms of Diphtheria

Signs of diphtheria often appear within two to five days after the infection occurs. Some people don't experience any symptoms, while others have mild symptoms that are similar to those of the common cold. The most visible and common symptom of diphtheria is a thick, gray coating on the throat and tonsils.

Symptoms According to the Types of Diphtheria

1. Phargeotonsillar Diphtheria

- Sore throat
- Difficulty in swallowing
- Low fever
- Mild erythema on the throat

2. Laryngeotracheal Diphtheria

- Fever
- Hoarseness
- Croupy cough
- Dyspnoea
- Parenchymatous degeneration
- Fatty infiltration
- Necrosis of the heart muscles, liver, kidneys & adrenals.
- Paralysis of the soft palate, eye muscles, or extremities.

3. Nasal Diphtheria

- Mild form of respiratory diphtheria
- Localized to the septum or turbinate of one side of the nose.

4. Cutaneous Diphtheria

- Common in tropical area.
- Secondary infection of previous skin abrasions or infections.
- Ulcer surrounded by erythema and covered with a membrane.

Other Common Symptoms Include

- Fever.
- Chills.
- Swollen glands in the neck.
- Loud, barking cough.
- Sore throat.
- Bluish skin.
- Drooling.
- General feeling of uneasiness or discomfort.

Additional Symptoms may Occur as the Infection Progresses, Including

- Difficulty breathing or swallowing
- Changes in vision

- Slurred speech
- Signs of shock, such as pale and cold skin, sweating, and a rapid heartbeat.

Diagnosis of Diphtheria

- History about symptoms.
- Physical examination for swollen lymph nodes, a gray coating on the throat or tonsils.
- Schick test

It is indradermal test for testing the antitoxin, information regarding immunity status, & state of hypersensitivity to diphtheria toxins and other proteins of the diphtheria cells.

Throat culture may also be taken for identifying the bacteria.

Treatment of Diphtheria

Diphtheria is a serious condition; it will want to treat quickly and aggressively.

- Isolation of the patient till 2 to 3 throat swab culture reports are negative consecutively, which will takes about 15 -20 days.
- Absolute bed rest.
- Concurrent disinfection of throat secretions, sputum utensils, clothes, is a must by using 10 % cresol.
- Administration of anti diphtheria serum
- Antibiotics treatment with crystalline penicillin or erythromycin
- Analgesics & antipyretics.
- Maintenance of fluid electrolyte balance.

Prevention of Diphtheria

- Elimination of reservoirs.
- Breaking the channels of communication.
- Protection of susceptible in the community

Immunization

A. Active Immunization

Vaccines used for active immunization include,

a) Vaccines of Single Antigen.

i. Plain vaccine.

ii. Adsorbed vaccines.

b) Vaccines of Multiple Antigens [Combined vaccines].

i. Bivalent vaccines [Td and DT].

ii. Trivalent vaccines [DPT]

iii. Quadruple vaccines [DPT +IPV].

iv. Easy four vaccines [DPT+ Hib].

v. Easy five vaccines [DPT+Hib+HBsAg].

vi. Hexavalent vaccines.

B. Passive Immunization

This is done with antidiphtheritic serum [ADS].

Complications of Diphtheria

- Respiratory failure
- Myocarditis
- Neurological complications
- Paralysis of diaphragm
- Bladder problems
- Bleeding problems
- Kidney failure

Conclusion

Diphtheria is an infection caused by the bacterium Corynebacterium diphtheria. Signs and symptoms may vary from mild to severe. They usually start two to five days after exposure. Symptoms often come on fairly gradually beginning with a sore throat and fever. In severe cases a grey or white patch develops in the throat. This can block the airway and create a barking cough as in croup. The neck may swell in part due to large lymph nodes. A form of diphtheria that involves the skin, eyes, or genitals also exists. Complications may include myocarditis, inflammation of nerves, kidney problems, and bleeding problems due to low blood platelets. Myocarditis may result in an abnormal heart rate and inflammation of the nerves may result in paralysis.

References

1. A H Suryakantha.community medicine with recent advances. 3rd edition. JP Brothers. 2014; 341-346.

2. B T Basavanthappa. Community health nursing. 2nd edition. Jaypee publications. 2008; 705- 707.

3. K Park. Preventive and social medicine Parks text book. 23rd edition. Bhaharsidas Bhanot publisher. 2013; 159-163.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.16

Zika Virus Disease

Pascaline Vilash Richard Martis

Abstract

Zika virus disease (Zika), is a disease caused by the Zika virus, which is spread to people primarily through the bite of an infected *Aedes* species mosquito. The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). The illness is usually mild with symptoms lasting for several days to a week after being bitten by an infected mosquito. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. For this reason, many people might not realize they have been infected. However, Zika virus infection during pregnancy can cause a serious birth defect called microcephaly, as well as other severe fetal brain defects. Once a person has been infected, he or she is likely to be protected from future infections.

Keywords: Zika Virus; Microcephaly; Brith Defects.

Introduction

Zika virus was first discovered in 1947 and is named after the Zika Forest in Uganda. In 1952, the first human cases of Zika were detected and since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands. Zika outbreaks have probably occurred in many locations. Before 2007, at least 14 cases of Zika had been documented, although other cases were likely to have occurred and were not reported. Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil.

Author's Affiliations: Associate Professor, VSPMs College of Nursing and Research Centre, Lata Mangeshkar Hospital, Digdoh Hills, Hingna, Nagpur.

