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Knowledge and Expressed Practice of Nursing Mother Regarding Breastfeeding and Breast Hygiene, in a Selected Community of Delhi

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Abstract

Children are our future and our most precious resource. For most of the children, breast feeding makes the difference between life and death and so breastfeeding is rightly said as the infant's "Passport of life". Breast milk not only is the best for the infants, lack of breast feeding during first few months of life are important risk factor for infant and childhood morbidity and mortality. A dirty breast harbours germs and when an infant sucks from it, it leaves them susceptible to various infections. Some of the common infections that can result from a child sucking dirty breast include diarrhoea. The objectives of the study were to assess the level of knowledge of nursing mother regarding breast hygiene and breast feeding, to assess expressed practice of nursing mothers regarding breast hygiene and to seek relationship between the knowledge of breastfeeding and practice of nursing mothers. For present study, sample comprises of 60 nursing mothers and purposive sampling technique was used. A structured interview schedule was prepared to assess level of knowledge regarding breast hygiene and breastfeeding and the expressed practice of breast hygiene of nursing mothers. A descriptive survey design was adopted. Majority (52%) of the mothers were having moderate knowledge. According to their practice score , majority (63.33%) were having average practice score regarding breast feeding and breast hygiene.

Keywords: Knowledge; Practice; Mothers; Breast Feeding; Breast Hygiene.

Introduction

Children are our future and our most precious resource. For most of the children, breast feeding makes the difference between life and death and so breastfeeding is rightly said as the infant's "Passport of life". Breast milk not only is the best for the infants, lack of breast feeding during first few months of life are important risk factor for infant and childhood morbidity and mortality. Health is basic foundation for productive activity of life. Thus to promote and maintain the health of a growing infant and child, it is essential to provide him adequate nutrition, love, and affection and safety against infectious disease. Breastfeeding meets all these needs and is the vital role of a mother [1].

Breast milk is nature's most precious gift to newborn and equivalent substitute of which is yet to be achieved by our scientific community. Western world having experimented with bottle feeding for over five decades now wants to go back to breastfeeding, hence the slogan "breast is best for the baby". Breastfeeding creates a unique bond between the mother and the baby. When the mother breastfeeds and holds her baby close, she gives warmth, affection and security as well as food and protection, thus helping in physical and mental development of the baby [2].

During the first six months, a baby feeds exclusively on milk, from six months onward, his food can be varied to ensure he grows normal. A child is breastfed 3 or 6 hours immediately after birth.

At initial time, it may happen that the baby finds it difficult to stick to the breast, or nursing mother feel pain when the baby sucks or your milk is not enough for him. Nursing mother should not worry, and keep on feeding the baby and later everything will get normal. The length of time a baby spends in feeding varies from child to child. Feed the baby with the two breasts one after the other. The breasts are rich of sugar and fats respectively [3].

Objective

The objectives of study were to assess the level of knowledge of nursing mother regarding breast hygiene and breast feeding, to assess the expressed practice of nursing mothers regarding breast hygiene by nursing mothers.

Methods

Formal administrative approval was obtained from the concerned authority to conduct final study. The research approach adopted for the study was descriptive survey approach. The setting of the present study was selected urban community i.e. Sangam Vihar, New Delhi. Purposive sampling was done and 60 nursing mothers were selected. A structured interview schedule was used for the data collection.The content validity was done by 7 experts in the field of pediatrics, obstetrics & community nursing. Section -1 of the tool had demographic items, Section -2 had knowledge items about breast hygiene and breast feeding, Section -3 had items related to expressed practice of breast hygiene of nursing mothers. The maximum score on knowledge items was 21 with score one for each correct answer. Score of 75% and above was considered as Good knowledge and between 50 - 74% as average knowledge and below 50% as poor knowledge. The maximum score on expressed practice items was 12 with score one for each correct answer. Analysis of the data was done by using descriptive statistics.

Results

Upon conclusion of the predetermined study, the data revealed the following results:

Section I

Finding Related to Sample Characteristics

This section describes the characteristics of nursing mothers in terms of age, religion, education, occupation, family type and parity.

Table 1: Frequency and percentage distribution of mothers according to their demographic characteristics N=60

S. No.	Sample Characteristics	Frequency	Percentage
1.	**Age (in years)**		
	Below 20 year	01	1.8
	20-25 year	36	60
	26 -30 year	19	31.6
	Above 30 year	04	6.6
2.	**Religion**		
	Hindu	36	60
	Muslim	15	25
	Christian	07	11.7
	Others	02	3.3
3.	**Education**		
	No formal education	16	26.6
	Up to 5th class	12	20
	5-10th class	11	18.4
	Up to 12th class	06	11
	Graduation and above	15	25
4	**Mother's Occupation**		
	Housewife	36	60
	Private service	06	10
	Govt. Services	11	18.6
	Own business	07	11.4
5.	**Family Type**		
	Nuclear	44	73.4
	Joint	16	26.6
	Extended	00	0
6.	**Parity**		
	1	20	33.3
	2	32	53.3
	3 or more	08	13.4

Section II

This section deals with the finding related to knowledge of mothers regarding breast hygiene and breast feeding.

Table 2: Mean, median and standard deviation of knowledge score of nursing mothers N=60

Mean	Median	Standard Deviation
13.4	14	3.31

Table 2 shows that that the mean knowledge score of nursing mothers regarding breast feeding and breast hygiene is 13.4, median of knowledge score is 14 and standard deviation is 3.31. The mean and median were close to each other indicating almost normal distribution.

The data presented in Table 3 depicts the frequency and percentage distribution of level of knowledge score of the nursing mothers. According to their level of knowledge, the majority (52%) were having moderate knowledge, 31.6% were having good knowledge and only 16.4% were having low knowledge regarding breast hygiene and breast feeding.

Section III

This section deals with the expressed practice of breast hygiene of nursing mothers.

Table 3: Frequency and percentage distribution of knowledge scores of nursing mothers according to level of knowledge N = 60

Level of Knowledge Score	Frequency	Percentage (%)
Good	19	31.6
Average	31	52
Poor	10	16.4

Table 4: Frequency and percentage distribution of expressed practice of breast hygiene of nursing mothers N = 60

S. No.	Practice Items	Frequency	Percentage
1.	Washes hands before breastfeeding	25	41.6%
2.	Wipes ones breast with dry towel after bathing	35	58.3%
3.	Uses cotton brassieres	26	43.3%
4.	Changing of bra or cloth if the milk spills on it	26	43.3%
5.	Avoids soap or lotion over nipple area	23	38.3%
6.	Uses a clean cloth over breast to absorb milk from breast	30	50%
7.	Cleans ones breast daily	29	48.3%
8.	Uses button/zips and v-necks dresses for easy access to breast	43	71.6%
9.	Cleans breast before breastfeeding	9	60%
10.	Cleans breast after breastfeeding	17	28.3%
11.	Changing of brassiere daily	21	35%
12.	Avoids long nails	13	21.6%

The data presented in table 4 depicts that majority (71.6%) mothers use buttoned/zip or v-neck dresses for easy access to breast, 60% mothers clean their breast before breastfeeding, 58.3% mothers wipe their breast with dry towel after bathing, 50% mothers use a clean cloth over breast to absorb milk from breast, 48.3% clean their breast daily, 41.6% mothers wash their hands before breastfeeding, 43.3% mothers use cotton brassieres and change their bra/cloth if the milk spills on it, 38.3% mothers avoid soap/lotion over nipple area, 35% mothers change their brassieres daily and only 28.3% clean their breast after breastfeeding, and 21.6% mothers avoids having long nails.

Table 5: Mean, median and standard deviation of practice scores of nursing mothers N=60

Mean	Median	Standard Deviation
7.28	7	2.36

Table 5 shows that the mean practice score of nursing mothers regarding breast hygiene is 7.28, median of practice score is 7 and standard deviation is 2.36. The mean and median were close to each other indicating almost normal distribution.

The data in table 6 depicts that the frequency and percentage distribution of practice score on nursing mothers regarding breast hygiene. According to their practice score, majority (63.33%) were having average practice score, 28.42% were having good practice score and only 8.34% were having poor practice score.

Table 6: Frequency and percentage distribution of practice scores of nursing mothers according to level of practice of breast hygiene N = 60

Level of Practice Score	Frequency	Percentage
Good (Above 75%)	17	28.43
Average (50-75%)	38	63.33
Poor Below 50%	5	8.34

Discussion

According to a study done by Verma vandana et. al [4], "Assessment of the General Breastfeeding Practices of Postnatal Mothers" , it was revealed that according to levels of practices majority of postnatal mothers (75%) had average general breastfeeding practices. These findings are consistent with the findings of the present study where most of the mothers had average knowledge regarding breast hygiene and breast feeding. Wagh et. al [5]. also revealed that lactating mothers showed right practice of breastfeeding in Akola district of Maharashtra. While assessing General Breastfeeding Practices; It was concluded that majority (72.6%) of postnatal mothers had good practices related to timing of breastfeeding and least (34%) were adopting good hygienic practices related to breastfeeding [4]. But in the present study, expressed practice of mothers regarding breast hygiene was average. Findings of another study done by Singh et al revealed that most of the mothers were not cleaning the breast or nipples after feeding the infant [6].These findings were consistent with the present study where only 35% of the mothers cleaned their breasts after breastfeeding.

The present study was conducted on small number of subjects, which limits the generalization of the findings of study.

Conclusion

Most of the mothers were having average knowledge regarding the breast feeding and breast hygiene. Most of the mothers were having average practice level of breast hygiene. The study can be replicated on large sample of mothers, so that findings could be generalized to a larger population. A study can be undertaken to determine, knowledge of antenatal mothers regarding breast feeding and breast hygiene. If the antenatal and nursing mothers are well informed and motivated for breast feeding and breast hygiene then there will be minimal neonatal mortality rates from diarrhoea and other infectious diseases in every country. Healthcare institutions, nursing and medical colleges should focus on creating more awareness programme on breast feeding and Breast hygiene.

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Original Article

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Behavioral Risk Factors of Coronary Artery Disease among Adolescents of Kerala

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Abstract

Context: According to World Health Organization (WHO) report coronary artery disease (CAD) is the largest cause of death, and by 2020, the low- and middle-income countries including India will also have ischemic heart disease as the most frequent cause of death and greatest disease burden. Various behavioral risk factors responsible for CAD include unhealthy diet, physical inactivity, tobacco use, stress. *Aim:* Estimate the prevalence of various behavioral risk factors for CAD among adolescents, Thrissur district, Kerala. *Settings and Design:* A cross-sectional descriptive design was used and study was conducted in the selected schools of Thrissur district, Kerala. *Materials and Methods:* Schools were selected using a multistage cluster sampling technique. Data was collected using a structured questionnaire. *Results & Conclusion:* It was found that 79.2% and 42.7 % don't engage in one hour daily physical activity and exercise during weekdays and weekends resp. Of all 5.1% and 95.9% of children spend more than two hours in front of the screen during weekdays and weekends resp. Out of all 64.5 % and 33.3% don't consume vegetables and fruits daily resp. The research identifies that 17.8% consume hotel, junk foods regularly at least 2-4 times in a week. 54.2 percent of adolescents were regularly (2-4 times in a week) consuming some fried foods; 7.2% were daily consumers. This study points out a very high prevalence of various behavioral risk factors among adolescents of Kerala. Hence calls for an urgent need for population based strategies implemented at local and national level to prevent escalation of CAD.

Keywords: Coronary Heart Disease; Behavioral Risk Factors; Adolescents.

Introduction

Cardiovascular disease (CVD) is a leading cause of morbidity and premature mortality globally: more people die annually from CVDs than from any other cause. An estimated 17.1 million people died from CVDs in 2004, representing 29% of all global deaths. According to the World Health Report 2002, CVD will be the largest cause of death and disability in India by 2020 [1]. By 2020, India will have the largest coronary artery disease (CAD) burden in the world and will account for one third of all deaths; many of them will be young. The addition of behavioral risk factors (physical inactivity, unhealthy diet, tobacco use) to the ethnic or genetic (hyperinsulinaemia, insulin resistance, lipoprotein A) susceptibility superimposed on the biological risk factors (hypertension, diabetes, hypercholesterolemia) can be considered as the reason for the rise of CAD in our Country. Data accumulated over the past 4 decades indicate that atherosclerotic-CAD processes begin early in childhood and are influenced over the life course by genetic and modifiable behavioral risk factors and environmental exposures.

Evidence from laboratory, clinical, and epidemiological studies the results of laboratory/ pathology studies and more recent noninvasive studies provide convincing evidence of the link

between established potentially modifiable risk factors and accelerated atherosclerotic processes in adolescence and early adulthood, support the need for primary prevention beginning early in life itself [2].

In 2000, approximately 30 per cent of India's population was aged 10 to 24 yr, that increased to 53 percent when children younger than 10 were included [3]. Various risk behaviors, such as smoking, consuming a high fat diet, poor intake of fruits and vegetables and alcohol, tobacco use, are often adopted during adolescence. At the same time, it may be easier to inculcate healthy behaviors at a young age rather than to modify behaviors at later ages or after the onset of disease. During adolescent period peer group culture is believed to play a significant role in the onset of life style risk behaviors; Strong associations between adolescents' peer group affiliations and their adoption of smoking, drinking alcohol, or both smoking and drinking alcohol have been reported. Smoking is a health risk behaviors often learned during the adolescent and school years. Along with this nutritional and lifestyle transition resulting in high fat intakes, linked to the consumption of refined foods, and foods of animal origin with an increased fat content, coupled with a low physical activity would result the risk of heart disease.

Adolescence is an impressionable age and can be motivated to make appropriate healthy modifications and in turn they can influence the society at large. There are marked variations in the epidemic of CAD its associated risk factors across India. Although there is limited knowledge this area, there have been no major studies on prevalence of CAD in Kerala. It cannot be assumed that figures from the various regions of Kerala are applicable to rest of the state.

Materials & Methods

Study Design and Subjects

The present cross sectional survey was conducted at Thrissur district, Kerala. The target population was school going adolescents of Kerala in the age group 12-15 years (grade-7-9). Sampling frame consisted of all High schools (Government/Private, aided/unaided, SSLC) of Thrissur district except special schools for disabled children. Out of three educational sub districts (clusters) of Thrissur, one sub district was randomly selected. One government, private aided and private unaided school were selected randomly using 2013 DPI/DDE census list. From each sample school one cluster of subdivision (7^{th}, 8^{th}, 9^{th}) was randomly selected using class lists of the sample schools obtained from the school authorities. The study was limited to 12-15 years age, as the authorities did not grant permission to include students above 15 years. The study protocol was approved by the ethics committee of Jubilee Mission medical college and research institute, Thrissur, Kerala and permission to conduct the research in schools was obtained from Directorate of Public Instructions, Thiruvananthapuram.

Data Collection

A well designed, pre-tested and validated questionnaire was administered to students. The instrument contained 2 parts

a. Socio-demographic details including age, gender, education of mother and father, occupation of father and mother, family income, source of information, and area of living. Validation of the above details was done by cross checking the information (esp. on, educational qualification & occupation of parents, household income) with records kept in schools of about 20 % subjects.

b. Self reported behavior questionnaire on physical activity, exercise, dietary habits, screen time, tobacco use. Physical activity was measured by asking about residential distance from school/ tuition centre, mode of conveyance, routine work at home (how long and how often), outdoor games (weekdays & weekends), and participation in sports with regular practice. Information on dietary habits included a food frequency table, with 11food groups and columns indicting the number of times (home or outside) taken in the last one month, watching television during meals, snacking while watching TV, eating dinner 2 hours before sleep, preference and use of soft drinks with meals, use of extra salt and oil/ghee with foods, skipping meals, were used to assess the dietary habits. This is the normal routine diet the students had, not in marriages/parties; their response was indicated by placing a tick in the respective columns. For the purpose of analysis the following categories were made according to the dietary guidelines.

Fruit Consumption Pattern

For fruit consumption pattern individuals who consume fruits seven days a week as appropriate or adequate, 4-6 days moderate, and less than 2-3 days

in a week were considered inadequate.

Vegetable Consumption Pattern

Categories were similar to fruit consumption pattern.

Dairy Products

Categories were similar to fruit consumption pattern.

Fish consumption pattern: Consumption of fish at least 2-4 times in a week was considered appropriate, weekly once moderate and less than that was considered inadequate.

Nut consumption Pattern

Categories were similar to fish consumption pattern.

Junk Food Consumption Pattern

For junk food consumption pattern individuals, who consume monthly as appropriate, weekly as moderate, and daily as inappropriate. Total screen time was measured by asking to report time spend in watching TV/Video/DVD, computer use (Weekdays & weekends). Information on exposure to passive tobacco, experimentation with tobacco products and use of tobacco products were collected.

Prior to the final study a pilot study was carried out to know the feasibility and practicability. Following a brief presentation about the study, a written consent was sought from the school authorities to conduct the study in their school premises. Explanation about the study, questionnaire was given to participants and doubts were clarified. Anyone not interested was allowed to keep away. Children from the representative samples were called for screening using inclusion criteria according to their classes and questionnaires were administered to collect information related to health behaviors. The questions were explained briefly and demonstrated to them. Collected data were coded, categorized and analyzed (SPSS -16) using univariate and bivariate analysis.

Results & Discussion

Sociodemographic Details

The total number of adolescents participated in the survey was 96, with a mean age of 12.75±.92years; 61boys and 35 girls. More than half were residing in village (57%) and remaining (43%) were from corporation. 94.8% of adolescents had no previous information regarding coronary artery disease, while 3.1% and 2.1% received information regarding coronary artery disease from family/friends and media (visual, oral and written) and advertising resp. One quarter (25%) of the students had a family income in the range of Rs. 16020-32049, 21.9 % had in the range of 12020-16019 and 20.9% had income below Rs. 8010.

Physical Activity and Exercise Including Screen Time

Table 1 shows that the mean duration of exercise was during weekdays and weekends was 237.7±159.3 and 403.3±268.4 minutes resp. which less than the recommend duration of exercise. It was also found that 79.2% and 42.7 % don't engage in one hour daily physical activity and exercise during weekdays and weekends resp. The beneficial role of physical activity in the prevention of CVD in adults has long been recognized. Compared to active subjects, inactive subjects had a relative risk of 1.5 to 2.4 of developing CVD; these effects were independent of other risk factors [4]. There is evidence that adolescents are not enough physically active and unable to sustain their activity levels into adulthood [5].