Corresponding Author: Pascaline Vilash Richard Martis, VSPMs College of Nursing and Research Centre, Lata Mangeshkar Hospital, Digdoh Hills, Hingna, Nagpur**:** 440019.
E-mail: pascalinemartis@gmail.com

January 22, 2016, CDC activated its Incident Management System and, working through the Emergency Operations Center (EOC), centralized its response to the outbreaks of Zika occurring in the Americas and increased reports of birth defects and Guillain-Barré syndrome in areas affected by Zika..

On February 1, 2016, the World Health Organization (WHO) declared Zika virus a Public Health Emergency of International Concern (PHEIC). Local transmission has been reported in many other countries and territories. Zika virus will likely continue to spread to new areas.

About Virus

Zika is an arbovirus. It is spread by mosquitoes of the genus Aedes, the same mosquitoes that spread Chikungunya and dengue. These mosquitoes bite during the day as well as at night . infected human and non human primates appear to be the main reservoirs of the virus, providing virus-rich blood to the insect vector.

Spread

- By mosquito bite

- In limited ways it can spread through ,
  - ➢ Aminotic fluid and placenta
  - ➢ Mother to baby in early perinatal period
  - ➢ Sexual transmission
  - ➢ Blood transfusion

Symptoms

- ✓ Fever
- ✓ Maculopapular rash
- ✓ Joint pain
- ✓ Nonpurulent conjunctivitis
- ✓ Muscle pain
- ✓ Headache

Once a person had been infected he or she is likely to be protected from future infections.

The illness is usually mild with symptoms lasting for several days to a week .

Investigation

- The symptoms of Zika are similar to those of dengue and chikungunya, diseases spread through the same mosquitoes that transmit Zika.
- See your doctor or other healthcare provider if you develop the symptoms described above and have visited an area where Zika is found.
- If you have recently traveled, tell your doctor or other healthcare provider when and where you traveled.
- Your doctor or other healthcare provider may order blood tests to look for Zika or other similar viruses like dengue or chikungunya.
- RT-PCR Testing [Reverse transcriptase-Polymerase chain reaction]

Treatment

- There is no vaccine to prevent or medicine to treat Zika virus.
- Treat the symptoms:

⇨ Get plenty of rest.

⇨ Drink fluids to prevent dehydration.

⇨ Take medicine such as acetaminophen (Tylenol®) or paracetamol to reduce fever and pain.

⇨ Do not take aspirin and other non-steroidal anti-inflammatory drugs (NSAIDS) until dengue can be ruled out to reduce the risk of bleeding.

⇨ If you are taking medicine for another medical condition, talk to your doctor or other healthcare provider before taking additional medication.

- If you have Zika, prevent mosquito bites for the first week of your illness.

⇨ During the first week of infection, Zika virus can be found in the blood and passed from an infected person to a mosquito through mosquito bites.

⇨ An infected mosquito can then spread the virus to other person

Complication

Microcephaly and Other Brain Defects

The association between Zika and microcephaly is not fully understood, the seriousness of the problem led the center for disease control and prevention to take the unprecedented step of advising pregnant women to avoid travel to affected area.

Prevention

- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning and window and door screens to keep mosquitoes outside.
- Take steps to control mosquitoes inside and outside your home.
- Sleep under a mosquito bed net if you are overseas or outside and are not able to protect yourself from mosquito bites.
- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol. Choosing an EPA-registered repellent ensures the EPA has evaluated the product for effectiveness. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breast-feeding women.

⇨ Always follow the product label instructions.

⇨ Reapply insect repellent as directed.

⇨ Do not spray repellent on the skin under clothing.

⇨ If you are also using sunscreen, apply sunscreen

before applying insect repellent.

- To protect your child from mosquito bites:

⇨ Do not use insect repellent on babies younger than 2 months old.

⇨ Do not use products containing oil of lemon eucalyptus or para-menthane-diol on children younger than 3 years old.

⇨ Dress your child in clothing that covers arms and legs.

⇨ Cover crib, stroller, and baby carrier with mosquito netting.

⇨ Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin.

⇨ Adults: Spray insect repellent onto your hands and then apply to a child's face.

- Treat clothing and gear with permethrin or purchase permethrin-treated items.

⇨ Treated clothing remains protective after multiple washings. See product information to learn how long the protection will last.

⇨ If treating items yourself, follow the product instructions carefully.

⇨ Do NOT use permethrin products directly on skin. They are intended to treat clothing.

Reference

1. Bestsy Todd, MPH,RN, CIC, Clinical editor, Zika Virus, AJN. 2016 April:116(4): 59-60.
2. http://www.who.int/mediacentre/factsheets/zika/en/
3. http://www.cdc.gov/zika/about/
4. Dr. Thamllmanl. The Nurse. Zika Virus. 2016 Jan-Feb; 8(1): 29-30.

Revised Rates for 2017 (Institutional)

	Title	Frequency	Rate (Rs): India		Rate ($):ROW	
1	Dermatology International	2	5000	4500	500	450
2	Gastroenterology International	2	5500	5000	550	500
3	Indian Journal of Agriculture Business	2	5000	4500	500	450
4	Indian Journal of Anatomy	3	8000	7500	800	750
5	Indian Journal of Ancient Medicine and Yoga	4	7500	7000	750	700
6	Indian Journal of Anesthesia and Analgesia	3	7000	6500	700	650
7	Indian Journal of Biology	2	5000	3500	400	350
8	Indian Journal of Cancer Education and Research	2	8500	8000	850	800
9	Indian Journal of Communicable Diseases	2	8000	7500	800	750
10	Indian Journal of Dental Education	4	5000	4000	450	400
11	Indian Journal of Forensic Medicine and Pathology	4	15500	15000	1550	1500
12	Indian Journal of Forensic Odontology	2	5000	4000	450	400
13	Indian Journal of Genetics and Molecular Research	2	6500	6000	650	600
14	Indian Journal of Law and Human Behavior	2	5500	5000	550	500
15	Indian Journal of Library and Information Science	3	9000	8500	900	850
16	Indian Journal of Maternal-Fetal & Neonatal Medicine	2	9000	8500	900	850
17	Indian Journal of Medical & Health Sciences	2	6500	6000	650	600
18	Indian Journal of Obstetrics and Gynecology	3	9000	6500	700	650
19	Indian Journal of Pathology: Research and Practice	3	11500	11000	1150	1100
20	Indian Journal of Plant and Soil	2	5500	5000	550	500
21	Indian Journal of Preventive Medicine	2	6500	6000	650	600
22	Indian Journal of Research in Anthropology	2	12000	11500	1200	1150
23	International Journal of Food, Nutrition & Dietetics	3	5000	4500	500	450
24	International Journal of History	2	6500	6000	650	600
25	International Journal of Neurology and Neurosurgery	2	10000	9500	1000	950
26	International Journal of Political Science	2	5500	5000	550	500
27	International Journal of Practical Nursing	3	5000	4500	500	450
28	International Physiology	2	7000	6500	700	650
29	Journal of Animal Feed Science and Technology	2	4100	3600	410	360
30	Journal of Cardiovascular Medicine and Surgery	2	10000	8600	910	860
31	Journal of Forensic Chemistry and Toxicology	2	9000	8500	900	850
32	Journal of Microbiology and Related Research	2	8000	7500	800	750
33	Journal of Orthopaedic Education	2	5000	4500	500	450
34	Journal of Pharmaceutical and Medicinal Chemistry	2	16000	15500	1600	1550
36	Journal of Social Welfare and Management	3	7500	7000	750	700
37	Meat Science International	2	5000	4500	500	450
38	New Indian Journal of Surgery	3	7500	6600	710	660
39	Ophthalmology and Allied Sciences	2	5500	5000	550	500
40	Otolaryngology International	2	5000	4500	500	450
41	Pediatric Education and Research	3	7000	6500	700	650
42	Physiotherapy and Occupational Therapy Journal	4	8500	8000	850	800
43	Urology, Nephrology and Andrology International	2	7000	6500	700	650
44	Indian Journal of Emergency Medicine	2	12000	11500	1200	1150
45	Indian Journal of Surgical Nursing	3	5000	4500	500	450
46	Indian Journal of Trauma & Emergency Pediatrics	3	9000	8500	900	850
47	International Journal of Pediatric Nursing	3	5000	4500	500	450
48	Journal of Community and Public Health Nurisng	2	5000	4500	500	450
49	Journal of Geriatric Nursing	2	5000	4500	500	450
50	Journal of Medical Images and Case Reports	2	5000	4500	500	450
51	Journal of Nurse Midwifery and Maternal Health	3	5000	4500	500	450
52	Journal of Organ Transplantation	2	25900	25000	2590	2500
53	Journal of Psychiatric Nursing	3	5000	4500	500	450
54	Psychiatry and Mental Health	2	7500	7000	750	700

Terms of Supply:

1. Agency discount 10%. Issues will be sent directly to the end user, otherwise foreign rates will be charged.
2. All back volumes of all journals are available at current rates.
3. All Journals are available free online with print order within the subscription period.
4. All legal disputes subject to Delhi jurisdiction.
5. Cancellations are not accepted orders once processed.
6. Demand draft / cheque should be issued in favour of "Red Flower Publication Pvt. Ltd." payable at Delhi
7. Full pre-payment is required. It can be done through online (http://rfppl.co.in/subscribe.php?mid=7).
8. No claims will be entertained if not reported within 6 months of the publishing date.
9. Orders and payments are to be sent to our office address as given above.
10. Postage & Handling is included in the subscription rates.
11. Subscription period is accepted on calendar year basis (i.e. Jan to Dec). However orders may be placed any time throughout the year.

Order from

Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-45796900, 22754205, 22756995, E-mail: sales@rfppl.co.in.

Community and Public Health Nursing
Vol. 1 No. 2, July - December 2016
DOI: http://dx.doi.org/10.21088/cphn.2455.8621.1216.17

Middle East Respiratory Syndrome (MERS)

Vasantha Kalyani*, S.K. Mohanasundari**

Abstract

Middle East respiratory syndrome (MERS) is a viral respiratory disease caused by a novel coronavirus (MERS CoV) that was first identified in Saudi Arabia in 2012. Coronaviruses are a large family of viruses that can cause diseases ranging from the common cold to Severe Acute Respiratory Syndrome (SARS). Typical MERS symptoms include fever, cough and shortness of breath. Pneumonia is common, but not always present. Gastrointestinal symptoms, including diarrhoea, have also been reported. Approximately 36% of reported patients with MERS have died. Although the majority of human cases of MERS have been attributed to human-to-human infections, camels are likely to be a major reservoir host for MERS-CoV and an animal source of MERS infection in humans. However, the exact role of camels in transmission of the virus and the exact route(s) of transmission are unknown. The virus does not seem to pass easily from person to person unless there is close contact, such as occurs when providing unprotected care to a patient.