Table 1: Screen time and exercise behaviour among adolescents

Variable	Mean ±SD
Screen time (Hours)	
Weekend	8.62±3.4
Weekdays	6.1±3.4
Total	14.7±5.4
Exercise (Minutes)	
Weekend	167.8 ±172.3
Weekdays	237.7±159.3
Total	403.3±268.4

As shown in table 2, although 54.2%of children stay within 5 km radius of school, 67.7% were using motor vehicles for transportation. Only 43.8% were involved in any sports, while 68.8% participate in school physical education sometimes and 14.6% only often resp. These findings were supported by

Ramachandran TY [6].

This is supported by the previous studies done by Ramachandran TY [6] and Nayak et al [7].Sudhain 2007 Active lifestyles imply not only increasing physical activity levels, but also decreasing sedentary behavior. Body weight, in between meals snacking, parental TV watching habits and having a TV in the bedroom are positively associated with youth's TV/ video viewing habits [8].(Gorely, Marshall & Biddle, 2004). More than half of television viewers in India today are children below 15 years (Sudha, 2007) [9]. The short-term effects of tobacco addiction among youths include damages to the respiratory system, nicotine dependence and are associated with its consumption until adulthood. Generally, pulmonary function deteriorates more rapidly in smokers of all ages, compared to non-smokers, and it increases the risk of CVD directly through harmful changes in blood pressure, total serum cholesterol and HDL cholesterol levels [10].

Table 2: Physical activity behaviour among adolescents

Variables	Frequency	Percentage
Distance from School		
0 to 5 kms	52	54.2
5 to 10 kms	35	36.5
More than 10 kms	9	9.4
Mode of conveyance to school		
Physical mode (Not using vehicles)	30	31.2
Using motor vehicles	66	67.7
Participation in school Sports		
Member of sports team	42	43.8
Not a member	54	56.2
Participation in school physical education		
Always	16	16.7
Sometimes	66	68.8
Often	14	14.6
Very often	0	0
Never	0	0

Food Consumption Pattern

The study finds out that only 64.5 per cent of the respondents take vegetables on a daily basis,6.2% takes once in a week and 6.3%only 1-3 times in a month. Only 33.3% consume fruits daily. 19.8%consume 2-4 times in a week, while 4.2% consume only once in a week and 14.6% don't have consume fruits at all in a month. Regular Fish consumption was seen in 63.4% of adolescents while 12.5% consume never and 12.5% only 1-3 times in a week30.2% of adolescents don't have the habit of consuming nuts, while 34.4% consume 1-3 times in a month. Only 25% consume at least 2-4 times in a week. Only 55.2% consume dairy products daily while 11.5%consume never. There is a tendency of junk food consumption among students. The research identifies that 17.8 percent consume hotel foods/junk food regularly at least 2-4 times in a week, of which 4.2% consume the same every day.er cent of the students consume soft drinks regularly (2-4 times in a week) and 3.1% consume soft drinks daily. Another important finding is related to the consumption of baked or bakery items. 88.6 per cent of the respondents consume any one of the confectionary items regularly. 54.2 percent of adolescents were regularly (2-4 times in a week) consuming some fried foods. Out of this 7.2% were daily consumers. 33.2% were regularly including butter or ghee in their foods. 72.9% were consuming foods rich in salt and oil like Pappad, Pickles on a regular basis.

Previous studies have shown that snacking while watching TV was associated with higher overall caloric intake, and calories from fat in women (Gore, Foster, DiLillo, Kirk & Smith West, 2003).[11] Eating at fast-food restaurants was associated with excessive weight (French, Story & Jeffery, 2001) [12] and eating quick-service foods twice a week or more was associated with increase in BMI scores in female adolescents; in addition, this behaviour continued from childhood through adolescence (Williams, Holmbeck, & Greenley, 2002) [13]. Also, increased consumption of soft drinks is concomitant with decreased consumption of milk in children and adolescents. Conversely, fruits and vegetable consumption is 50% below recommended levels [12].

From table 5 it is evidenced that 48.7% of adolescents are exposed to tobacco smoke at home and 15.6%of them are unaware of passive smoking and had been offered by some tobacco products by

others. 10.3% of them had experimented with tobacco before the age of 13 years. These findings were supported by the studies done by Mathur et al [14] and Sinha DN [15].

Table 3: Pattern of food consumption among aadolescents

Items	Frequency (percentage)								
	Monthly			Weekly		Daily			
	0	1-3	1	2-4	5-6	1	2-3	4-5	6+
Hotel food, Fast foods (noodles, burger, pizza etc)	17(17.7%)	5(57.3%)	10(10.4%)	9(9.4%)	4(4.2%)	4(4.2%)	0	0	0
Fried foods (fish/meat/vegetable)	73(7.3%)	22(22.9%)	7.3(7)	35(36.5%)	11(11.5%)	6(6.2%)	1(1%)	0	0
Fish curry	12(12.5%)	12(12.5%)	11(11.5%)	36(37.5%)	10(10.4%)	3(3.1%)	10(10.4%)	1(1%)	1(1%)
Vegetables	0	6(6.3%)	6(6.2%)	12(12.5%)	10(10.4%)	12(12.5%)	30(31.2%)	20(20.8%)	0
Fruits	14(14.6%)	20(20.8%)	4(4.2%)	19(19.8%)	6(6.2%)	12(12.5%)	14(14.6%)	5(5.2%)	1(1%)
Nuts	29(30.2%)	33(34.4%)	10(10.4%)	10(10.4%)	5(5.2%)	7(7.3%)	2(2.1%)	0	0
Fruit Juice/ Carbonated drinks (cola, sprite etc.)	23(24)	46(47.9%)	4(4.2%)	17(17.7%)	2(2.1%)	3(3.1%)	1(1%)	0	0
Pappad, Pickles	3(3.1%)	14(14.6%)	9(9.4%)	25(26)	9(9.4%)	17(17.7%)	10(10.4%)	9(9.4%)	0
Butter , Ghee	26(27.1%)	24(25%)	14(14.6%)	17(17.7%)	8(8.3%)	6(6.2%)	1(1%)	0	0
Biscuits/bread/cakes/ Mixture/chips	3(3.1%)	3(3.1%)	5(5.2%)	24(25)	10(10.4%)	19(19.8%)	18(18.8%)	14(14.6%)	0
Milk/yogurt (1 cup=250ml, a household tea cup)	11(11.5%)	3(3.1%)	9(9.4%)	16(16.7%)	4(4.2%)	27(28.1%)	19(19.8%)	7(7.3%)	0

Table 4: Dietary habits among adolescents

Variables	Frequency	Percentag
Habit of watching TV during breakfast		
Yes	74	77.1
No	22	22.9
Habit of watching TV during lunch		
Yes	79	82.3
No	17	17.7
Habit of watching TV during dinner		
Yes	81	84.4
No	15	15.6
Preference of drinks		
Water	34	35.4
Carbonated drinks	10	10.4
Fruit juices	52	54.2
Family eats dinner together		
Yes	75	78.1
No	21	21.9
Snacking while watching TV		
Yes	58	60.4
No	38	39.6
Eating dinner at least 2 hours before sleep		
Yes	35	36.5
No	61	63.5
Extra salt to food/ salad/curd after it is served		
Most of the times	17	17.7
Sometimes <25%	51	53.1
Never	28	29.2
Apply ghee/oil on chapatti /foods		
Most of the times	14	14.6
Sometimes <25%	39	40.6
Never	43	44.8
Parents offer food/sweets as reward		
Most of the times	20	20.8
Sometimes <25%	56	58.4
Never	20	20.8

Drink soft drinks with meals or snacks		
Most of the times	10	10.4
Sometimes <25%	57	59.4
Never	29	30.2
Do you skip breakfast/lunch/dinner		
Most of the times	8	8.3
Sometimes <25%	57	59.4
Never	31	32.3

Table 5: Exposure and use of tobacco among adolescents

Variables	Frequency	Percentage
Exposure to passive tobacco at home		
Never	49	51
1 or 2 days	28	29
3 or 4 days	9	9.4
5 or 6 days	1	1
All 7 days	9	9.3
Heard of passive smoking		
Yes	79	82.3
No	15	15.6
Offered tobacco by others		
Yes	15	15.6
No	81	84.4
Age of experimentation with tobacco products		
I have never tried tobacco	86	89.6
7 years or younger	3	3.1
8 or 9 years old	3	3.1
10 or 11 years old	1	1
12 or 13 years old	3	3.1
Use of tobacco products during last 6 months		
Yes	5	5.2
No	91	94.8

Conclusion

The study reveals the high prevalence of major factors leading to coronary artery disease among adolescents. The major conclusion from this study is that of low physical activity, sedentary lifestyle, poor dietary habits with consumption of junk food and tobacco use are prevalent among adolescents in the study area. Unless effective preventive strategies are implemented at the local, and national level, we can expect that trend of increasing coronary artery disease in adults observed in recent decades will accelerate even further and suggests concerted efforts targeted at improving lifestyles of children and adolescents.

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A Descriptive Study to Assess the Prevalence of PEM among Preschool Children in Rishikesh, Uttarakand

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Abstract

A study includes 50 preschool children, a quantitative, descriptive study. Purposive sampling technique were adopted, basic anthropometric were assessed, and it was found 1 child is 3rd degree malnourished, 9 children were 2nd degree malnutrition, and 12 children were 1st degree malnourished, and 28 children were well nourished.

Keywords: Anthropometric; Malnutrition.

Introduction

Nearly one in five children under age five in the developing world is underweight (MDG report, 2012) [1] and it continues to be a primary cause of ill health and mortality among children. The World Health Organization (WHO) has reported hunger and related malnutrition as the greatest single threat to the world's public health. One in every three malnourished children of the world lives in India and under-nutrition is a major cause in more than half of under-five deaths. In India, around 43% of under five children were underweight according to the report of third national family health survey (NFHS- 3) conducted during 2005-06 whereas in rural Uttar Pradesh, it was 44.1% [1]. Malnutrition has shown to be an important concern in children because of rapid growth and development [2]. Pre-school children are most vulnerable to the effect of protein energy malnutrition (PEM) and their nutritional status is considered to be a sensitive indicator of community health, so that the present study was conducted to study the epidemiology of protein energy malnutrition among pre school children (3-6 years) in rishikesh.

PEM results from various factors, including inadequate intake of nutrients, abnormal gastrointestinal assimilation of the diet, and stress response to acute injury or chronic inflammation Studies in developing countries investigating the possible determinants of child growth showed the nutritional status of children has a significant inverse relationship with the household income, immunization status and childhood illness, intestinal parasitic infections and childhood nutrition also have been significantly associated with the nutritional status of children.

Several studies showed that maternal education emerges as a key element of an overall strategy to address malnutrition [3]. The best global indicator of children's well being is growth. Poor growth is attributable to a range of factors closely linked to overall standards of living and the ability of populations to meet their basic needs, such as access to food, housing and health care. Assessment of growth is the single measurement that best defines the nutritional and health status of children, and provides an indirect measurement of the quality of life of the entire population.

Aims & Objectives

- To assess the prevalence of PEM among

preschool children

- To assess the distribution of various degree of PEM according to Gomez classification.
- To associate the prevalence of PEM among pre school children with selected demographic variables

Materials and Methods

A quantitative approach, non experimental descriptive study design was adopted for this current study. A study was carried out in three Anganwadi in Rishikesh, Dehradum dist. The target population was preschool children's. Purposive sampling technique was adopted to select 50 preschool children's. The parents were interviewed to get the necessary information. A structured tool was used to collect the data. The tool contains demographic variables and anthropometric measurement of the child. General information like name of the child, father's name, age and sex of the child, place of living, birth order of the child, number of sibling, parents educational status, type of family, income of the family, food habit of the children, immunization history and current illnesses was collected from the parents. Basic anthropometric measurement was taken from each child includes, weight, height, mid arm circumference. Concern taken from parents Descriptive and inferential statistics where used to analyze the data. The grading of PEM was done as per the Gomez classification.

i. Setting and Participants:

ii. Tools and Techniques:

iii. Description of Intervention:

iv. Ethical Considerations:

v. Statistical Methods:

Results

It was found that there was 44% percentage of children malnourished and 56 % of children were nourished up to their age (Table 1).

It was found that more than half of the children were nourished well and 24 % of preschool children having 1st degree PEM, 18% of preschool children were suffering from 2nd degree PEM and only 2% of preschool children is suffering from 3rd degree PEM (Table 2).

It was found that there [3] is no significant association exit between age, sex, place of living, birth order of the child, educational status of the parents, types of family, economic status of the family, child food habit, and immunization status, but there was significant association exit between the prevalence of PEM and number of siblings, recent or current illness like diarrhoea, URTI. It was tested with X^2 with "p" value of 5% (Table 3).

Table 1: Distribution of PEM

Distribution of PEM	Frequency	Percentage B
Presence of PEM	22	44%
Adequately Nourished	28	56%

Table 2: Distribution of Degree of protein energy malnutrition (Gomez classification)

Degree of Malnutrition	Grading	Frequency	Percentage
Nourished	>90%	28	56%
1st degree PEM	76-90%	12	24%
2nd degree PEM	60-75%	9	18%
3rd degree PEm	<60%	1	2

Table 3: Frequency, percentage distribution and Association of demographic variables

Demographic variables	Frequency	Percentage %	X^2	'P' value
Age				
3-4years	20	40	1.919	5.99
4-5yeqars	18	36		
5-6years	12	24		
Sex				
Male	24	48	1.413	3.84
Female	26	52		
Place of living				
Rural	29	58	0.169	3.84
Urban	21	42		

Birth order				
1	28	56	2.37	7.82
2	14	28		
3	5	10		
4&above	3	6		
Number of siblings				
0	15	30	29.97*	7.82
1	21	42		
2	10	20		
3 & above	4	8		
Educational status of the father				
Educated	49	98	0.397	3.84
Uneducated	1	2		
Educational status of the mother				
Educated	46	92	0.912	3.84
Uneducated	4	8		
Types of family				
Joint	24	48	0.082	3.84
nuclear	26	52		
Economic status of the family				
Low class	12	24	4.60	7.82
Middle class	30	60		
Upper middle	5	10		
Upper class	3	6		
Food habit of the child				
Vegetarian	17	34	0.983	5.99
Non vegetarian	26	52		
Ova vegetarian	7	14		
Immunization history				
Complete	48	96	0.478	3.84
Incomplete	2	4		
Suffering with diarrhoea or URTI etc				
Yes	39	88	4.96*	3.84
No	11	22		

Note: * = significant difference

Discussion

The WHO (2000) has estimated that 182 million children, representing 32.5% of all preschool children fewer than 5 years of age in developing countries are malnourished and over two-thirds of them live in Asia, especially southern Asia. Many studies have been carried out regarding the prevalence and determinant factors of PEM in India.

In present study prevalence of PEM and its relation to various epidemiological factors was assessed in 50 children on the basis of weight for age. Out of total 50, 40% (20) were in 3-4 year, 36% (18) were 4-5years, and 24% (12) were 5-6 years of age. According to sex more than half of the children were female (52%) and 48% (24) were male children. Over all it was found that more than half of the children (56%) were health and nourished, and only 44% of children were malnourished. The incidence of 3rd degree PEM was found to be just 2%, were as 1st degree PEM was 24 %(12) and 2nd degree PEM was 18% (9).

In this study, grade 1 and grade 2 PEM is higher rate than grade 3 PEM. The number of sibling and current health problem was having significant influence on development of various grades of PEM among children of 3-6 age groups.

Conclusion

India stands at a very vulnerable position with one of the highest prevalence of under nutrition in the world in spite of improvement in food availability and poverty alleviation. In addition to it, numerous determinants play a role in its causation. The interplay of these determinants and their complementary effect makes it difficult to isolate one key factor in causing under nutrition [4].

The extent of malnutrition can be countered by educating the parents with respect to basic nutritional requirements of their children and encouraging them to consume locally available low cost nutritious foods [5].

Source of Support

· Books,

- Journals
- WHO guidelines
- Online journals,
- WEB pages,
- Blog posts

Conflict of Interest

Prevalence of anemia can be assessed with clinical observation method rather than invasive method for preschool children with PEM.

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Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Phototherapy for Neonatal Jaundice among Third Year B.Sc. Nursing Students

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Abstract

Background: Phototherapy consists of exposing infants to blue light, which is close to ultraviolet light on the light spectrum. Infants with jaundice caused by high levels of bilirubin, a byproduct of the breakdown of old red blood cells are exposed to the light, which changes the shape of the molecule, allowing the body to excrete it properly. The aim this study to assess the knowledge of Third Year B. B. Sc, Nursing Students with neonatal jaundice on effects of phototherapy. *Material Method:* A quasi experimental study used to conducted a total number of students were selected 30 B.B.Sc Nursing Student in MINS College of Nursing, latur, in July 2016.With their demographic variable, data was collected by using structure questionnaire before and after video teaching programme the data was interested using descriptive and inferential statistics. *Result:* The result of the study revealed that video teaching effective as the knowledge score shows improvement from 'Inadequate' (76.6%) to 'inadequate' 2(6.6%) from pretest to posttest respectively. There was a significant difference found between pretest and posttestknowledge, at $p< 0.05$ level. A significant association found between knowledge and demographic variables like age, sex, previous experience and experience 't' test (2.02) at $p<0.05$ level. *Conclusion:* Majority of students demographic variables are highly signifience after the video teaching programme the hypothesis is accepted.

Keyword: Phototherapy; Video Teaching; Newborn and Nursing Students.

Introduction

New born are considered to be tiny and powerless and more of all treasure to the nation, completely dependent on others or parents for their adaptation in the external environment within one minute of birth the normal newborn adapts from dependant fetal existence to an independent one capable of oxygenation and carry on physiological processes. Understanding and appreciating this transition are vital to the assessment and care of newborn babies.