Keywords: MERS Cov; Viruses; Pneumonia; Respiratory Distress; Darwinism and Transmission.

Introduction

The Middle East respiratory syndrome coronavirus (MERS-CoV), is a novel positive-sense, single-stranded RNA virus of the genus Betacoronavirus. It was first reported in 2012 after genome sequencing of a virus isolated from sputum samples from a person who fell ill in a 2012 outbreak of a new flu. MERS-CoV genomes are phylogenetically classified into two clades, clade A and B. The earliest cases of MERS were of clade A clusters (EMC/2012 and Jordan-N3/2012), and new cases are genetically distinct (clade B). As of July 2015, MERS-CoV cases have been reported in over 21 countries, including Saudi Arabia, Jordan, Qatar, Egypt, the United Arab Emirates, Kuwait, Turkey, Oman, Algeria, Bangladesh, Indonesia (none were confirmed), Austria, the United Kingdom, South Korea the United States [5,6], Mainland China, Thailand, and the Philippines.

Author's Affiliations: *Assist Professor College of Nursing, AIIMS, Rishikesh. ** Nursing Tutor, AIIMS, Jodhpur, Rajasthan

Corresponding Author: S.K. Mohanasundari, Nursing Tutor, College of Nursing, AIIMS, Jodhpur, Rajasthan 342005
E-mail: roshinikrishitha@gmail.com

Outset

The first confirmed case was reported in Saudi Arabia 2012. A second case was found in September 2012, a 49-year-old male living in Qatar presented with similar flu symptoms, and a sequence of the virus was nearly identical to that of the first case.

Dispatch

On 13 February 2013, the World Health Organization stated "the risk of sustained person-to-person transmission appears to be very low. The Centers for Disease Control and Prevention (CDC) list MERS as transmissible from human-to-human.

1. Non-human to human transmission: The route

of transmission from animals to humans is not fully understood, but camels are likely to be a major reservoir host for MERS-CoV and an animal source of infection in humans. Strains of MERS-CoV that are identical to human strains have been isolated from camels in several countries, including Egypt, Oman, Qatar, and Saudi Arabia.

2. Human-to-human transmission: The virus does not appear to pass easily from person to person unless there is close contact, such as providing unprotected care to an infected patient. There have been clusters of cases in healthcare facilities, where human-to-human transmission appears to be more probable, especially when infection prevention and control practices are inadequate. Thus far, no sustained community transmission has been documented.

Darwinism

The evidence available to date suggests that the viruses have been present in bats for some time and had spread to camels by the mid 1990s. The viruses appear to have spread from camels to humans in the early 2010s. The original bat host species and the time of initial infection in this species have yet to be determined.

People at Increased Risk

1. People with co-morbid condition included diabetes; cancer; and chronic lung, heart, and kidney disease and weakened immune systems.
2. Recent Travellers from the Arabian Peninsula
3. Close Contacts of an Ill Traveller from the Arabian Peninsula
4. Close Contacts of a Confirmed Case of MERS
5. Healthcare Personnel Not Using Recommended Infection-Control Precautions
6. People with Exposure to Camels

The Incubation Period for MERS

Are usually about 5 or 6 days, but can range from 2-14 days.

Symptoms

Common symptoms are severe acute respiratory illness with symptoms of: fever, cough and shortness of breath. Some people also had gastrointestinal symptoms including diarrhea and nausea/vomiting.

Treatment and Prevention

- There is no vaccine or specific treatment is available at present. Only supportive treatment is available based on the clinical symptoms.
- As a general precaution, anyone visiting farms, markets, barns, or other places where camels and other animals are present should practice general hygiene measures, including regular hand washing before and after touching animals, and should avoid contact with sick animals.
- The consumption of raw or undercooked animal products, including milk and meat, carries a high risk of infection from a variety of organisms that might cause disease in humans. Animal products that are processed appropriately through cooking or pasteurization are safe for consumption, but should also be handled with care to avoid cross contamination with uncooked foods. Camel meat and camel milk are nutritious products that can continue to be consumed after pasteurization, cooking, or other heat treatments.
- People at increase risk should avoid contact with camels, drinking raw camel milk or camel urine, or eating meat that has not been properly cooked.
- Appropriate measures to decrease the risk of transmission of the virus from an infected patient to other patients, health care workers, or visitors. Health care workers should be educated and trained in infection prevention and control and should refresh these skills regularly.

Complication

Pneumonia and kidney failure.

Prognosis

About 3-4 out of every 10 people reported with MERS have died.

Most of the people who died had an underlying medical condition. Some infected people had mild symptoms (such as cold-like symptoms) or no symptoms at all; they recovered.

Pneumonia due to MERS CoV is associated with a high rate of mortality that reached 76%.

Role of CDC in Controlling MERS CoV

1. continued to collaborate with international partners on epidemiologic and laboratory studies to better understand MERS
2. Improved the way to collect data about MERS cases
3. Increased lab testing capacity in states to detect cases
4. Developed guidance and tools for health departments to conduct public health investigations when MERS cases are suspected or confirmed
5. Provided recommendations for healthcare infection control and other measures to prevent disease spread
6. Provided guidance for flight crews, Emergency Medical Service (EMS) units at airports, and U.S. Customs and Border Protection (CPB) officers about reporting ill travellers to CDC
7. Disseminated up-to-date information to the general public, international travellers, and public health partners
8. Used Advanced Molecular Detection (AMD) methods to sequence the complete virus genome on specimens from cases to help evaluate and further describe the characteristics of MERS-CoV.