Jaundice is considered pathologic if it presents within the first 24 hours after birth, the total serum bilirubin level rises by more than 5 mg per dL (86 mol per Liter) per day or is higher than 17 mg per dL (290 mol per L), or an infant has signs and symptoms suggestive of serious illness. The management goals are to exclude pathologic causes of hyperbilirubinemia and initiate treatment to prevent bilirubin neurotoxicity.

Phototherapy should be instituted when the total serum bilirubin level is at or above 15 mg per dL in newborn 25 to 48 hours old, 18 mg per dL in infants 49 to 72 hours old, and 20 mg per dL in infants older than 72 hours. Few term newborns with hyperbilirubinemia have serious underlying pathology.

Phototherapy is the use of visible light for the treatment of Hyperbilirubinemia (Neonatal Jaundice) in the newborn. The mother as a caretaker can enhance the effectiveness and effects of phototherapy

for the neonatal suffering with Hyperbilirubinemia (Neonatal Jaundice).

Need for the Study

The world IMR (Infant Mortality Rate) an on average is 41.81 per 1000 live and the world incidence rate for neonatal jaundice is 1-10 of about 1, 33,000 Among that our country has the highest IMR estimation to about 43.19 per 1000 live birth in India and Indian Incidence rate for neonatal jaundice is 1-10 for about 1,12000.In Maharashtra IMR (Infant Mortality Rate) an on average is 28 per 1000 live (national health mission 2015)

Statement of the Problem

"A study to assess the effectiveness of video assisted teaching programme on knowledge regarding phototherapy for neonatal jaundice among third year B.Sc. Nursing students at M.I.N.S., College of Nursing, and Latur."

Objective of the Study

1. To assess the knowledge of Third Year B. B. Sc, Nursing Students with neonatal jaundice on effects of phototherapy through pre-test.
2. To evaluate the effectiveness of video assistedteaching programme on effects of phototherapy.
3. To find out the association between pre-test & post-test knowledge score with selected demographic variables with neonatal jaundice.

Hypothesis

H_1: There will be significant difference between pre-test and post-test knowledge scores of students with neonatal jaundice after video assistedteaching programme.

H_2: There will be significant association between pre-test knowledge scores with selected demographic variables of students with phototherapy.

Materials and Methods

A quasi experimental study, pretestposttest design without control group approach was undertaken in the MINS College of Nursing, Latur Maharashtra. A total of 30 III year Students were selected with help of probability method, systematic random sampling technique. The study was approved by institutional ethics and research committee of MIMSR and written permission from Principal and informed consent was obtained from the III year Students before enrollment. The pre tested structured interview schedule was used to collect data, it consists of 30 items and correct response carries 1 and wrong response carries 0 score respectively. The maximum score was 30 and based on score the knowledge was categorized as Adequate, Moderately adequate and Inadequate. A pre tested structured interview schedule was used for conducting the pretest, followed by the Video Teaching Effectiveness of video teaching was done by conducting posttest. The collected data were complied, tabulated and analyzed based on objectives with help of descriptive (mean, SD and mean %) and inferential (t test, chi square test and coefficient of co relation test) statistical methods wherever required.

Result

The study revealed that level of knowledge is (7) 23.33 % having moderate knowledge in pretest. 23 Students (76.66%) having inadequate knowledge in pretest. The posttest knowledge score adequate 9 (30%) of them, Moderately adequate 19 students (63.33%). Inadequate knowledge 2 (6.66 %) of them. This indicate the study was effective & it enhance Knowledge of phototherapy among undergraduate students. The improvements was statistically tested by paired't' test value and result found to be significant at p > 2.02 value. There was a statistically no significant association found between the post test scores of the sample with theirhypothesis 2 is accepted.

Table 1: Comparison of pre-test and post-test level of knowledge on phototherapy among third year B.Sc. nursing students

Sr. No	Level of knowledge	Pretest scores		Post test scores	
		Number	Percentage	Number	Percentage
1	Adequate (>76%)	-	-	9	30
2	Moderate (51-75%)	7	23.33	19	63.33
3	Inadequate (<50%)	23	76.66	2	6.66

Table 1 shows that during pre-test 60% of third year B.Sc. nursing students had moderately adequate knowledge and 40% of third year B.Sc. nursing students had inadequate knowledge whereas, during post-test 90% of third year B.Sc. nursing students had adequate knowledge.

Table 2: Area wise comparison of mean, SD, and mean percentage of pretest knowledge scores about phototherapy among third year B.Sc. nursing students N:30

S. No	Area	Max obtainable score	Pretest score		
			Mean	SD	Mean (%)
1	Knowledge on definition, indication, contraindications of phototherapy	5	2.86	0.81	57.35
2	Knowledge on action, guidelines. articles and procedure of phototherapy	9	3.23	0.93	35.92
3	Knowledge on complications and nursing management of phototherapy	16	7.06	2.63	44.16
	Overall	30	4.38	1.45	45.81

Table 3: Area wise comparison of mean, SD, and mean percentage of posttest knowledge scores about phototherapy among third year B.Sc. nursing students N: 30

S. No	Area	Max obtainable score	Post test score		
			Mean	SD	Mean (%)
1	Knowledge on definition, indication, contraindications of phototherapy	5	4.36	0.76	87.33
2	Knowledge on action, guidelines. articles and procedure of phototherapy	9	6	1.87	66.66
3	Knowledge on complications and nursing management of phototherapy	16	10.2	1.68	63.75
Overall		30	6.85	1.43	72.58

Table 4: Comparison between difference of pre-test and post- test knowledge scores regarding phototherapy among third year B.Sc. nursing students N:30

Sr. No	Area	't' value	Level ofSignificance
1	Knowledge on definition, indication, contraindications of phototherapy	7.82	HS
2	Knowledge on action, guidelines. articles and procedure of phototherapy	13.50	HS
3	Knowledge on complications and nursing management of phototherapy	6.39	HS
	Overall	9.01	HS

(Degree of freedom (df)=29 table value=2.02 highly significant(HS)

Table 5: Association between posttest score on phototherapy among third year B.Sc. nursing students with demographic variables

Sr. No	DemographicVariables	DF	Table value	χ^2 value	Level of significant
1	Age	4	7.82	6.66	HS
2	Sex	2	3.8	46.94	HS
3	Previous Experience	2	3.8	12.55	HS
4	Work Experience	2	3.8	0.35	HS

Table 4 shows that there is highly significant difference between the area wise score of pretest and posttest. Hence, the stated null hypothesis is rejected and statistical hypothesis is accepted. Thus the difference observed in the mean score value of pretest and posttest were true difference.

Prior to the implementation of the video assisted teaching the third year B.Sc nursing students had the mean percentage 45.81% of the total mean score, which was poor knowledge, whereas after the implementation of video assisted teaching, the third year B.sc nursing students had the mean percentage 6.85 ±1.43 (SD) which is 72.58 % of the total mean score which is good knowledge depicting the difference of 26.77 % increase in mean percentage of score.

Implications

Nursing Service

The content of the video assisted teaching regarding knowledge on phototherapy will help the nursing professionals in the hospital as well as in the community to reinforce their knowledge on phototherapy. The video assisted teaching provides knowledge on phototherapy with which she/he can categorize the types, severity and the management.

Nursing Education

The study emphasizes the need of educating the

nursing personnel through in-service or continuing programme to update their knowledge and still in educating the third year B.Sc. nursing students regarding phototherapy and its current medical practices.

Student nurses must develop their skills by using these materials to identifying nosocomial; infection through meaning, sources, and transmission.

Nursing Administration

Provision should be made for money in budget in order to identify the prevalence of phototherapy among third year B.sc nursing students and to conduct health awareness programmers.

Recommendations

- Same study can be conducted with large size and for long duration.
- Same study can be done as an experimental study.
- An exploratory study can be conducted to identify the causes of phototherapy and its prevention.
- Same study can be conducted as a comparative study among the other medical colleges.
- Same study can be conducted among college students.

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Knowledge of Medico- Legal Aspects of Patient Care among Nurses Working in Cardiothoracic Setting

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Abstract

Nursing practice is surrounded by many legal aspects because nurses are accountable for their professional judgments and action. For the implementation of high quality of nursing practice in the world of latest medical technological advances a good knowledge of legal aspects of health care is necessary. The enactment of various legal provisions like Consumer Protection Act, India, 1986 (CPA), Right to Information Act, 2005 (RTI), and standardization of procedures and practices has brought nursing care under the legal ambit and focus, more than ever before. The purpose of the present study was to determine the level of knowledge regarding medico legal aspects of patient care among nurses working in a selected hospital of Kerala.The study utilized a non-experimental approach, and descriptive design. The target population was staff nurses working in the selected hospital, Thrissur, Kerala. A total of 48 staff nurses who were working in cardiology and cardiothoracic wings of the selected hospital wasrecruited using purposive sampling. Findings revealed that, majority of 91.7% of study participants had inadequate knowledge while 4.2% each had moderately adequate and adequate knowledge. None of the participants reported to be aware of medico-legal cases against nurses in India and in the working institution. Knowledge regarding medicolegal aspects of patient care was only found to be associated with total years of experience (p=0.000), but not with other variables. The study highlights on the need to strengthen nurse's knowledge on medico legal aspects of patient care.

Keywords: Knowledge; Medico- Legal; Nurses.

Introduction

Nursing profession is in the forefront of healthcare. It is governed by legislation, code of Ethics, and Etiquette. Government has made laws related to medical and nursing practice. Also accountability is an essential concept of professional practice. Nurses deal with the most fundamental human events like birth, death and suffering, they encounter many legal issues surrounding these sensitive areas. With a paradigm shift in the role of nurses, there is an expansion and extension of their clinical roles in a number of specialized areas.

Nursing practice is surrounded by many legal aspects because nurses are accountable for their professional judgments and action. For the implementation of high quality of nursing practice in the world of latest medical technological advances a good knowledge of legal aspects of health care is necessary. Legal responsibility in nursing practice is getting more important as each year passes.

Consumers are becoming increasingly aware of their legal rights in the health care. The enactment of various legal provisions like Consumer Protection Act, India, 1986 (CPA), Right to Information Act, 2005 (RTI), and standardization of procedures and practices has brought nursing care under the legal ambit and focus, more than ever before. Needless to say, the level of legal awareness amidst nursing staff in India is abysmally low. Medical malpractice statistics for the USA in 2003, shows that 16,339 (7.9%) nurses and nursing-related practitioners had a malpractice report made against them in the US (1990-2003, US DHHS). Even in developed countries like USA, the number of adverse actions reported to NPDB, related to nurses in 2011, was nearly double of that which was seen in 2002 (21,586 vs. 11,029 respectively) [1].

Safe Nursing practice includes an understanding of the legal boundaries in which nurses must function. An understanding of the implication of the Law support critical thinking on the Nurses part. Laws are changing constantly to reflect changes in the society, changes in the delivery of health care and advancement in medical technology.

Recently nurses in India have been in the limelight fornegligence and cases of criminal medical negligence against nursesare also being registered in courts [2]. In recent era of educated and intellectual society it is necessary for the nurses to become aware about the legal medicine. During the clinical postings the investigators has come across various negligence and medication errors that arise due to the lack of knowledge of staff nurses which has put the hospital and themselves into various issues. So the researcher proposed this study to determine the level of knowledge regarding medico legal aspects of patient care among nurses working in a selected hospital of Kerala.

Objectives

1. To assess the knowledge regarding medico-legal aspects of patient care among nurses.
2. To examine the association of knowledge regarding medico-legal aspects of patient care among nurses with the selected variables.

Materials and Methods

The present utilized a non-experimental approach, and descriptive design. The target population was staff nurses working in the selected hospital, Thrissur, Kerala. A Total of 100 staff nurses who were working in cardiology and cardiothoracic wings of the selected hospital and who were willing to participate in the study were included in the study. Those who were not available during the study were excluded.Purposive sampling technique was used for the selection of sample. Study was conducted in a tertiary care hospital, Thrissur, Kerala.

A self-administered questionnaire developed in English was used for the study. The initial part of the questionnaire consisted of demographicssuch as age, gender, education, marital status, area of practice, designation, years of experience in the current hospital, total years of experience in profession, the ever involvement of medico–legal cases and the frequency encountered in practice. The second part of the questionnaire consisted of 52 questions pertaining to medico legalterminologies (10), related acts and laws (18), consumer protection act (6), consent (12), and documentation (6). It also had two open ended questions to list medico legal cases against nurses in India in the present working hospital. Reliability and validity of the questionnaire was ensured before administration. The permission to conduct the study was obtained from the hospital authorities. Written consent was obtained after providing the information sheet to the participants. A pilot study was conducted among 10% of the study population for testing the feasibility of the study. Individuals included in the pilot study were not considered for the mainstudy to prevent possible bias. The study was conducted during the month of May 2017.

On selection of the study subject, a brief introduction about the self was given to the subjects followed by detailed explanations regarding the purpose of the study and expectations from the nurses during the data collection were informed. Among the 60 distributed questionnaires, 49 were returned, out of which one questionnaire was incompletely filled and was not included for analysis.

One point was assigned for each correct answer and 0 for wrong answer. The knowledge score for theindividual was calculated by summating the correct answers. A score of more than 80% was considered as adequate, 60-80% as moderately adequate, and less than that as inadequate. Statistics used in the study were descriptivestatistics, Pearson Chi-square test. Statistical significance was fixed at the level of $p < 0.05$. Statistical analysis was done using SPSS Version 20 software program.

Results and Discussion

Characteristics of Study Participants

The mean age of study participants was

27.46±3.031 (Range 22-35 years). All of them were females and 75% were married. The mean total professional experience was 4.54±3.351(Range 0-13 years). Regarding area of work, 55% were working in wards 45% were working in ICU. None of them reported prior involvement of medico-legal cases while 4.2% reported facing legal problems by their colleagues. Out of all 33.3% had attended in-service education on medico-legal aspects of nursing. Of them 70.8% each was oriented to the bill of rights of patients, read articles on legal aspects of patient care and legal aspects of nursing. Hemant Kumar et al conducted similar study to know the legal awareness among nursing staff in administration of patient care the among nurses working in a trust hospital. The analysis of results based on age of nursing staff, revealed that the knowledge of nursing staff on various established basicnursing procedures was highest among those who were more than 40 years of age [3].

Knowledge Regarding Medico-Legal Aspects of Patient Care

Table 1: Distribution of category wise knowledge regarding medico legal aspects of patient care

Domain	Minimum score	Maximum score	Mean	SD
Terminology	1	7	4.13	1.852
Acts and Laws	14	3	17	8.50
Consumer protection act	5	0	5	2.04
Consent	5	1	6	3.25
Documentation	5	1	6	3.25
Total score	12	47	23.38	7.280

Table 2: Distribution of category wise knowledge regarding medico legal aspects of patient care

Domains	Adequate F (%)	Moderately Adequate F (%)	Inadequate F (%)
Terminology	0(0)	12(25)	36(75)
Acts and Laws	2(4.2)	12(25)	34(70.8)
Consumer protection act	12(25)	14(29.2)	22(45.8)
Consent	2(4.2)	10(20.8)	36(75)
Documentation	4(8.3)	32(66.7)	12(25)
Total score	2(4.2)	2(4.2)	44(91.7)

From Table 1 & 2 it is clear that the present study participants had inadequate knowledge regarding medicolegal aspects of patient care. Majority of 91.7% of study participants had inadequate knowledge while 4.2% each had moderately adequate and adequate knowledge. The results of the present study were also consistent with the findings of similar studies done in India and abroad, which also indicated huge deficits in their knowledge regarding medico legal aspects of patient care. Kumar et al in their study in Jaipur, Rajasthan, reported that a majority (90%) of the nurses possessed only a moderate level of knowledge on legal awareness [4]. Hemant Kumar et al reported that the knowledge on various legal provisions, as was applicable to nursing, across all categories of nurses was found to be poor. The nursing staff had poor knowledge on patients' rights and also on their legal obligations towards patients. In another study done by Sharmil in Malaysia on 'Awareness of community health nurses on legal aspects of health care', it was observed that only 11.7% nurses had the expected adequate level of knowledge on legal aspects of health care, while the remaining 88.3% nurses had only a moderate level of knowledge [5]. Aliyu D et al have found contrasting results while studying knowledge, attitude and practice of nursing ethics and law among nurses at Federal Medical Centre, Bida. They found that nurses had considerably good knowledge, attitude and practice of nursing ethics and law [6].

Awareness of Medico Legal Cases Against Nurses

In the present study, none of the participants reported to be aware of medico-legal cases against nurses in India and in the working institution. Though there are not too many cases of legal suits filed against nurses in India, the numbers are slowly increasing. A total of 47% nurses admitted to having some knowledge on such cases of negligence caused by nurses, which were mainly related to wrong administration of injections and drugs to patients. 3

Association between Knowledge and Selected Variables

Knowledge regarding medicolegla aspects of patient care was only found to be associated with total years of experience (p=0.000), but not with other variables.

As the age increases the level of knowledge on legal aspects has also been increased. The better knowledge on legal aspects of healthcare was found to be associated with increasing age, Christian religion, Bsc Nursing degree, increasing total experience in the profession [7].

Conclusion

It is high time in India for nurses to have acquire enough knowledge on medicolegal aspects related to clinical practice with the growing awareness on consumers, increasing complexity of health care andwith the prying eyes of the media.The overall results of the study suggested that there is an urgent need for nurses to understand the medico legal aspects of patient care.

Nursing associations and hospitals should arrange and enhance participation in seminars, and continuing nursing education to increase awareness ofmedico legal issues of patient care.

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Original Article

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Standard Warmer Protocol on Selected Physiological Parameters of Low Birth Weight Babies in NICU

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Abstract

Most infants can be safely and adequately cared for in either incubator or radiant warmer bed. The purpose of this study is to determine whether the implementation of standard warmer protocol causes a greater influence in maintenance of normal physical parameter of the Low Birth weight babies. One group pre-post test only design was adopted for this study. Total enumerative Sampling technique includes 60 low birth weight babies weighing below 2500g admitted in Tayma general hospital during the study period. Tools consist demographic variables and physiological parameters such as temperature, heart rate, respiration, oxygen saturation, activity, appearance/ colour, fluid status, feeding capacity/24hrs were monitored The data were collected over 3 months by Bio-physiological method (in-vivo). Descriptive and inferential statistics were used to analyse the date. The result showed standard warmer protocol is effective in maintaining normal physiological parameter of LBW babies in NICU.