Role of WHO in Controlling MERS CoV

1. WHO is working with clinicians and scientists in affected countries and internationally to gather and share scientific evidence to better understand of the disease?.
2. Working with countries to develop public health prevention strategies to combat the virus.
3. WHO is coordinating the global health response to MERS, including: the provision of updated information on the situation; conducting risk assessments and joint investigations with national authorities; convening scientific meetings; and developing guidance and training for health authorities and technical health agencies on interim surveillance recommendations, laboratory testing of cases, infection prevention and control, and clinical management
4. WHO continues to request that Member States report to WHO all confirmed and probable cases of infection with MERS-CoV together with information about their exposure, testing, and clinical course to inform the most effective international preparedness and response.

Discussion

Transmission of MERS CoV between patients to health care worker also reposted. It is not easy to diagnose this condition as early as possible as the symptoms are life flu and non specific. Prevention and spread control measure are only effective method to prevent the possible spread of MERS CoV in general public as well as in health care facility. Positive case of MERS CoV is not reported .in India yet, but the symptoms of swine flu and MERS Cov looks similar. HINI virus which causes swine flu also derived form same group of virus. It is expected to follow prevention and control measure that we follow for influenza A (H1N1) to be free from MERS CoV in India even in the feature.

Reference

1. M. AlGhamdi; F. Mushtaq; N. Awn; S. Shalhoub "MERS CoV Infection in Two Renal Transplant Recipients: Case Report" American Journal of Transplantation. 2015; 15(4): 1101-1104.
2. Memish Z, Cotton M, Meyer B, Watson S, Alsahafi A, Al Rabeeah A, et al. Human infection with MERS coronavirus after exposure to infected camels, Saudi Arabia, 2013. Emerg Infect Dis. 2014; 20: 1012–15.
3. Raj VS, Farag E, Reusken CB, Lamers MM, Pas SD, Voermans J, et al. Isolation of MERS coronavirus from a dromedary camel, Qatar, 2014. Emerg Infect Dis. 2014; 20: 1339–42.
4. Alagaili AN, Briese T, Mishra N, Kapoor V, Sameroff SC, de Wit E, et al. Middle East respiratory syndrome coronavirus infection in dromedary camels in Saudi Arabia. MBio. 2014; 5: e00884–14.
5. Reusken CBEM, Farag EABA, Haagmans BL, Mohran KA, Godeke G-J, Raj VS, et al. Occupational exposure to dromedaries and risk for MERS-CoV infection, Qatar, 2013–2014. Emerg Infect Dis. 2015; 21.

Revised Rates for 2016 (Institutional)

Title	Frequency	Rate (Rs): India	Rate ($):ROW
Dermatology International	2	5000	500
Gastroenterology International	2	5500	550
Indian Journal of Agriculture Business	2	5000	500
Indian Journal of Anatomy	3	8000	800
Indian Journal of Ancient Medicine and Yoga	4	7500	750
Indian Journal of Anesthesia and Analgesia	3	7000	700
Indian Journal of Anthropology	2	12000	1200
Indian Journal of Biology	2	4000	400
Indian Journal of Cancer Education and Research	2	8500	850
Indian Journal of Communicable Diseases	2	8000	800
Indian Journal of Dental Education	4	4500	450
Indian Journal of Forensic Medicine and Pathology	4	15500	1550
Indian Journal of Forensic Odontology	2	4500	450
Indian Journal of Genetics and Molecular Research	2	6500	650
Indian Journal of Law and Human Behavior	2	5500	550
Indian Journal of Library and Information Science	3	9000	900
Indian Journal of Maternal-Fetal & Neonatal Medicine	2	9000	900
Indian Journal of Medical & Health Sciences	2	6500	650
Indian Journal of Obstetrics and Gynecology	3	9000	900
Indian Journal of Pathology: Research and Practice	3	11500	1150
Indian Journal of Plant and Soil	2	5500	550
Indian Journal of Preventive Medicine	2	6500	650
International Journal of Food, Nutrition & Dietetics	3	5000	500
International Journal of History	2	6500	650
International Journal of Neurology and Neurosurgery	2	10000	1000
International Journal of Political Science	2	5500	550
International Journal of Practical Nursing	3	5000	500
International Physiology	2	7000	700
Journal of Animal Feed Science and Technology	2	4100	410
Journal of Cardiovascular Medicine and Surgery	2	9100	910
Journal of Forensic Chemistry and Toxicology	2	9000	900
Journal of Microbiology and Related Research	2	8000	800
Journal of Orthopaedic Education	2	5000	500
Journal of Pharmaceutical and Medicinal Chemistry	2	16000	1600
Journal of Practical Biochemistry and Biophysics	2	5500	550
Journal of Social Welfare and Management	3	7500	750
New Indian Journal of Surgery	3	7100	710
Ophthalmology and Allied Sciences	2	5500	550
Otolaryngology International	2	5000	500
Pediatric Education and Research	3	7000	700
Physiotherapy and Occupational Therapy Journal	4	8500	850
Urology, Nephrology and Andrology International	2	7000	700
SUPER SPECIALITY JOURNALS			
Indian Journal of Emergency Medicine	2	12000	1200
Indian Journal of Surgical Nursing	3	5000	500
Indian Journal of Trauma & Emergency Pediatrics	3	9000	900
International Journal of Pediatric Nursing	3	5000	500
Journal of Community and Public Health Nurisng	2	5000	500
Journal of Geriatric Nursing	2	5000	500
Journal of Medical Images and Case Reports	2	5000	500
Journal of Nurse Midwifery and Maternal Health	3	5000	500
Journal of Organ Transplantation	2	25900	2590
Journal of Psychiatric Nursing	3	5000	500
Psychiatry and Mental Health	2	7500	750

Terms of Supply:

1. Advance payment required by Demand Draft payable to Red Flower Publicaion Pvt. Ltd. payable at Delhi.
2. Cancellation not allowed except for duplicate payment.
3. Agents allowed 10% discount.
4. Claim must be made within six months from issue date.

Order from

Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-45796900, 22754205, 22756995, E-mail: sales@rfppl.co.in.

Guidelines for Authors

Manuscripts must be prepared in accordance with "Uniform requirements for Manuscripts submitted to Biomedical Journal" developed by international committee of medical Journal Editors.

Types of Manuscripts and Limits

Original articles: Up to 3000 words excluding references and abstract and up to 10 references.

Review articles: Up to 2500 words excluding references and abstract and up to 10 references.

Case reports: Up to 1000 words excluding references and abstract and up to 10 references.

Online Submission of the Manuscripts

Articles can also be submitted online from http://rfppl.co.in/customer_index.php.

I) First Page File: Prepare the title page, covering letter, acknowledgement, etc. using a word processor program. All information which can reveal your identity should be here. use text/rtf/doc/PDF files. Do not zip the files.

2) Article file: The main text of the article, beginning from Abstract till References (including tables) should be in this file. Do not include any information (such as acknowledgement, your name in page headers, etc.) in this file. Use text/rtf/doc/PDF files. Do not zip the files. Limit the file size to 400 Kb. Do not incorporate images in the file. If file size is large, graphs can be submitted as images separately without incorporating them in the article file to reduce the size of the file.

3) Images: Submit good quality color images. Each image should be less than 100 Kb in size. Size of the image can be reduced by decreasing the actual height and width of the images (keep up to 400 pixels or 3 inches). All image formats (jpeg, tiff, gif, bmp, png, eps etc.) are acceptable; jpeg is most suitable.

Legends: Legends for the figures/images should be included at the end of the article file.

If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks from submission. Hard copies of the images (3 sets), for articles submitted online, should be sent to the journal office at the time of submission of a revised manuscript. Editorial office: Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi – 110 091, India, Phone: 91-11-22756995, 22754205, 45796900 mail: info@rfppl.co.in, Web:www.rfppl.co.in.

Preparation of the Manuscript

The text of observational and experimental articles should be divided into sections with the headings: Introduction, Methods, Results, Discussion, References, Tables, Figures, Figure legends, and Acknowledgment. Do not make subheadings in these sections.

Title Page

The title page should carry

1) Type of manuscript (e.g. Original article, Review article, Case Report)
2) The title of the article, should be concise and informative;
3) Running title or short title not more than 50 characters;
4) The name by which each contributor is known (Last name, First name and initials of middle name), with his or her highest academic degree(s) and institutional affiliation;
5) The name of the department(s) and institution(s) to which the work should be attributed;
6) The name, address, phone numbers, facsimile numbers and e-mail address of the contributor responsible for correspondence about the manuscript; should be mentoined.
7) The total number of pages, total number of photographs and word counts separately for abstract and for the text (excluding the references and abstract);
8) Source(s) of support in the form of grants, equipment, drugs, or all of these;
9) Acknowledgement, if any; and
l0) If the manuscript was presented as part at a meeting, the organization, place, and exact date on which it was read.

Abstract Page

The second page should carry the full title of the manuscript and an abstract (of no more than 150 words for case reports, brief reports and 250 words for original articles). The abstract should be structured and state the Context (Background), Aims, Settings and Design, Methods and Materials, Statistical analysis used, Results and Conclusions. Below the abstract should provide 3 to 10 keywords.

Introduction

State the background of the study and purpose of the study and summarize the rationale for the study or observation.

Methods

The methods section should include only information that was available at the time the plan or protocol for the study was written such as study approach, design, type of sample, sample size, sampling technique, setting of the study, description of data collection tools and methods; all information obtained during the conduct of the study belongs in the Results section.

Reports of randomized clinical trials should be based on the CONSORT Statement (http://www.consort-statement. org). When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, as revised in 2000 (available at http://www.wma.net/e/policy/l 7-c_e.html).

Results

Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Extra or supplementary materials and technical details can be placed in an appendix where it will be accessible but will not interrupt the flow of the text; alternatively, it can be published only in the electronic version of the journal.

Discussion

Include summary of key findings (primary outcome measures, secondary outcome measures, results as they relate to a prior hypothesis); Strengths and limitations of the study (study question, study design, data collection, analysis and interpretation); Interpretation and implications in the context of the totality of evidence (is there a systematic review to refer to, if not, could one be reasonably done here and now?, What this study adds to the available evidence, effects on patient care and health policy, possible mechanisms)? Controversies raised by this study; and Future research directions (for this particular research collaboration, underlying mechanisms, clinical research). Do not repeat in detail data or other material given in the Introduction or the Results section.