Keywords: Standard Warmer Protocol; Physiological Parameters; Low Birth Weight Babies and NICU.

Introduction

Survival of each newborn depends on the ability for it to regulate its body temperature. While full-term and healthy neonates (newborns) do not have serious problems with thermoregulation, preterm and sick babies often are not able to keep their body temperature and other physiological parameters at a constant level without any external assistance. Without the environment in which a preterm neonate can maintain a normal body temperature (37°C), it will risk cold stress and hypothermia, which may cause an increase in the morbidity and mortality. There are three general ways to keep term and preterm newborns warm and these include incubators, radiant warmers and heated mattresses. The first two are in common use in hospitals. The incubators were invented earlier than radiant warmers and they provide an enclosed environment with warm air circulating inside the device. Radiant warmers are open devices. They consist of a radiant heater placed above a neonate lying on a crib. In this case, a child is heated by a source of radiant heat. The power of this source is servo-controlled from the skin temperature. The main advantage of these devices over incubators is the ease in the access to the baby, thus enabling various medical interventions. However, there are also a few concerns when using radiant warmers. The main drawback is that they increase evaporative heat losses from the newborn body. This is due to the fact that premature and low birth weight babies have a very thin and permeable skin and this, combined with a strong radiation source, yields high evaporative heat losses through the skin. This

situation is likely to result in serious dehydration in the case of very premature babies.

By keeping this problem in view a study was conducted to develop a protocol to care a baby under warmer especially LBW babies which helps in keeping their body temperature in constant as well as maintains fluid balance with other physiological status.

Problem Statement

"A Study to develop and assess the effectiveness of standard warmer protocol on selected physiological parameters of Low Birth Weight Babies in NICU, Tayma General Hospital, Saudi Arabia"

Research Question and Purpose

Develop and determine whether the implementation of standard warmer protocol causes a greater influence in maintenance of normal physiological parameter of the Low Birth weight babies.

Objectives of the Study

1. To assess the selected physiological parameter of low birth weight babies at birth.
2. To develop and assess the effectiveness of standard warmer protocol on the selected physiological parameters of low birth weight babies in NICU.
3. To associate the selected demographic variables with of mean score of selected physiological parameters of low birth weight babies in NICU.

Criteria

Inclusion Criteria

- Low birth weight babies below 2.500gm
- Low birth weight babies born in Tayma general hospital

Exclusion Criteria

- Low birth weight babies with severe birth complications and illness.
- Low birth weight babies under Incubator and mechanical ventilator
- Low birth weight babies who referred out with in 24 hours after birth.

Materials and Method

- *Study Approach:* Quantitative approach
- *Study Design:* Pre experimental designàone group Pre and post test only design
- *Setting of the Study:* Clinical settingà NICU Tayma General Hospital, Saudi Arabia
- *Target Population:* Low birth weight less than 2500 gm.
- *Accessible Population:* Low birth weight babies admitted in TGH, Saudi Arabia
- *Sampling Technique:* Non probability- Total enumerative sampling technique
- *Sample Size:* 60

Development and Description of the Tool

Section 1: Demographic variables such as age in days, sex, APGAR score at birth, weight, gestational week of the baby and mode of delivery.

Section 2: An observational check list contains physiological parameters. A total score is 8.

Table 1: Observational check list

S. No	Physiological Parameters	Yes (Score- 1)	No (Score-0)
1.	Temperature	36.5-37 ^{o} C	<36.5 or >37 ^{o} C
2.	Heart rate	120-160 beats/min	<100 or >160 beats/min
3.	Respiration	30-60 breaths/min	<30 or >60 breaths/min
4.	Oxygen saturation	95-100%	< 95%
5.	Activity	Normal activity	Decreased activity
6.	Appearance / colour	Pink	Pale, blue.
7.	Fluid status	Moist/ Elastic	Dry and scaly
8.	Feeding capacity	Normal	Decreased

Score	Interpretation
7-8	Physiological parameter well Maintained
5-6	Physiological parameter moderately Maintained
<5	physiological parameter poorly Maintained

- *Ethical Clearance:* Permission obtained from the ethical committee of the TGH and consent from parents of LBW babies.
- *Method of Data Collection:* Observational and bio physiological method (in-vivo). (Thermomer, pulse-oxymeter, Cardiac Monitors were used)
- *Data Collection:* physiological parameters at birth and consecutive days at same time of birth until complete recovery were recorded.
- *Duration of Data Collection:* 5 months
- *Pretest:* Conducted to assess the feasibility of the study design and tools.
- *Data Analysis:* Parameters at birth and at 24 hours were analyzed through descriptive statistics (Tables, diagram, and measures of central tendency) and inferential statistics (X^2).

Description of the Intervention

A warmer protocol was developed and implemented over 60 Low birth weight babies from the time of birth until complete recovery. Daily Physiological parameters were compared with the previous day result.

Warmer Protocols

1. Perform hand hygiene before initiating new contact with baby and after each contact with the baby.
2. Ensure that the temperature of the room is 22^0C.
3. Place the warmer away from air currents.
4. Clean the mattress and platform, and cover the mattress with clean linen sheet.
5. When it is known beforehand that a baby is to arrive in the newborn unit, turn on the warmer at least 20 minutes prior to pre-warm the linen and mattress so that the baby does not lie on a cold surface initially.
6. Read temperature on display. Adjust heater output to:

   High: If baby temperature is below 36^0C

   Medium: If baby temperature is between 36-36.5^0C .

   Low: If baby temperature is between 36.5-37.5^0C
7. Once the baby's temperature is between 36.5-37.5^0C, switch on the servo mode/skin mode.
8. If baby is in supine position place the skin probe on the right hypochondrium. When in prone position, place the probe on the loin area. To prevent skin injury, place tegaderm and fix the probe on it with an adhesive.
9. Look for probe displacement when the baby is in servo mode. Check for and ensure proper probe placement every hour.
10. Change the probe site for every 12 to 24 hours.
11. Ensure that the baby's head is covered with cap and feet secured in socks and the baby is clothed or covered unless it is necessary for the baby to be naked or partially undressed for observation or for a procedure.
12. Maintain dry linens and diapers
13. Place only one baby under each radiant warmer.
14. Turn the baby frequently while under the warmer, if possible.
15. 15 Check the temperature of the warmer and of the room every hour, and adjust the temperature setting accordingly.
16. Record the heater output in each shift (every 6 hours). (Any sudden increase in heater output is an early indicator of sickness).
17. Move the baby to be with the mother as soon as the baby no longer requires frequent procedures and treatment. If in servo mode the heater output is >20% it is safe to shift the baby at mother side.
18. Postpone weaning from warmer for 24 hours if axillary temperature is less than 36.4°C at two consecutive readings
19. Use manual mode only for pre-warming, during resuscitation and initial stabilization
20. When "Skin temperature alarm High or Low" change to manual mode with maximum output if baby is having low temperature and adjust the temperature to try and normalize the baby's temperature. If baby is having fever, shift to manual mode and set appropriate heater output. Check for signs of infection.
21. For low birth weight or sick neonate adjust heater output depending on baby temperature in manual mode.

22. Never use full (100%) heater output unsupervised.
23. Record baby temperature every 2-4 hourly when it is in manual mode.
24. Give 6 to 10 feeds per day at 1st week, 6-8 per day at 2week-1 month.
25. Monitor the fluid status of the baby. liberal use of caps, and socks to reduce the IWL under the radiant warmer.
26. Apply sterile liquid paraffin or non irritating oil on the skin to reduce evaporative losses from skin.
27. Administer 80 ml/kg/day of 10% dextrose on day 1 of life for Preterm baby with birth weight 1000-1500 grams. For Term babies and babies with birth weight > 1500 grams. total fluid therapy on day 1 would be 60 ml/kg/day. It is provided as 10% dextrose. A day 2-7 it can be max of 150ml/kg/day. For >7 days it can be 150-160 ml/kg/day.
28. Use a warmed, humidified environment for increased insensible water loss.
29. Notify physician/practitioner of temperature instability of infant, extreme fluctuation of isolette temperature or out of not to exceed range if using skin control, hypo or hyperthermia, or inadequate growth pattern.

Result

The study showed that LBW babies were not able to maintain physiological parameter with in normal range at birth were as 23 % (14) of LBW babies were able to maintain moderately, the mean pre test score was 5.3 with SD of 0.26 and majority (77%) (46) of LBW babies were unable to maintain physiological parameter, the mean pre test score was 3.5 with SD of 0.49.

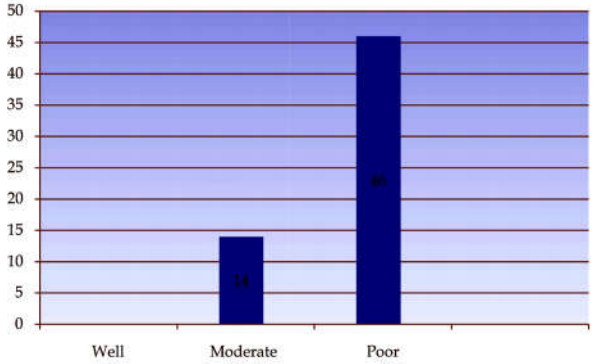

Fig. 1: Pre test status (at birth)

The study result showed that after implementation of an standard warmer protocol, around 42(70%) low birth weight babies were able to maintain normal physiological parameter, the mean post test score was 6.95 with SD of 0.75, were as 18 (30%) Low birth weight babies were able to maintain physiological parameter slightly less than normal limit, the mean pre test score was 5.6 with SD of 0.60. And study result also showed no babies were poor in maintaining physiological parameter .

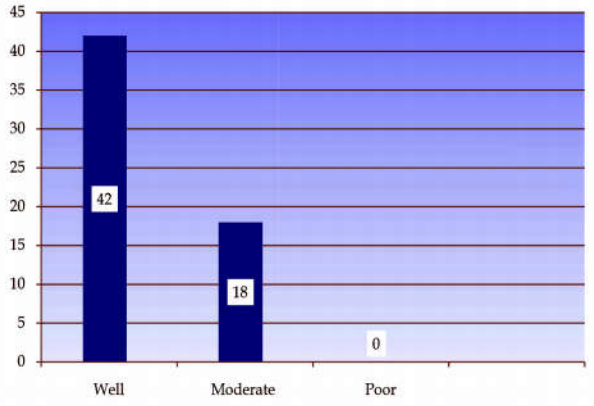

Fig. 2: Post test status for 24 hours after birth

It also found that there is a significant association exit between APGAR score at birth, weight of the baby, and gestational week of the baby. And no association exist between sex and mode of delivery with physiological parameters. Association was tested with chi square test, with 5% level of significant.

Discussion

It was found that implementation of standard warmer protocol is effective in maintaining normal physiological parameter of LBW babies in NICU. The results indicate benefits for the use of the standard warmer protocol for LBW babies. Age in days, APGAR score at birth, weight of the baby, and gestational week of the baby was major extraneous variable and in this study it showed there is association between those variables.

Conclusion

Despite improvements in neonatal care during the past 10 years, death of LBW babies are the second leading cause of neonatal mortality. Very low-birth-weight infants are vulnerable in the delivery room because of their gestational age, birth weights, and

immaturity, which puts them at risk to the effects of the environment . Neonatal health care providers must begin to implement evidence-based practices and best practices to address the needs of vulnerable infants beginning in the first minutes of life.

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An Observational Study to Assess the Health Status of Preschooler Children in Selected Rural Anganwadi Centre of Selected City

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Abstracts

The present study assessed the physical status and nutritional status of pre-school children who are attending anganwadi. *Objectives of the study:* To determine the health status of rural pre-school children in terms of physical assessment. To determine the health status of rural pre-school children in terms of nutritional assessment. To find the association of health status (physical) of pre-school children with selected demographic variables. *Methodology:* The research Methodology use for study that, Research design- Non-experimental descriptive design, Study Setting - Anganwadi centre, Research Approach -Non-experimental descriptive approach. *Results:* The results were drawn based on the following findings. The study findings revealed that majority of the subjects who attend Anganwadi centers were in the age group of 2 to 5 years. The most common illness, which affected pre-school-child population, was fever and acute respiratory tract infection. It was observed that majority of the subjects (40) who attended Anganwadi centers had very good health states (score 50-64). Major area of deviation from normal was nasal discharge (20), dental caries (26) & tooth deposits (14) Majority of the subjects 81% had normal height, weight, mid-arm circumference and only 19% of the subjects had their height below ICMR mean height. Nutritional status of subjects studied was satisfactory compared to NFHS-2 data. There were only 18 subjects (8%) among 3 years. 25% among 4 years and 35.7% among 5 years) having Grade-1 Mild) Mal-nutrition.

Keywords: Health Status; Rural; Preschooler Childrens; Anganwadi Centre; Mortality Rate; Physical Assessment; Nutritional Assessment; Malnutrition.

Introduction

"The child is like a bank, where something must be put before we expect to draw out"

(Mahatma Gandhi)

A Child is precious to his parents, to his family, community, and nation and to the world at large. The young children needs love for growth but also adequate nutrition and health facilities, so that he can growth up to complete at his optimum level.

The concept of the importance of a child to society greedily emerged as each group settled in an area of fertile land. Instead of being a liability, the child slowly became an asset to the family and to the society.Children between 2-5 years of age are generally called pre-school age children.

Need for the Study

India is still among high infant mortality rate country (67 in the year 2002). IMR has declined slowly from 204 during 1911-1915 to 129 per 1000 live births in 1970 and remained static around 127 for Many years and then declined a bit once again to 114 in 1980 and coming to 67 in the year 2002. Despite this significant decline the rates are very high as compared to developed countries, which are now mostly in the range of 5-8 per 1000 live

births [2].

It is well known fact that the diseases like pneumonia, diarrhea, Malaria and mal-nutrition have roots in the environment around the child. Inadequate and poor quality of water, sanitation food hygiene and child rearing practice result in infection and Malnutrition the two constant companions of children in poor families.

Statement of the Problem

An observational study to assess the health status of preschooler children in selected rural anganwadi centre of selected city.

Objectives of the Study

1. To determine the health status of rural pre-school children in terms of physical assessment.
2. To determine the health status of rural pre-school children in terms of nutritional assessment.
3. To find the association of health status (physical) of pre-school children with selected demographic variables.

Hypothesis

$\mathbf{H_1}$ - Physical and nutritional health disorder may exists among pre-school children who attend Anganwadi centers

$\mathbf{H_2}$ - There will be an association between the health status of pre-school children and selected demographic variables

Methodology

Research Design

Non-experimental descriptive design

Study Setting

Anganwadi of kondhwa, pune

Research Approach

Non-experimental descriptive approach.

Target Population

All rural preschool children who are attending Anganawadi centers

Accessible Population

All rural preschooler children present at the time of study.

Criteria for Sample Selection

Inclusion Criteria

1. Rural pre-school children in the age of 2 to 5 years.
2. Rural pre-school children who are attending Anganwadi center.

Exclusion Criteria

1. Rural pre-school children who are not available at the time of data collection.
2. Rural Pre-school children whose mothers Anganawadi workers not willing to give consent for the study.

Results

Organization and Presentation of Data

Section I: Description of pre-school children based on demographic variables.

Section II: Description of pre-school children based on physical health status.

Section III: Description of pre-school children based on nutritional status.

Section IV: Association of physical health status with selected demographic variables

The present study assessed the physical status and nutritional status of pre-school children who are attending anganwadi.

The following conclusions were drawn based on the following findings.

1. The study findings revealed that majority of the subjects who attend Anganwadi centers were in the age group of 2 to 5 years.
2. The most common illness, which affected pre-school-child population, was fever and acute respiratory tract infection.
3. It was observed that majority of the subjects (40) who attended Anganwadi centers had very good health states (score 50-64).
4. Major area of deviation from normal was nasal discharge (20), dental caries (26) & tooth deposits (14).
5. Majority of the subjects 81% had normal height, weight, mid-arm circumference and only 19% of the subjects had their height below ICMR mean height.

6. Nutritional status of subjects studied was satisfactory compared to NFHS-2 data. There were only 18 subjects (8%) among 3 years. 25% among 4 years and 35.7% among 5 years) having Grade-1 Mild) Mal-nutrition.

Summary

Children are invaluable human assets. It is the states responsibility to protect the rights of the children and provide equitable chances to them for development. In India, scheme of ICDS is considered the single largest programme to provide the basis services to children from the deprived section of society. It aims for a better start in life by providing nutrition, health education and non-formal pre-school education in addition to providing many other services.

In India, poverty, population explosion, low female literacy and environmental degradation, protein energy malnutrition contributes to majority of infant and under five mortality. Nutrition affects the physical dimensions of the body, particularly in the rapidly growing period of early childhood. The present study was carried out to investigate the physical health status of pre-school children with special attention to nutrition status in terms of anthropometrics measurements.

Sample Characteristics

- Majority 35% (21) of the subjects were of 4yrs of age,
- Maximum 55%(33) of them were female,
- Higher 93.3% (56) of subject were Hindus,
- Majority 70% (42) of pre – school children were first child in their family,
- 83.3% (50) of mother were delivered in hospital,
- 16.7% (10) were dliver in home,
- 88.3% (53) of child mother were delivered by full term normal delivery
- 11.7% (7) were delivered by LSCS, 100%(60) of mother were given colostrum feeding,
- 70% of subjects belonged to first order of birth
- 100% (60) of preschool children were immunized and vitamin –A prophylaxis given. Considering the number of siblings 53.3%(32) had no brothers.

Physical Examination Findings

The most common area of deviation from normal was lips, teeth and gums. A total of 24 subjects had dental caries and 15 subjects had tooth deposits and stains. The next common area of deviation from normal was ENT, where 29 subjects had thick nasal discharge. No deviation were found in the lower respiratory system, cardio-vascular system, musculo-skeletal system and genito-urinary system.

Anthropometrics Measurements/Nutritional Status

Out of 60, majority of the subjects were aged between 2 to 5 years. There was no abnormality found in height, weight and mid-arm circumference. Association between personal characteristics of the subject of physical health status. There was no significant association between physical health status of pre-school children and selected demographic variables age, sex, religion, no. of siblings, birth order, education and occupation of parents, place of delivery and mode of delivery.