References

List references in alphabetical order. Each listed reference should be cited in text (not in alphabetic order), and each text citation should be listed in the References section. Identify references in text, tables, and legends by Arabic numerals in square bracket (e.g. [10]). Please refer to ICMJE Guidelines (http://www.nlm.nih.gov/bsd/uniform_requirements.html) for more examples.

Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003; 61: 347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000; 71: 1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O, Kidd EAM,

editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

More information about other reference types is available at www.nlm.nih.gov/bsd/uniform_requirements.html, but observes some minor deviations (no full stop after journal title, no issue or date after volume, etc).

Tables

Tables should be self-explanatory and should not duplicate textual material.

Tables with more than 10 columns and 25 rows are not acceptable.

Table numbers should be in Arabic numerals, consecutively in the order of their first citation in the text and supply a brief title for each.

Explain in footnotes all non-standard abbreviations that are used in each table.

For footnotes use the following symbols, in this sequence: *, ¶, †, ‡‡,

Illustrations (Figures)

Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint files of minimum 1200x1600 pixel size. The minimum line weight for line art is 0.5 point for optimal printing.

When possible, please place symbol legends below the figure instead of to the side.

Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay.

Type or print out legends (maximum 40 words, excluding the credit line) for illustrations using double spacing, with Arabic numerals corresponding to the illustrations.

Sending a revised manuscript

While submitting a revised manuscript, contributors are requested to include, along with single copy of the final revised manuscript, a photocopy of the revised manuscript with the changes underlined in red and copy of the comments with the point to point clarification to each comment. The manuscript number should be written on each of these documents. If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks of submission. Hard copies of images should be sent to the office of the journal. There is no need to send printed manuscript for articles submitted online.

Reprints

Journal provides no free printed reprints, however a author copy is sent to the main author and additional copies are available on payment (ask to the journal office).

Copyrights

The whole of the literary matter in the journal is copyright and cannot be reproduced without the written permission.

Declaration

A declaration should be submitted stating that the manuscript represents valid work and that neither this manuscript nor one with substantially similar content under the present authorship has been published or is being considered for publication elsewhere and the authorship of this article will not be contested by any one whose name (s) is/are not listed here, and that the order of authorship as placed in the manuscript is final and accepted by the co-authors. Declarations should be signed by all the authors in the order in which they are mentioned in the original manuscript. Matters appearing in the Journal are covered by copyright but no objection will be made to their reproduction provided permission is obtained from the Editor prior to publication and due acknowledgment of the source is made.

Abbreviations

Standard abbreviations should be used and be spelt out when first used in the text. Abbreviations should not be used in the title or abstract.

Checklist

- Manuscript Title
- Covering letter: Signed by all contributors
- Previous publication/ presentations mentioned, Source of funding mentioned
- Conflicts of interest disclosed

Authors

- Middle name initials provided.
- Author for correspondence, with e-mail address provided.
- Number of contributors restricted as per the instructions.
- Identity not revealed in paper except title page (e.g.name of the institute in Methods, citing previous study as 'our study')

Presentation and Format

- Double spacing
- Margins 2.5 cm from all four sides
- Title page contains all the desired information. Running title provided (not more than 50 characters)
- Abstract page contains the full title of the manuscript
- Abstract provided: Structured abstract provided for an original article.
- Key words provided (three or more)
- Introduction of 75-100 words
- Headings in title case (not ALL CAPITALS). References cited in square brackets
- References according to the journal's instructions

Language and grammar

- Uniformly American English
- Abbreviations spelt out in full for the first time. Numerals from 1 to l0 spelt out
- Numerals at the beginning of the sentence spelt out

Tables and figures

- No repetition of data in tables and graphs and in text.
- Actual numbers from which graphs drawn, provided.
- Figures necessary and of good quality (color)
- Table and figure numbers in Arabic letters (not Roman).
- Labels pasted on back of the photographs (no names written)
- Figure legends provided (not more than 40 words)
- Patients' privacy maintained, (if not permission taken)
- Credit note for borrowed figures/tables provided
- Manuscript provided on a CDROM (with double spacing)

Submitting the Manuscript

- Is the journal editor's contact information current?
- Is the cover letter included with the manuscript? Does the letter:

1. Include the author's postal address, e-mail address, telephone number, and fax number for future correspondence?
2. State that the manuscript is original, not previously published, and not under concurrent consideration elsewhere?
3. Inform the journal editor of the existence of any similar published manuscripts written by the author?
4. Mention any supplemental material you are submitting for the online version of your article. Contributors' Form (to be modified as applicable and one signed copy attached with the manuscript)

Subject Index

Subject Index

Author Index

Revised Rates for 2017 (Institutional)

	Title	Frequency	Rate (Rs): India		Rate ($):ROW	
1	Dermatology International	2	5000	4500	500	450
2	Gastroenterology International	2	5500	5000	550	500
3	Indian Journal of Agriculture Business	2	5000	4500	500	450
4	Indian Journal of Anatomy	3	8000	7500	800	750
5	Indian Journal of Ancient Medicine and Yoga	4	7500	7000	750	700
6	Indian Journal of Anesthesia and Analgesia	3	7000	6500	700	650
7	Indian Journal of Biology	2	5000	3500	400	350
8	Indian Journal of Cancer Education and Research	2	8500	8000	850	800
9	Indian Journal of Communicable Diseases	2	8000	7500	800	750
10	Indian Journal of Dental Education	4	5000	4000	450	400
11	Indian Journal of Forensic Medicine and Pathology	4	15500	15000	1550	1500
12	Indian Journal of Forensic Odontology	2	5000	4000	450	400
13	Indian Journal of Genetics and Molecular Research	2	6500	6000	650	600
14	Indian Journal of Law and Human Behavior	2	5500	5000	550	500
15	Indian Journal of Library and Information Science	3	9000	8500	900	850
16	Indian Journal of Maternal-Fetal & Neonatal Medicine	2	9000	8500	900	850
17	Indian Journal of Medical & Health Sciences	2	6500	6000	650	600
18	Indian Journal of Obstetrics and Gynecology	3	9000	6500	700	650
19	Indian Journal of Pathology: Research and Practice	3	11500	11000	1150	1100
20	Indian Journal of Plant and Soil	2	5500	5000	550	500
21	Indian Journal of Preventive Medicine	2	6500	6000	650	600
22	Indian Journal of Research in Anthropology	2	12000	11500	1200	1150
23	International Journal of Food, Nutrition & Dietetics	3	5000	4500	500	450
24	International Journal of History	2	6500	6000	650	600
25	International Journal of Neurology and Neurosurgery	2	10000	9500	1000	950
26	International Journal of Political Science	2	5500	5000	550	500
27	International Journal of Practical Nursing	3	5000	4500	500	450
28	International Physiology	2	7000	6500	700	650
29	Journal of Animal Feed Science and Technology	2	4100	3600	410	360
30	Journal of Cardiovascular Medicine and Surgery	2	10000	8600	910	860
31	Journal of Forensic Chemistry and Toxicology	2	9000	8500	900	850
32	Journal of Microbiology and Related Research	2	8000	7500	800	750
33	Journal of Orthopaedic Education	2	5000	4500	500	450
34	Journal of Pharmaceutical and Medicinal Chemistry	2	16000	15500	1600	1550
36	Journal of Social Welfare and Management	3	7500	7000	750	700
37	Meat Science International	2	5000	4500	500	450
38	New Indian Journal of Surgery	3	7500	6600	710	660
39	Ophthalmology and Allied Sciences	2	5500	5000	550	500
40	Otolaryngology International	2	5000	4500	500	450
41	Pediatric Education and Research	3	7000	6500	700	650
42	Physiotherapy and Occupational Therapy Journal	4	8500	8000	850	800
43	Urology, Nephrology and Andrology International	2	7000	6500	700	650
44	Indian Journal of Emergency Medicine	2	12000	11500	1200	1150
45	Indian Journal of Surgical Nursing	3	5000	4500	500	450
46	Indian Journal of Trauma & Emergency Pediatrics	3	9000	8500	900	850
47	International Journal of Pediatric Nursing	3	5000	4500	500	450
48	Journal of Community and Public Health Nurisng	2	5000	4500	500	450
49	Journal of Geriatric Nursing	2	5000	4500	500	450
50	Journal of Medical Images and Case Reports	2	5000	4500	500	450
51	Journal of Nurse Midwifery and Maternal Health	3	5000	4500	500	450
52	Journal of Organ Transplantation	2	25900	25000	2590	2500
53	Journal of Psychiatric Nursing	3	5000	4500	500	450
54	Psychiatry and Mental Health	2	7500	7000	750	700

Terms of Supply:

1. Agency discount 10%. Issues will be sent directly to the end user, otherwise foreign rates will be charged.
2. All back volumes of all journals are available at current rates.
3. All Journals are available free online with print order within the subscription period.
4. All legal disputes subject to Delhi jurisdiction.
5. Cancellations are not accepted orders once processed.
6. Demand draft / cheque should be issued in favour of "Red Flower Publication Pvt. Ltd." payable at Delhi
7. Full pre-payment is required. It can be done through online (http://rfppl.co.in/subscribe.php?mid=7).
8. No claims will be entertained if not reported within 6 months of the publishing date.
9. Orders and payments are to be sent to our office address as given above.
10. Postage & Handling is included in the subscription rates.
11. Subscription period is accepted on calendar year basis (i.e. Jan to Dec). However orders may be placed any time throughout the year.

Order from

Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-45796900, 22754205, 22756995, E-mail: sales@rfppl.co.in.

Introducing a new sister concerned company of ***Red Flower Publication Pvt. Ltd.***

RF Library Services Pvt. Ltd.

RF Library Services Pvt. Ltd. is a global market leader in managing professional information. We develop and deliver innovative services that enable the use of knowledge to its full extent. As the only information Service Company globally we play a key role in today's complex information marketplace. Founded in 1985 as a registered company under sub-section (2) of section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014, the business draws on more than a decade of experience within the information industry. With this knowledge, we satisfy the needs of thousands of customers from over 30 countries. We are a division of Red Flower Publication Pvt. Ltd.

Where we are based?

RF Library Services Pvt. Ltd is located in Delhi-91 in India.

RF Library Services Pvt. Ltd.
D-223/216, Laxmi Chambers, Laxmi Nagar,
Near Laxmi Nagar Metro Station,
Delhi-110092(India)
Tel: 011-22756995, Fax: 011-22756995
E-mail: custsupport@rflibraryservices.com, rflibrary.delhi@gmail.com
Wesite: www.rf-libraryservices.com