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Evaluate the Effect of Self-Foot Reflexology on Stress among School Children at Selected Schools in Thalassery, Kerala

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Abstract

The study attempts to evaluate the effect of Self Foot Reflexology on stress among school children at selected schools in Thalassery. *Aiims:* The objectives of the study are to assess the level of stress among school children, evaluate the effect of self foot reflexology on stress among school children and to find the association between Stress and Selected Variables. *Settings and Design:* Quasi experimental approach with Non-equivalent Pretest Post design was used in the study. The study was carried out in selected Schools at Thalassery. The sample comprised of 128 school children studying in eighth and nineth classes, selected by Multi stage sampling. Pilot study was conducted in16 sample and the tools were found to be feasible. *Methods and Meterial*: The reliability of the rating scale to assess the level of stress was 0.845. Data collection was done from 22nd January to 20th of February 2013. Data was collected by administering a Questionnaire and rating scale before and after self foot reflexology. *Statistical analysis used:* Data were analyzed by descriptive and inferential statistics. *Results:* The results of this study showed that most of sample (51.56%) has mild stress whereas only 6.25 % have severe stress. About 42.18% of sample has moderate stress. The study reveals that there is significant reduction in stress after self foot reflexology (t_{126}=5.258 and t_{63}=4.841). A relationship between stress and selected variables like Income of family and stress Management Programs were noticed. *Conclusion*: The findings of this study support the need of self foot reflexology to help the school children to combat various stress situations in their daily life which will help them to be a healthy citizen.

Keywords: Stress; School Children; Self Foot Reflexology.

Introduction

It is easier to build strong children than to repair broken men.

Frederick Douglass

Stress is unavoidable situation can occur in all facets of life. Similarly stress is having an importance in natural part of development and adaptation to a changing environment. So the implications of stress among children can be far reaching and they learn to adjust with daily activities. Stress has a negative effect on physical, mental, and cognitive outcomes for children based on the severity. Stress is the situation where the individuals cannot cope with their own ability. In the present world stress among children are dangerously rising in alarming proportions due to pressure on their daily activities. All children cannot put up with the high levels of expectation of parents and the parents do not realize or accept that their children are under severe pressure.

Material and Methods

Research Approach

The research approach used in the study is quasi

experimental approach.

Research Design

Research design is the overall plan for addressing a research question, including specifications for enhancing the study's integrity [25]. The research design selected for the study is Nonequivalentpretestposttest experimental design.

O_1 X O_2
O O

Fig. 2: Schematic representation of study design

Key

O_1: Assessment of level of stress of experimental group.

O_2: Re assessment of level of stress of experimental group.

X: Self foot reflexology for 4 weeks.

O: Assessment of level of stress of control group.

Variables

Variables are quantities, properties or characteristics of persons, things or situations that can change or vary and are manipulated or measured in research [25].

In this study,

Independent Variable: Self foot reflexology.

Dependent Variable: Stress

Demographic Variables: Gender, Religion, Type of Family, Income of Family, Leisure time activities, Exposure to stress management programs.

Setting of the Study

The schools selected for the study are Vadakumbad Government Higher secondary school at Thalassery, Kavumbagham Government Higher secondary school at Thalassery, New Mahe MMHS, and AKG Higher School Pinarayi.

Population

Population is a group who possess specific attributes that a researcher is interested in studying[25]. In present study population was school children.

Sample and Sampling Technique

A finite subset of the population selected with the objective of investigating its properties is called a sample [25]. The sample of the study are 128 school children of selected schools at Thalassery who meet the inclusion criteria.

Sample Selection Criteria

The inclusion criteria of subjects in the study were:

- Children studying in 8th and 9th standards of High school classes.
- Children who are willing to participate in the study.
- Children who are available at the time of data collection procedure.

The Exclusion criterions of the subjects in the study were:

- Children with physical and mental disabilities.

Sampling Technique

In the study Multi stage sampling is used. In the present study investigator randomly selects schools in Thalassery and then select school children from selected schools. The school children are made into different strata's based on gender and the final selection of samples performed by simple random sampling from following schools namely GHSS Kavumbagham, AKG Pinarayi, Vadakumbad HSS, and New Mahe MMHSS.

Tools/Instruments

Development/Selection of Tool

Technique

The means of gathering data with the use of specific tools that are used in given methods are known as techniques of data collection.

In present study the technique is – self reporting. Self Reporting were used to assess personal variables and level of stress by using questionnaire and rating scale respectively.

The following steps were taken for the selection of items and preparation of tool.

- The investigator reviewed the research and non-research literature related to stress and various tools to assess stress among children and adults .Investigator visited schools and analyzed the

stress areas in school children .Formal discussions were conducted with nursing experts and suggestions were obtained from school teachers and Nursing experts.

Description of Tools

Tool 1- Questionnaire to Assess Personal Variables

This tool used to collect base line information. It consist of five items namely Gender, Type of family, income of family and leisure time activities.

Tool 2: Rating Scale to Assess Level of Stress

A blueprint is prepared based on two domains and distribution of items based on content areas. It included two domains interpretation and application. It had 7 interpretation items, 1 application.

Preparation of Rating Scale

The blueprint of items in the tool featuring the two domains, interpretation and application were formed. According to content area the items were spread in these two domains. The content areas included were; stress at home, school atmosphere/ infrastructure, stress related to academics, teacher-pupil relationship, peer relationship, physique, self-assessment, and stress related to future. Each response was scored 0, 1, 2, 3, and 4. It consists of total 40 items. It is a five point rating scale. Stress is categorized as No stress, mild stress, and moderate stress, severe and very severe stress.

Score

No stress - 0

Mild stress - 1-40

Moderate stress- 41-80

Severe stress - 81-120

Very severe stress- 121-160

Content Validity

The content validity of tool was obtained from seven experts, six from nursing field, one from teaching field and one from statistician. The modifications were made according to suggestions and instructions given by experts

Reliability

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring [25].

Reliability of the tool was calculated by using Test retest method and was conducted in 30 samples .The reliability was calculated by Karl Pearson correlation coefficient and the value is 0.845.

Intervention

Self foot reflexology was used as an intervention in this study. Self foot reflexology was taught to samples in experimental group. It is the technique of Self massage through the application of finger pressure on feet's for 15 -20 min for 3 days in a week for 4 weeks.

Pilot Study

Pilot study is defined as a small-scale version or trail run of the major study [25]. Pilot Study is conducted from 2nd to 18th December in selected High Schools in Thalassery. After obtaining written permission from the head of the institution and informed consent from parents, the tool will be administered to 16 school children who fulfilled the sampling criteria. The purpose of the study was explained to the Parents and assured the confidentiality of their son/daughters identity and responses. On the first day, pre-test was conducted by a questionnaire and rating scale followed by Self foot reflexology. The post-test was conducted on the 14th day using the rating scale. The study was found feasible and practicable. No modifications were made after pilot study. Data analysis was done using descriptive and inferential statistics. There difficulty of reaching the schools were the problems faced by the investigator during the pilot study. The investigator then proceeded for the main study.

Data Collection Process

The data will be collected from 21-1-13 to 20-2-13. Before data collection a formal written permission will be obtained from principal of selected high schools for conducting the research study. The purpose of the study will be explained to the parents and assures the confidentiality of their child to ensure their co-operation and prompt response. An informed consent will be taken from the Parents. The pretest will be conducted in students followed by self foot reflexology which will be performed by students for 15 -20 min for 3 days in a week for 4 weeks. Post-test will be administered to the school children using the same tool after 4 weeks.

Data collection process will be concluded by

thanking each child for his/her participation and co-operation. The data collected will be then compiled for data analysis.

Plan for Data Analysis

Analysis is defined as the process of organizing and synthesizing data in such a way that research questions can be answered and hypothesis tested [22]. The plan for data analysis includes both descriptive and inferential statistics. The analysis will be planned on the basis of objective and hypothesis.

Descriptive Statistics

Frequency and percentage will be computed for analyzing sample characteristics. Mean, Median, standard deviation computed will be computed for level of stress among school children

Inferential Statistics

Chi-square test will be used for finding association between stress and selected variables like gender, religion, and type of family, Income of family and leisure time activities. The paired t test will be computed for comparing pretest-posttest mean stress scores of high school children.

Results

Findings of the Study

Major findings of the study are presented under the following headings:

Section I: Description of Personal variables of sample.

- Majority (51.5%) of sample belongs to Hindu religion.
- Regarding monthly income of family most (54.68%) of sample have monthly income less than 5000.
- Most of the sample (57.03%) belongs to nuclear family.
- Highest percentage of sample (82.81%) participated in leisure time activities.
- 50% of samples were not exposed to stress management programs.

Table 1: Distribution of sample based on Personal Variable N=128

Personal Variable	Frequency (F)	Percentage (%)
Gender		
Male	64	50
Female	64	50
Religion		
Hindu	66	51.5
Muslim	62	48.43
Christian	0	0
Others	0	0
Monthly Income of Family		
<5000	70	54.68
5001-10,000	35	27.34
>10,001	23	17.96
Type of Family		
Joint family	55	42.96
Nuclear family	73	57.03
Participation in Leisure		
Yes	106	82.81
No	22	17.18
Exposure to stress management Programs		
Yoga	13	10.15
Exercise	44	34.37
Stress Management Classes	7	5.46
· None of these	64	50

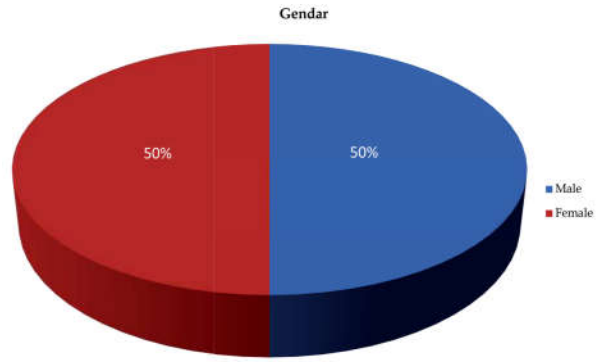

Fig. 1: Distribution of sample based on Gender

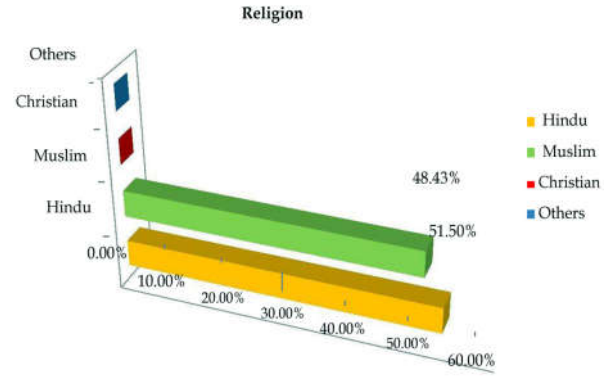

Fig. 2: Distribution of sample based on Religion.

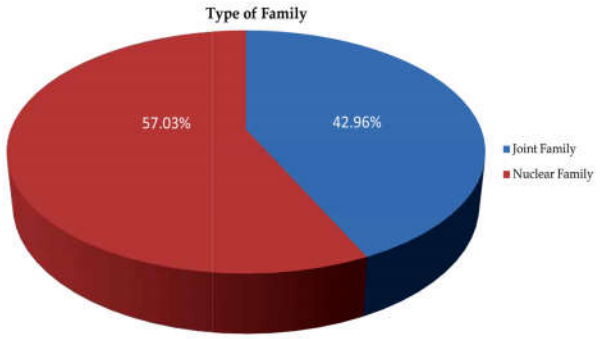

Fig. 3: Distribution of sample based on Type of Family

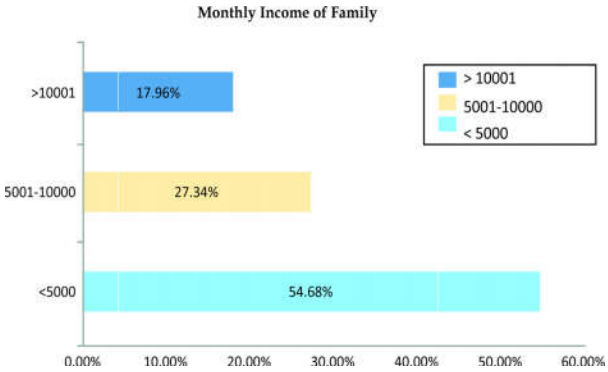

Fig. 4: Distribution of sample based on Income of the Family

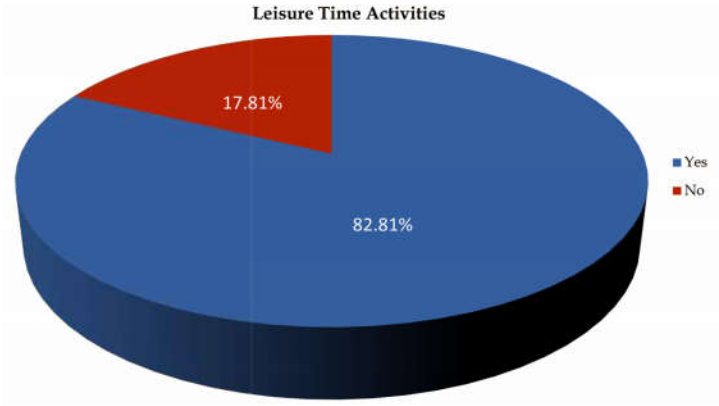

Fig. 5: Distribution of sample based on Income of the Family

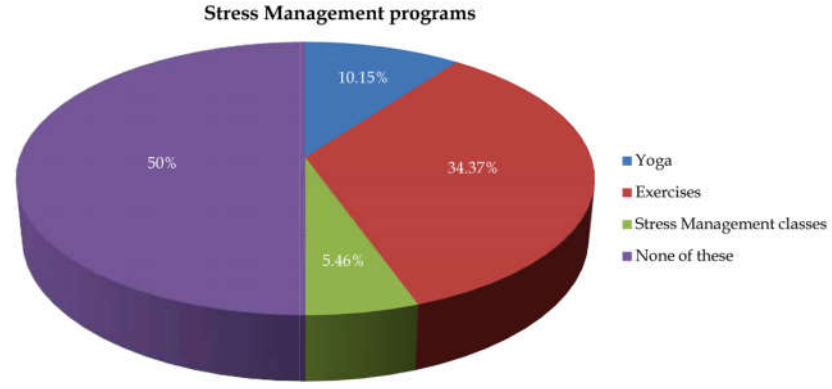

Fig. 6: Distribution of Sample based on exposure to stress management programs

Section II: Description of Level of Stress among School Children

Most of samples (51.56%) were having mild stress whereas only 6.25 % have severe stress. About 42.18% of sample has moderate stress.

Section III: Effect of Self Foot Reflexology on Stress among School Children.

Comparison of Pretest sores of experimental and control group showed significant difference

Comparison of pretest and post test scores of experimental group showed that there is reduction in stress after self foot reflexology.

Comparison of post test scores of experimental and control group shows significant difference at 0.05 level and thus

significant reduction in stress after self foot reflexology in the experimental group so the hypothesis is accepted.

Comparison of Pretest and posttest scores of control group shows significant difference at 0.05 level.

Gain scores of experimental and control group using ANCOVA shows sample is heterogeneous and thus difference between the mean of experimental and control group is present which indicates the self foot reflexology was effective in reducing stress level of school children.

Table 2: Frequency and percentage distribution of school children/ sample based on level of stress N=128

Level of stress	Frequency (f)	Percentage(%)
No stress	0	0
Mild Stress	66	51.56
Moderate Stress	54	42.18
Severe Stress	8	6.25
Very severe Stress	0	0

Table 3: Comparison of pretest scores of experimental group and control group N=128

Group	Mean	S.D.	DF	t
Experimental	36.67	18.07	1.26	3.266**
Control	48.85	23.75		

** Significant at 0.05 level [.t(126)=1.631,Pd"0.05]

Table 4: Comparison of Pretest and post test score of Experimental Group N=64

Tests	Mean	S.D.	DF	t
Pre test	36.67	18.47	63	4.841**
Post test	22.85	15.62		

**Significant [t(63)=1.669,Pd"0.05]

Table 5: Comparison of Post test scores of experimental and control group N=128

Group	Mean	S.D.	DF	t
Experimental	22.85	15.62	126	5.258**
Control	39.59	20.1		

**Significant [t (126) =1.631, Pd"0.05]

Table 6: Comparison of Pretest and Post test scores of control group N=64

Tests	Mean	S.D.	DF	t
Pretest	48.85	23.75	63	2.26**
Post test	39.59	20.1		

**Significant [t(63)=1.669,Pd"0.05]

Table 7: Gain scores of experimental and control group N=128

Source	Type III sum of squares	DF	Mean Square	F	P
Pretest	20729.010	1	20729.010	104.67	0.456
Group	946.864	1	946.864	4.782	0.037

Group	Mean	Standard error
Experimental	24.102	1.794
Control	18.445	1.794

Section IV: Association between Stress and Selected Variables

There is significant association between stress among school children and Income of Family (df=2, ü² =22.42,Pd"0.05) and exposure to stress management programs (df=3, ü² = 15.55,Pd"0.05) where as there is no significant association between stress among school children and gender (df=1, ü²= 0.03) ,Religion (df=2, ü²=0.28),Type of Family and Participation in leisure time activities.

Table 8: Association between stress and selected variables N=128

Personal Variable	Stress Score		DF	χ^2
	<median	≥median		
Gender				
Male	29	33	1	0.03*
Female	32	34		
Religion				
Hindu	33	33	3	0.28*
Muslim	28	34		
Christian	0	0		
Others	0	0		
Type of Family				
Joint family	31	24	1	2.42*
Nuclear family	31	42		
Monthly Income of Family				
<5000	32	18	2	22.4**
5001-10,000	18	17		
>10,001	12	11		
Participation in Leisure time activities				
Yes	54	52	1	0.73*
No	9	13		
Exposure to stress Management programs				
Yoga	2	11	3	15.55**
Exercise	20	24		
Stress Management Classes	4	3		
None of these	35	29		

*Not Significant at pd"0.05 level, ** Significant at pd"0.05 level

Discussion

The Present study was an attempt to evaluate the effect of self foot reflexology on stress among school children .The study was conducted among school children at selected schools in Thalassery.

The findings of the study were discussed in terms of objectives and hypothesis and comparison made with other study findings. The discussion is divided into follow headings:

- Description of level of stress among school children.
- Effect of self foot reflexology on stress among school children.
- Association between stress and selected variables.

Description of Level of Stress among School Children

In Present study findings revealed that most of school children (51.56%) experienced mild stress where as 42.18% of school children experienced moderate stress. 6.25% of school children have severe stress.

These findings are supported by a study to understand the prevalence of stress in school children of Kerala which reveals that 93 to 100% of the children aged 4-17 years showed medium to moderate stress and 1.9% had severe stress [3].

Effect of Self Foot Reflexology on Stress among School Children

Findings revealed that calculated t value (4.841) is greater than table value (1.669). So there is significant reduction in stress after self foot reflexology.

Findings are supported with the study done in Korea to evaluate the effect of self foot reflexology on perceived stress, immune response and fatigue in middle aged women in rural areas shows that self-foot reflexology massage is an effective intervention for perceived stress, systolic blood pressure, diastolic blood pressure and fatigue in middle-aged woman [21].

Association between Stress and Selected Variables

Findings revealed that there is significant association between stress and variables such as Income of Family and exposure to Stress management programs where as there is no

significant association between stress and variables such as gender, Religion, Type of family and leisure time activities.

This finding is supported by a study conducted in Dharwad, Karnataka among 150 students to identify stressors showed that there exists a non-significant association between selected demographic variables (Age, Number of siblings, Type of family, Occupation and Qualification of Father and mother) and stress [13].

Conclusion

In conclusion, practicing self foot reflexology for 4 weeks was associated with significant reduction in Level of stress. Self foot reflexology is inexpensive and easy way of selfcare at home and school, can have increased benefits in academic and other daily activities. Such Self treatment modalities should be expanded, as an integral part of School health Program to reduce level of stress among school children.

Nursing Implications

The findings in the study have implications in Nursing Practice, Nursing Administration and Nursing Research.

Nursing Practice

The ultimate aim of our nursing care is to reduce level of stress among school children.

- The findings of present study confirm that Self foot reflexology is an effective The study highlights the positive role of non – pharmacological nursing intervention to reduce the stress among school children
- The investigator recommends the teachers of schools to practice self foot reflexology in schools and also educate parents about the advantage of self Foot reflexology.

Nursing Education

- The nurse educator should give importance for these evidenced measures in school curriculum and should encourage teachers to include these measures in reduction of stress level in school children.
- In service education programs should be organized for teachers to reinforce the need of developing and practicing effective management techniques for management of level of stress among school children.

Nursing Administration

- Nursing administrator should initiate measures about the importance of evidence based non-pharmacological measure that would uplift the children to be a good citizen
- The responsibility of a nurse administrator is to inculcate self foot reflexology as a cost effective, safe and evidence based treatment modalities which will promote enthusiasm in adopting innovative stratergies for reduction of stress
- The administration of nursing service and education should arrange in service training and continuing education to train teachers in use of treatment modalities like self foot reflexology so that they can be incorporated in their daily life.
- Measure in reduction of stress without much money, time and material resources

Nursing Research

The research studies related to stress management in school children are very limited. In present world very few studies were carried out to assess the effect of self foot reflexology on stress among school children.More studies needed to be conducted regarding the effect of self foot reflexology on stress and thus this area has to be explored further.

The nurse researcher should take initiative to conduct research in this area. Research in this area should be promoted by providing funds, scholarship, personnel and materials needed to improve evidence based practice.

Limitations

The study has few limitations

- The study was limited to Government schools.
- No attempt was made to follow-up to measure the retention of knowledge after the post-test in control group.
- The study was intended to find out level of stress among High school children. Due to lack of time the study has been limited to high school students and was not extended to other sections like primary, upper primary and college level students
- The study has been limited to Thalassery mainly due to lack of time.

The tool was not administered to large sample due

to lack of time hence administered only to 128 samples

- The samples were School children of eighth and ninth standard, so the data obtained for every item in the tool may not be reliable and opinions of each child may not be their own.
- The investigator does not consider all the acceptable variables such as medium of instruction.

Recommendations

- A True experimental approach can be used to evaluate the effect of Self Foot reflexology.
- Studies can be done in large samples to assess the effect of the self Foot reflexology
- A Self-instructional module can be developed regarding the daily practice of Self foot reflexology
- Studies can be done in management of other psychological symptoms with self foot reflexology in children
- More studies can be done to assess level of stress in school children
- Large studies preferably involving large public and private schools
- Studies can be done to assess the level of stress in children studying in X and Higher secondary classes.

Acknowledgement

My efforts are fruitful because of the kindness showered on me by the Almighty and My deep sense of gratitude to the Almighty for his blessings.

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The researcher expresses his respectful thanks to all the experts who had agreed to do the content validation of tools.

With overwhelming hearty thanks, he submit this effort to his loving Dad and mom.

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Medication Error in Pediatric Outpatient Prescription in a Tertiary Care Institute

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Abstract

Objective: To determine the medication errors in Pediatric outpatient practice at a tertiary care institute, Eastern India. *Design:* Hospital based cross sectional study. *Place and Duration of the Study:* Pediatric outpatient department of the All India Institute of Medical Sciences, Patna, 2014 May and June. *Methodology:* 40 outpatient pediatric prescription were evaluated for drug dosage error. *Results:* Out of 40 prescription papers 4(10%) there was no mentioned of provisional clinical diagnosis and seven Papers (17%) had dosage error. In 21 (52.5%) cases there was no mention of route of administration of the drugs. *Conclusion:* Dosing error in paediatric outpatient department is a common problem.Training regarding writing of prescription is essential for the residents before they are posted in paediatrics OPD. Intermittent continuous medical education of residents are required on regular basis.

Keywords: Medication; Pediatric; Medication error.

Introduction

Medication error is one of the most common type of medical error that contribute to the morbidity of children in outpatient department. Medication error potential to cause more harm within the paediatric population than in the adult population. The dosing error is more common in children than adults because of weight base dose calculation, fractional dosing (e.g. mg vs Gm), and the need for decimal points [1].

Previous study has been shown that dosing errors occurs in up to 17.8% of hospitalised children. There are limited studies available regarding dosing error in children in paediatrics outpatient and inpatient department. Knowing where and when error occurs will be the first step to try to avoid these errors. As there are few studies exist from the developing country on this issue we conducted a pilot study in our institute to detect the frequency of dosing error in paediatric outpatient prescription.

Methodology

This was a cross-sectional study carried out in outpatient department of Paediatrics of All India Institute of Medical Sciences, Patna, during the month of May and June year 2014 after obtaining approval from Institute Ethics committee. The Paediatric out patient department caters around 40 to 50 patient per day. The Institute providestertiary and subspecialtycare inPaediatrics and manned by one consultant and four senior resident. It caters patient not only from Bihar but also nearby state such as Jharkhand and Uttar Pradesh and neighbourhood country Nepal. All children whovisits to paediatric OPD were seen by trained senior resident in Paediatrics and each case is discussed with consultant for the plan of care. The senior residents were aware that their prescription being audited. Each day randomly five OPD prescriptions sheet were collected over eight days. The copy of original prescription sheet was analysed for the basic drugs use and medication errors. The information about

children age, weight also gathered. All the drugs prescribed were recorded including each drug dose, route, dosage form, and strength, frequency of administration, indication for which prescribed and duration of therapy. These recorded form were also analysed for average number of drug prescription , number of prescription containing antibiotics, percentage of drugs containing generic drug name, Iron, multivitamin, calcium and vitamin D preparation. For drugs dosages and duration of therapy, the*drug dosage for children* book by Dr. Meherban Singh, eighth editionused as referral book. All the DATA were enteredand analysed in SPSS version 20. Quantitative data were represented as mean, and standard deviation where qualitative datawere represented as proportion.

Results

Total 40 prescriptions are collected and were checkedfor containing any dosage error in it. The basic demographic profile of these 40 children's are depicted in Table 1. Out of 40 prescription papers 4(10%) there was no mentioned of provisional clinical diagnosis and seven Papers (17%) had dosage error. The medication error were common amongst prescription of H2 blockers, diethyl carbamazepine citrate, H1 blocker (Cetirizine), calcium carbonate, antibiotics such as amoxicillin and clavulanic acid combination. In 21 (52.5%) cases there was no mention of route of administration of the drugs. The drugs which were prescribed to these children are mostly in syrup form (27.5%) cases followed by tablet (20% cases), in capsule form (17.5%) cases. In 10% cases children received these drugs in all three forms. The average frequency of drug administration per day was 1.8 times with standard deviation of 0.96 times with range of 1 time to maximum of 5 times in a day. In 45% cases the drugs are administered once daily. In 27.5% cases drugs are administered two times a day and in 25% cases three times a day.The median duration of drug administration was 30 days. Out of 40 cases there was no mention of duration of therapy in 5(12.5%) cases.Each prescription contains around 2.4 numbers of drugs with standard deviation of 1.29. The minimum number of drug in a prescription was one, and maximum was six. Prescription analysis were also done to know about prescription containing generic name because the All India institute of Medical Sciences OPD also has pharmacy store which sales medicine of generic name only. However detailed analysisrevealed only (5)12.5% of prescription contained generic name. Misuse of antibiotics is not uncommon in developing world, and we found that only 5 (12.5%) prescription sheet had mentioned of antibiotics. There is a notion that micronutrient and iron deficiency would be prevailing in this part of country as malnutrition is quite a common problem with this part of world. Therefore prescription were also looked for prescription of iron-, multi vitamins, calcium and vitamins D. The prescription of Iron syrup wasnoticed in 22 (55%) cases. In 16(35%) there was prescriptions of multivitamins.It was found that 7 (17.5%) prescription had contained vitamin D and calcium preparation.

Table 1:

Age (Years)	**Minimum 0.2**	**Maximum 15**	**Mean ± SD 8.03±4.5**
Weight (Kg)	4.7	55	23.7±14.4
Sex	Male(22)	Female(18)	
Religion	Hindu(30)	Muslim(10)	
No. of drugs in each prescription	1	6	2.4±1.7

Discussion

The prescription of medicine is an integral part of provision of health and represents a relatively safe, effective and inexpensive mode of treatment. Third world country spends around 30-40% of their budget on health care many of which are prescribed irrationally. These countries double their expenditure on drugs every four years while gross national product double every 16 years [2].

For an effective utilisation of resource spent on drugs it is essential that the prescribing and administration of the drug must be evaluated from time to time to quantify the error in it and to look for possible solution for it. The error of omission is where prescription is in complete in some ways whereas error of commission containing incorrect information. This study was carried out over 15 days in the month of May. The study included children less than 15 years of age. The male to female higher ratio reflected that more male patient visiting the outpatient

department than female patient. According to Tiwari et al [3] the most common reason for visiting the outpatient department was upper respiratory tract infection. However we did not get similar disease profile in our condition which may be explained by that the data were collected and study was done during the summer season. The drug dosage error in our study found to be 17.5%. Prior studies have demonstrated a dosing error up to 17.8%. Our studies also has got similar incidence rate as far as dosing error in paediatric OPD patient are concerned. The reason for this degree of dosing error occurs because of not referring drug dosage book children while prescribing and it was observed in the cases where paediatrician is either unfamiliar to the drugs. There is 2.4 drug is prescribed in each prescription. Which is less compared another study conducted in Mumbai by karande et al [4] where average number of drugs were 2.9. In a similar study from Nigeria [5] the number of drug was 3.1 per prescription.

Fixed drug formulation is one of the commonest error found by Pandey et al [6]. However we did not find any such prescription in our study. According to a prior study by Ahalwat et al [7] the antibiotics prescription is as high as 37.9%. Studies by Amne et al [8] reported that up to 33.9% prescription contained antimicrobial agents. We found only 12.5% of prescription had contained antibiotics. This is most probably due to strict antibiotics policy and guideline that is adopted by the department of paediatrics. The dosing error was found up to a significant proportion in our conditions despite posting of senior resident after three year of post graduate training programme. We could envisage the incidence of medication error will be higher where doctors with MBBS degree will be working as care provider to these groups. Presently more focus has been shifted towards the prescription of generic medicine as it happens to be cheaper and produce less economic burden to the patient. However in our study we found only 12.5% of prescriptions were generic and rest 82.5% drugs prescribed are various brands name. Which is far less as compared to Ravindra et al [9], who reports that 43% prescription of paediatrics contained generic name. This suggests that it is very important to calumniate a behaviour of writing generic medicine in our residents. It was also found that a significant proportion of our prescription containing iron prescription with maximum duration up to 180 days. However all these prescription was only empiric iron therapy without documenting any haemoglobin value or iron deficiency state in a significant proportion of cases . The prescription of multivitamins was up to 35% cases. Which can be corroborate to the occurrence of micronutrient deficiency and various grade of malnutrition in this part of country. We found very less number of prescription containing Vitamin D and calcium preparation. Another important observation that was borne out was that 24(60%) of prescription doesn't contain strength of drugs prescribed. Which emphasize that training regarding writing of prescription is essential to the residents before they are posted in paediatrics OPD.

Nursing Implications

1. Implication for Nursing Practice This study also implied the needs for integrated series feedback, follow up in collaborative approach in hospital.
2. Implication to Nursing education

   The nurses should update knowledge in Medication error which is one of the most common type of medical error that contribute to the morbidity of children in outpatient department. Medication error potential to cause more harm within the paediatric population than in the adult population. The dosing error is more common in children than adults because of weight base dose calculation, fractional dosing (e.g. mg vs Gm), and the need for decimal points.
3. Implication to Nursing Administration

   The Nursing Administrator should take active Participation in health policy development protocol, drug dosage calculation and standard procedure, medication orders regarding drug Administration
4. Implication to Nursing Research

   The study helps the nurse Researcher to develop insight into the identification and Prevention of errors in prescription of drugs.

Conclusion

1. Dosing error in paediatric outpatient department is a common problem.
2. 17.5% dosing error was found in this study.
3. 60% of prescription didn't mention about the strength of medication in it.
4. Iron prescription was empirically found in significant number of cases.
5. It is prudent to do haemoglobin level and peripheral smear to rule out iron deficiency anaemia before prescribing long term iron

therapy.

6. The role of prescribing multivitamin therapy is unclear unless the signs of micronutrient deficiency are present.
7. Dosing error can be avoided by simply referring the drug dosage manual while prescribing any drugs
8. Continue medical and nursing education regarding how to write of prescriptions is essential for the doctors in a schedule interval in regular basis.

Recommendations

1. Replication of this study may be done in different settings
2. A comparative study may be conducted in to assess the difference between prescription errors in other medical colleges with in the city, secondary level and grass root level health care prescriptions to identify the severity and types of errors in country.
3. A study can be conducted to identify errors of prescriptions on different levels of health care delivery system.
4. Nurses working in different settings of hospital can conduct numerous studies on drug administration right dose calculation strategies and policies in practices in units, wards.

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Transforming Aging Population: Child as a Change Agent Environmental Context and Development of Self

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Abstract

Growth and development is a process of growing to maturity. Development is a lifelong process of physical, behavioral, cognitive, and emotional growth and change. It transforms from infanthood to childhood, childhood to adolescence, and adolescence to adulthood and during these phases enormous changes take place. During these phases an individual passes through a variet to challenges and adjustment processes. One needs to understand and study how human being is related to the feelings, growth and development of self and others. Various models for the relationship that occurs in each of human being's growth and development process. Old age is the "Heritage" which is needed for any past or future references. Certain pre-requisites that any elderly may follow in order for this smooth transformation and a child can be an agent in this transformation.

Keywords: Growth; Development; Child; Aging; Family; Human Development; Development Models.

Introduction

It is said that "time is flying!" In fact, the youth of this time wants to move ahead with increasing speed!

Keeping in mind the above mentioned statement, it becomes natural for the other category of human to be at par with these so called "fast pacing world". Old age is the "Heritage" which is needed for any past or future references.

Thus, in keeping with the article topic, how a school going child may be an agent in transforming aging population? For that, there are certain pre-requisites that any elderly may follow in order for this smooth transformation.

They are as follows:

1. Accepting self as they are
2. Being nonjudgmental
3. Keeping self in the present time
4. Maximizing flexibility related to new technology in the surrounding
5. Remaining in Soul consciousness than body consciousness
6. Always in Giving mode than in Receiving mode
7. Remaining in useful and necessary thoughts
8. Believing that the past was good, the present is fantastic and future will be excellent
9. Avoid waste and negative thoughts
10. Be of help to others as much as possible
11. Tendency of acceptance than expectation

If any elderly keep these above mentioned points in their day to day dealings, it will be easy for the school going child to be an agent in transforming aging population [1].

One needs to understand and study how human being is related to the feelings, growth and development of self and others. For this, here are the models for the relationship that occurs in each of human being's growth and development:

An introduction to Human Growth and Development across the Lifespan [2,3,4].

Perspectives on Human Development

⊙ *Life-span Development*

- Study of Birth to Death
- Increasing research in adult development.

⊙ *Interactional 'Systems' Perspective*

- MUTUAL interaction between the person and the environment.
- Limitations of a Linear understanding.
- Nature of Human Development: Quantitative, Qualitative.

Some Definitions

- 'Psychology' is a science which studies behavior and thinking of people.
- 'Developmental Psychology' is concerned with specific changes that occur over time.
- 'Life span Developmental Psychology' is the discipline which studies changes from conception through adulthood and looks at the processes and influences that account for these changes.

Some Definitions

- 'Growth' ordinarily refers to physical changes.
- 'Maturation'–Less precise than growth – is used to describe changes that are relatively independent of environment. However, in almost all aspects of human development, maturation and learning interact, e.g. talking or walking. Both require adequate maturation of the nervous system. However, neither can be achieved if the opportunity to practice the skill is denied [3].
- 'Learning' – defined as the result of experience rather than maturation. All changes in behavior resulting from experience are examples of learning.
- To develop is to grow, to mature and to learn. Development is the process by which we adapt to our environment.

Why Life-span Perspective?

- A life-span perspective helps to ensure that all milestones of human life will be covered.
- Earlier emphasis was on childhood up to adolescence.
- Today, the life-span understanding covers from conception to death.

Why Interactional / Systems Perspective to Human Development?

- It provides a way of understanding the relationship between the human being and the 'significant contexts' or environments of life. Many important events throughout the life – span are the result of the mutual interaction between the person and the contexts of development [5].

E.g.:

- Development of the unborn Child between Pregnant Mother and Child
- Growth and Development of infant
- Between Child and Family

Why Interactional / Systems Perspective to Human Development?

- Mutual interaction between contexts and individual.
- Changing and evolving nature of contexts and individual.
- Cumulative impact of each context of development.

Characteristics of Child, Characteristics of School, Democratic or autocratic school of environment Child's success in school Adaptation of Adult to the world of work Skills and personality of the worker, Characteristics of the job and the workers:

Summary of Interaction / Systems Perpsective

- The person is a growing active individual.
- Interaction is reciprocal.
- Interaction is not only between P and E, but also E and E.

Person (P) With

a. Experiences
b. Motivation

Environment (E) Consisting of 5 primary life contexts

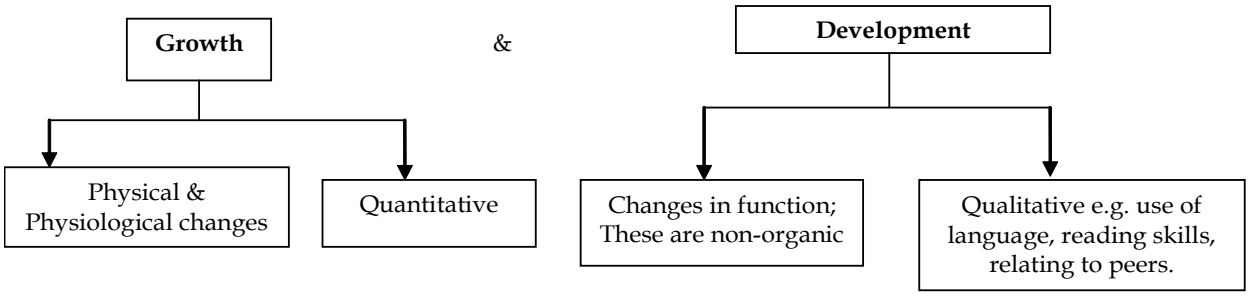
a. Family

b. School
c. World of Work
d. Peer
e. Community

The Nine Periods of Human Development Life Span	Appropriate Age
Prenatal period	Conception to Birth
Infancy (includes toddler period from 2 –3 years)	0 –3 years of age
Pre-school years	3 –5 years of age
Middle childhood	5 –12 or 13 years (the onset of puberty)
Early adolescence	Approximately12 or 13 (the onset of puberty) until 17 or 18 years of age (the high school years)
Later adolescence	Approximately17 –18 years of age (the completion of high school) until the person attains a sense of social status or social identity in the early 20s.

Principles of Human Development [2,4]

- General patterns or principles of growth that hold true in describing the way human beings develop.
- The process of Human Growth and Development relate to changes in the Psychological, Social, Emotional, Physical, Mental (intellectual) and Moral domains throughout life.
- The terms Growth and Development are used to describe this overall process.



'Growth' has a positive emphasis. Doesn't include changes in later life e.g. deterioration of tissues, vision, hearing, smell, etc.

Four Principles of Human Development

⊙ *Principle 1*

Growth gradients, i.e. physical and physiological changes:

There are 3 directions of such growth.

- Cephalocaudal
- Proximodistal
- Differentiation (from simple to complex).

⊙ *Principle 2*

Orderly and Sequential Development

- Human growth and development are orderly not random from conception to death.
- Predictability.

⊙ *Principle 3*

Individual Variation

While process of growth is orderly there is considerable variation among individuals. E.g. physical growth differs, growth 'spurts' may occur – no consistency.

⊙ *Principle 4*

Sensitive or Critical Periods

There are specific periods when potential to grow and develop are maximal as well as harm from environment is maximal.

- e.g. 1 - Malnutrition in under - three's.
- e.g. 2 - Rubella in the first 12 weeks of pregnancy.

Methods of Study

⊙ *Naturalistic Studies*

- Include Baby biographic, Naturalistic Observations, Time Sampling.

⊙ **Clinical Studies**

Clinical Method	**Interview Method**
i.e. observation plus questioning, flexible, open-ended, can probe	- Can get a broad picture. - Could be supported by a physical examination, IQ tests, personality test, etc.

⊙ *Experimental Studies*

- Independent variable and Dependent variable.
- Are standardized.
- Less subjective can be replicated.

Methods of Data Collection

1. Longitudinal Design
2. Cross Sectional Design
3. Cross Sequential Approach

What is the Systems Perspective?

The general systems theory originated with Ludwig Von Bertelanffy, a theoretical biologist as a way to think about and study the constant, dynamic adjustments of living phenomena [6]. A system "is an organized set of interrelated and interacting parts that attempts to maintain its own balance amid the influences of its surrounding environment". The systems method of analyzing means accepting and recognizing that causation is multiple and forces that influence are complexly interrelated. Therefore, it is a way of thinking about behavior that avoids / discards the idea that complex behaviors in groups result from a single cause [7].

In human development, it presents a framework for thinking about the developing human being in relationship to the significant environments of his or her life, e.g., the family, school, peer group, world of work, the neighborhood, the media, the community. This holistic approach is referred to as the systems perspective.

Defining Systems

A "System" is an organized sustained pattern of interaction between two or more units or components and their attributes or characteristics resulting in an interated, self – governed adaptation of these units or components. (Ambrose,1977).

Units/Components

These are parts of a system. Can be physical e.g. games, bones, family school can be abstract, e.g. self - concept, mortality, cognitive processes.

Attributes

These are the properties of the components.

Interactions

Relationships that "tie the system together"

These relationships are in the context of the problem or issue which is raised.

Sample issue: Why do some children from some Scheduled Caste families have difficulty succeeding in school?

Steps

First identify the components, then their attributes, and then specify the relationships.

Defining Systems

Environment

Both physical and social including cultural

↓ Natural & Man- made ↓ Man - made environment

Feedback

- Reciprocal or mutual interaction among the components of the system
- This allows the system to self-regulate itself.
- Homeostasis.

Traditional View V/s Life Span View

There are marked differences in views between the traditional view of human development and the life – span view:

1. *Development is continuous:* old view is that infancy to childhood to adolescent to adulthood, after this little will change.
2. *Maturity is Relative:* cannot easily be described

as a predetermined final state nor is such a description useful. To be a person is to change.

3. *Development Occurs in Context:* Context meaning ecology (Oikos – home (in Greek). In human development theory, it refers more to the social context in which behavior; a development occurs (Bronfrenbrenner). Not only does the child construct the world, but also world constructs the child and the adult [5].
4. *Developmental Influences are Bi-Directional:* children influence parents, parents influence children and both in turn are influenced by the ecology – social context including culture etc. and influence it in turn.

Three Basic Beliefs

Three basic beliefs underlie these four approaches:

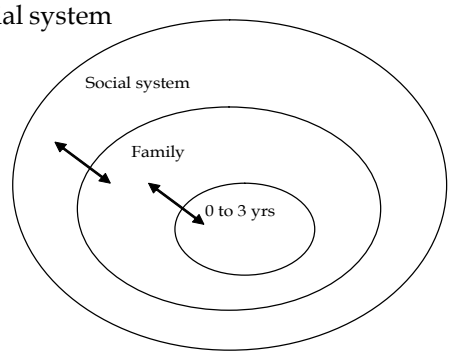
1. Children and adults are constantly changing organisms as are families, societies and cultures. Hence, development does not stop at any point in life. It is continuous.
2. Influences in development are bi-directional.
3. Not only parents and children influence each other, but are also greatly affected by and themselves affect the social context they are embedded in.

Implications of these Beliefs for Contemporary Human Development Research and Teaching

a. Shift from individual in isolation to individual as part of a complex social context.
b. Increased attention to how individual affects surrounding systems and ways in which these systems affect the individual.
c. Shift of focus from describing states and stages to investigating processes i.e. a shift of concern from Static to the Dynamic.

Infancy and Toddlerhood (0 –3) Years

Social system



Social System Includes [5]

- Neighborhood.
- Parental work setting.
- Government structure and social policies.
- Education Institutions.

The Family

"A Family is a group of adults and children who live together for an extended period of time."

Type of Family Groups:

- Family of orientation.
- Family of Procreation.
- Nuclear, Extended, Single –Parent.

Family Functions

1. Economic Co-operation and Division of Labor
2. Care for & Socialization of Children
3. Legitimizing sexual relations.
4. Reproduction.
5. Provision of Status & role.
6. Emotional support & companionship.

Physical Growth

- Height
- Weight
- Skeletal Development
- Muscle Development

Motor Development [7]

Locomotion

- From general reflexes to differentiated (and relatively skillful) movements.
- All motor development follows the principles of cephalocaudal and proximodistal development

Prehension (Grasping):

10 stages from 16-52 weeks

Cognitive Development

Jean Piaget - The Sensori–motor stage.

Sub Stages

- Reflex (0 –1 month)

- First Differentiations (1 –4 months)
- Reproduction (4 –8 months)
- Co-ordination of Schemata (8 –12 months)
- Experimentation (12 –18 months)
- Representation (18 –24 months)

Construction of the Permanent Object –represents the beginning of ability to "think".

Memory is an Aspect of Cognitive / Mental Development

- Memory is a process of expecting and predicting future events based on past events.
- Construction of object permanence is the beginning of building a memory.

Language Development

Functions of Human Language

- Self-stimulation and control of individual activity.
- Organizes social behavior and interactions of people with each other.

Theories of Language Acquisition

- Learning Theory (Stimulus –Response – Reinforcement).
- Psycholinguistic Theory (Built in preprogram in deep structure)
- Social Learning Theory (imitation)

Course of Early Language Development

Social & Personality Development

- *Attachment as a System; Components*

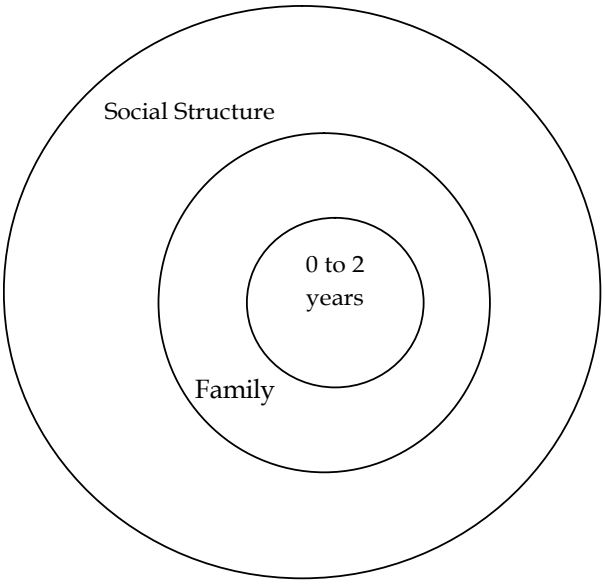
a. Rooting & Sucking
b. Adjusting posture
c. Looking & Following
d. Listening
e. Smiling
f. Vocalizing
g. Crying.

- Four Phases of the Development of Attachment.
- Relationship between attachment & other infant behaviors.

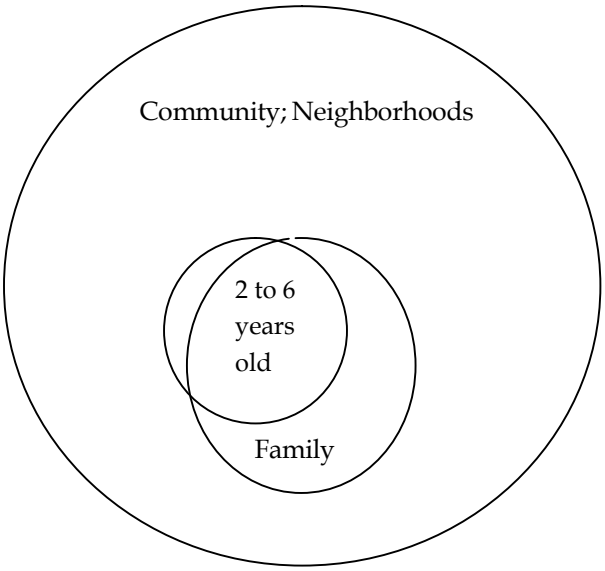
a. Play, exploration & attachment.
b. Fear of strangers.
c. Separation anxiety.

- Role of the Father.
- Emerging Self-concept – who am I, whom do I trust, what can I do.

Environmental Context: Development of Self: (From Birth to Toddler our Relationship with Self, Family and Society) [8]

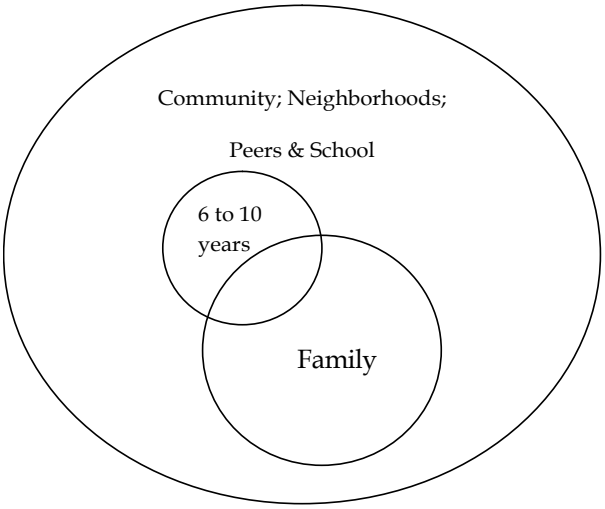


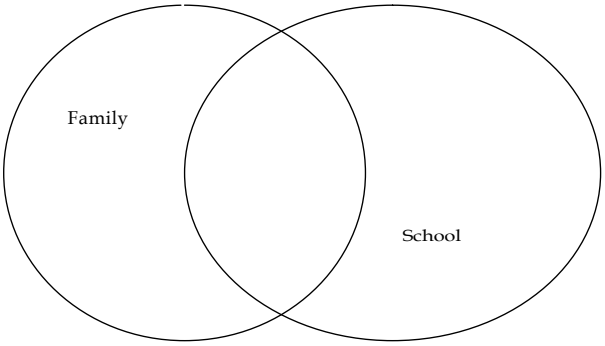
As a Preschool Child, our Relationship with Self, Family, Society, School and Peer Group: (Observe How this Preschooler is Slowly Emerging Away from Family to Mingle more with outside Environment)



Environmental Context: Development of Self

As a school going child our relationship with self, family, society, school, neighborhood and peer group: (observe how this school child is almost emerged away from family to mingle more with outside environment)

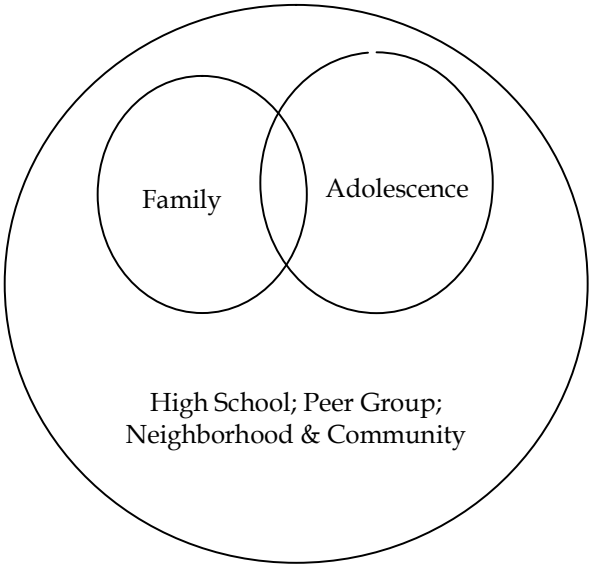




Environmental Context : Development of Self

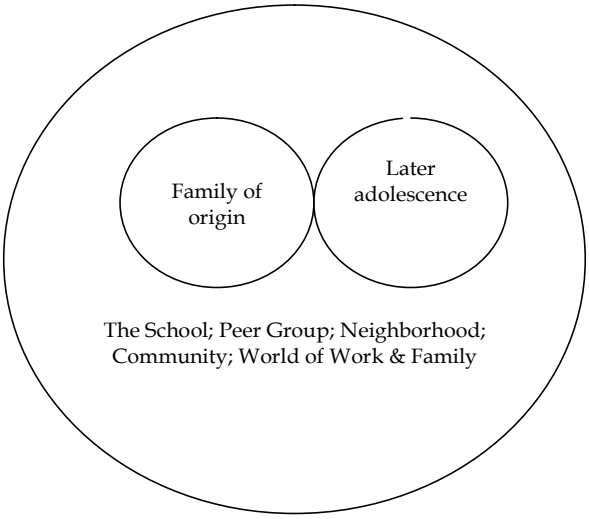
The System of Early Adolescence [3]

As an adolescent, our relationship with self, family, society, school, neighborhood and peer group: (observe how this adolescent is 90% emerged away from family to mingle more with outside environment as though in search of self…)



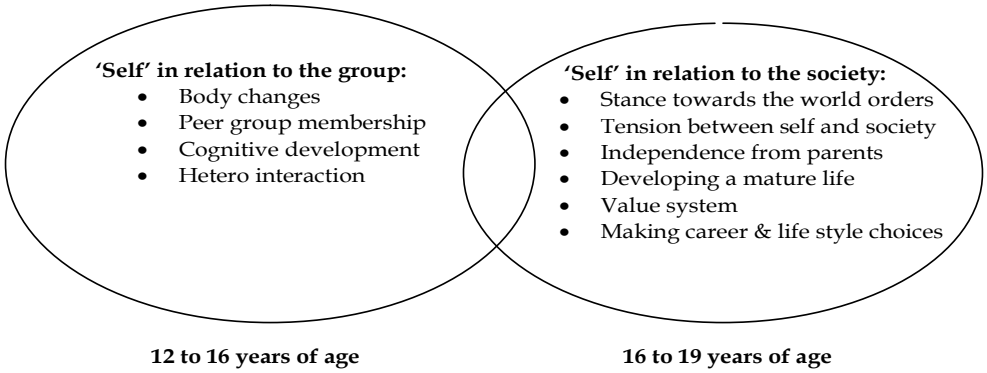
The System of Later Adolescence:

Later Adolescence: (12 to 16 years)



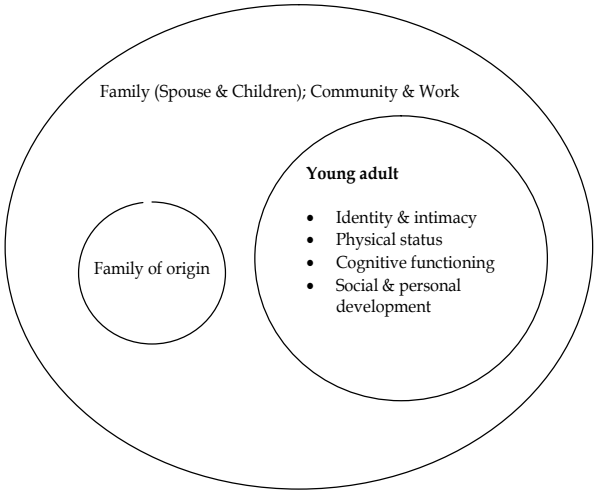
Environmental Context – Development of Self [10]***:***

Developing identity – the system of adolescence

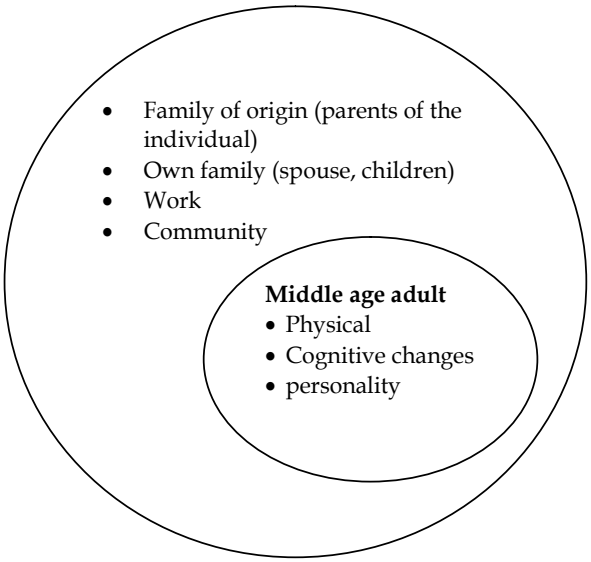


Environmental Context – Development of Self:

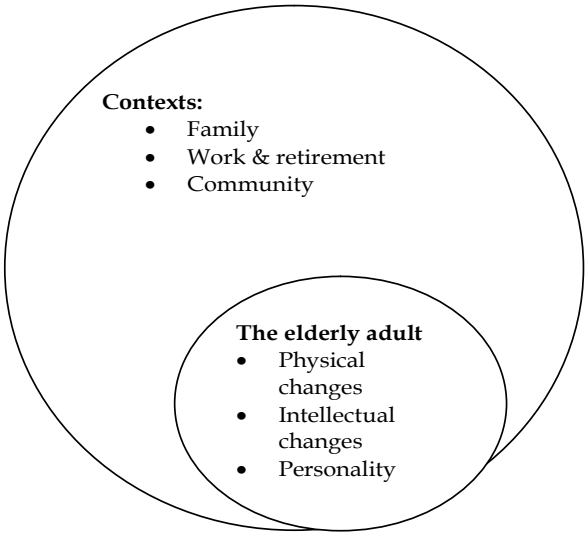
Context of Early Adulthood



Environmental Context – Development of Self

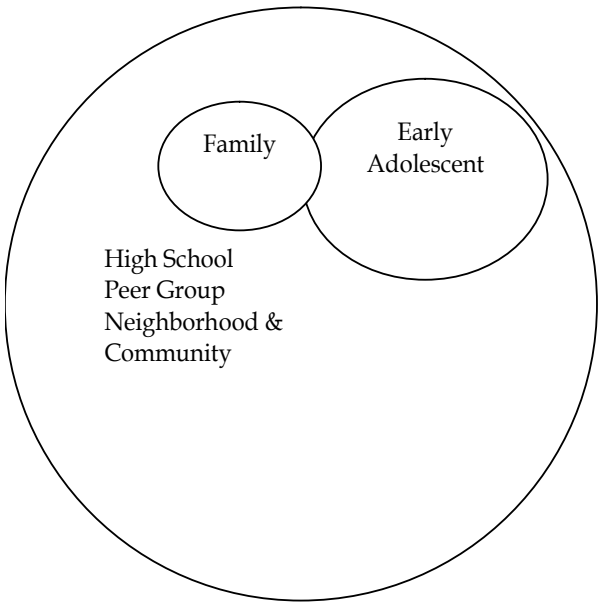


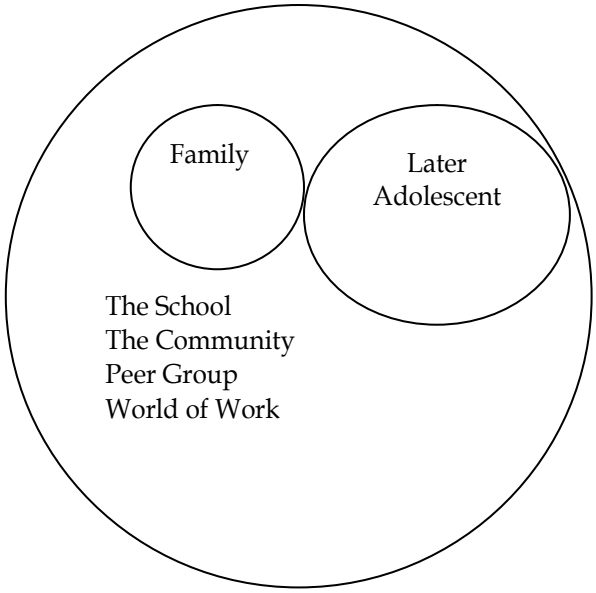
Environmental Context – Development of Self



Early Adolescence (12/13 -15/16)

Youth (16/17 –19/20)





Identity [12]

Early Adolescent

''Self' in relation to the 'group'

- Body changes
- Peer Group membership
- Cognitive Development
- Hetero Interaction

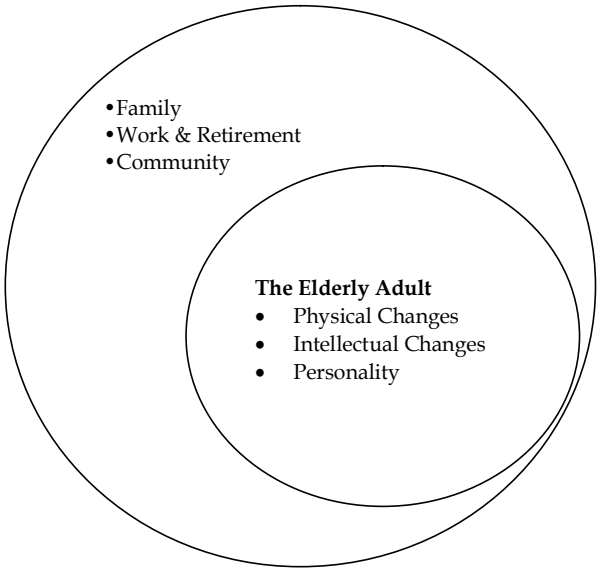
Later Adolescent

'Self' in relation to 'Society'
"stance towards the world"

- Tension between Self and Society
- Independence from Parents
- Developing a mature sex role
- Developing a mature value system.
- Making career and life style choices.

Later Adulthood (60+ years)

Context of Later Adulthood



The Family [8]

- Developing a mature relationship with adult children
- Married elder couple continues to adapt to the "empty nest".
- Role of the Grand parent
  - ❖ A new role to take up as others close.
  - ❖ Meaningful relationship with grandchildren with minimal responsibility.
  - ❖ Gives them a sense of human continuity and biological renewal
- Death of a spouse creates a new role –widow / widower.

The Community

- Changing nature of friendships
- Participation in community activities
- Quality of housing

Successful adaptation to changes in the above three is an important basis for morale and life satisfaction.

Work & Retirement

Work gives identity

- Retirement as an event.
- Retirement as a status.
- Retirement as a process.

Meaning of retirement to a person is linked to what work meant to that person.

Factors Related to Positive Adjustment are

- A relatively high level of income prior to retirement.
- A relatively high standard of living during retirement.
- Good health
- A relatively high level of education.
- Pre - retirement planning.

'Structuring' time is a preoccupation for the retired.

The Individual – Elderly Adult [2,4,9]

Physical Changes

- Vision, hearing
- Movement and motor skills –changes in Bone, Muscle, Nervous System

Cognitive Functioning

- Slower reaction, intelligence remains the same
- Memory -Short-term memory may decline, long term appears unaffected.

Personality Patterns and Changes

- Disengagement theory
- Activity theory
- Continuity theory

Patterns of Ageing [1]

The 'mature' Person

He ages successfully but accepts his role. Reviews the past fruitfully, has confidence in himself and his optimism for the future

The Rocking Chairman

Who accepts his role and also relies on other to just some extent for emotional and financial support.

The Disengaged

Who doesn't want to admit that he is going old, weak. He doesn't want to depend on anybody for anything, continues his old habit.

The Self Haters

The one who hate being old and dependent. They hate the way they are and look forward to their death.

The Individual –Elderly Adult

Self - Concept & Self – Esteem

More dependent on **inner** thoughts and feelings than on **external** factors e.g. People's opinions. Neugarten calls this a change from **active** mastery to **passive** mastery. Ability to relate emotionally to others declines.

Stability in Self-Concept Through Adult Life

- This is associated with positive adjustment to the role changes. The key to positive self - esteem in old age may, in most cases, lie in the past
- Important dimension of self-esteem at all ages is the perception of competence and being in control (as much as possible) of one's life.
- Positive sense of self-esteem is associated with making decisions for self [2,3].

Later Adulthood

In later adulthood, according to Erikson, the issue is integrity (a belief that one's life has had a purpose) vs. despair.

Ages 60–65 - Late Adult Transition (Levinson, Gould and others) [2,3,6]

- This transition brings retirement or anticipation (or dread) of retirement.
- It may be especially difficult for those who have largely defined themselves by their careers. Women who have not worked, often make this transition more easily than either men or women who have previously had their time structured and energies absorbed by careers.
- Adjustments to less income.
- Confronted by loss (loss of jobs, loss of home, loss of spouse), the older adult may react with alienation, a sense of powerlessness, meaningless, isolation, self-estrangement, futility or despair.
- Or the older adult may choose to meet the crisis as a challenge to be mastered and continue to grow.
- "Expand a vocational interest, do those things l've always wanted to do."

Ages 65 and up - Late Adulthood (Neugarten, Levinson and others) [9]

Phases of retirement (R.T. Atchley):

1. Pre-retirement (anticipation).
2. Honeymoon (euphoria at newfound freedom).
3. Disenchantment (missing the former life).
4. Reorientation (finding new interests).
5. Stability (routinization).

Ages 65 and up - Late Adulthood (Neugarten, Levinson and others)

With advancing age, engagement, rather than disengagement, is more closely associated with psychological well-being.

Older persons who are educationally active tend to have greater zest for living & better self-concept and are more generally satisfied with their lives.

Although religious practices (like attending church) tend to decrease in later years, religious feelings and beliefs increase.

At some point, late adulthood may be characterized by any one or more of the following [9,10,11].

1. Retirement from full-time employment.
2. Relinquishment of household management.
3. Withdrawal from active community and organizational leadership.
4. Breaking up of marriage through death of one's mate.

Ages 65 and up -Late Adulthood (Neugarten, Levinson and others)

1. Loss of independent household.
2. Loss of interest in distant goals and plans.
3. Acceptance of dependence on others for support

or advise and „management funds .

4. Acceptance of subordinate position to adult offspring or to social worker.
5. Taking up membership in groups made up largely of old people.
6. Acceptance of planning in terms of immediate goals.

- Search for meaning of one's life; feelings of fulfillment or failure.
- Looking backward in time; reviewing one's life.

Human Response to Change

Phases in responding to personal life change (Gordon Lippitt)

- Shock
- Disbelief (It can't be happening!)
- Guilt (What did I do to cause this?)
- Projection (blaming, anger, rage)
- Rationalization (finding reasons to justify)
- Integration (Making change fit)

The Dying Process (Elizabeth Kubler-Ross)

1. Denial
2. Anger
3. Bargaining
4. Depression
5. Acceptance

Parents, school and society need to teach the school going child the following aspects that may be beneficial for any child to be an agent in transforming aging population:

1. Accept the restlessness and discontents of adolescence
2. Don't minimize their feeling of unique struggle - Their emotions
3. Be supportive in time of turmoil
4. Encourage to express Hidden Worries
5. Allow them to search for identity
6. Don't hurry to correct facts.
7. Don't violate their privacy
8. Avoid cliché and preaching
9. Don't label them
10. Don't use reverse psychology
11. Acknowledging experience
12. Narrate Story with a Moral
13. Avoiding criticism and name calling
14. Parents can be their children's advocates
15. Provide Emotional first aid
16. Always give nonjudgmental reply
17. Have Empathy and genuineness (what you think, what you feel, what you say and what you do, are consistent)
18. Constructive criticism for the growth. Parental criticism is unhelpful. It creates anger, resentment, and defiance in children.
19. *Praise:* a new approach
20. Appreciate the Effort Rather than Evaluate the Person
21. *Social life:* freedom and limits
22. Provide Autonomy and Guidance
23. *Our Responsibility*: Setting Standards and Upholding Limits while Respecting Feelings
24. *A Discussion on Sex*: providing sex education. This helps to learn, to grow, to change.
25. Avoid Parents' Fears and promote Teenage Sports

Conclusion

During the process of growth and development there are often additional challenges to be faced and there may be some detours along the road, but these stages are the similar and follow a pattern. As health care workers knowledge of these stages and the role of "anticipatory guidance" to countries that are developing the role can be helpful to developing countries. Throughout the life span whether pediatric and adolescent or elder or elderly development even though the stages are known and are clear, the individual must progress through them in order to emerge as a strong and healthy individual, Knowledge of development of self in environment context will help the health care worker to assist in smooth transformation and developing child as a change agent.

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Review Article

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Internet Addiction and Teens' Vulnarability

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Abstracts

The main aim of the study was to assess the knowledge of primary school teachers and effectiveness of computer assisted planned teaching program on health appraisal of school children in selected schools of Dhamtari District, Chhattisgarh. Keeping the objectives of the study in view, the researcher selected one group pretest and post-test pre-experimental design. The study was carried out in a group of 50 primary school teachers from selected schools of Dhamtari Chhattisgarh, selected by non-probability purposive sampling and a self-structured questionnaire was administered to assess the knowledge of primary school teachers. After pre-test a computer assisted planned teaching program on health appraisal of school children was administered. Data collection was analyzed by using descriptive and inferential statistics. Results of the study revealed that primary school teachers have average knowledge

Keywords: Health Appraisal of School Children; Primary School Teacher.

Introduction

Increased diffusion of the Internet enabled speedy and effective communication. According to various reports and researches, the addiction to internet is increasing rapidly among all the age groups. The addiction to internet can be described as a constant desire to stay online even though when there is no real need.It thus indicates that there is a serious psychic problem. It is also proved that obsession to internet is significantly altering brain's perception for internet use. People are so dependent that they are anxious when offline. Internet gives a sense of connectivity and also a source of entertainment. It facilitates the users to relieve their stress or pass their free time on it (Thomée, Härenstam, & Hagberg, 2011). People staying online almost all the times e.g. while at work time, with family or even when with friends. Psychiatrists believe that internet addiction is becoming one of the biggest non-drug addictions in the next century [1].

Children get approval from their parents for internet use for academic purpose but, license to use internet for academic purpose provides opportunity to access other online activities. Prolong online stay discourages the children to take part in various healthful activities which carry developmental value to physical and mental health. Teenagers are also vulnerable to internet addiction, which may have negative impact on their physical health, social relationships, psychological temperament as well as academic performance.

Teens between the ages of 13 – 19 years old go through a stage known as "Identity versus Role Confusion" (Erikson, 1963). The online world is also another viable option for the youth to seek out their self-identity. They may use the Internet as a platform to establish a sense of self (Erikson, 1963) and experiment with different roles and behaviours. Hence it is through this phase which shapes the youth's identity which last into their later years [2].

How to Identify the Child with Internet Addiction

Be observant for the 4 'C's of internet addictions,

- *Craving*: *Having continuous desire to use internet*– whether the child issearching for opportunities to go online, giving up non – technological task, frequent excuses for using internet, doing advocacy for internet use, most of the time talking about various types of gadgets with internet access and apps.
- *Control: Unable to reduce the time for internet use*- the child having thedesire to stay online longer, unable to log out, the time spent on internet going on increasing day by dayto activate mood, get excitement, overcome boredom.
- *Compulsion*: Having strong urge to use internet – though other activities are available to carry out, but the child prefer to do online activities only.
- *Consequences*: Having noticeable problems due to prolong online stay- physical problems e.g. headache, neck pain, back pain, eye problems, sleep disturbances, eating fast food; psychological problems e.g. not feeling good in the absence of internet experiencing irritable, angry, low mood etc.; social problems e.g. prefer to spend time with gadgets, avoid offline contacts, family, friends, avoid doing outdoor activities; academic problems e.g. distraction, problems in attention/concentration etc. Withdrawal Symptoms - tends to temper tantrums, irritable, angry and exhibit violent behaviors during unavailability of online activities.

Underlying Triggers (The Teens' Factors)

The ***3 'P's*** can lead to such addiction

⊙ *Psychological Factors*

- Having low mood, low confidence, nervousness, sad mood, feelings of loneliness, boredom
- Need for excitement and experimentation as staying online is very funny and engaging because internet facilitates gaming, chatting on social networking site, online shopping, internet gambling, pornography etc.
- Provides secure feelings because of anonymity
- An arena for sexual exploration
- To establish a sense of belongingness and acceptance with their friends
- Escape/Emotional release and catharsis
- Immediate gratification that meets the demands of the fast-paced lifestyles
- Search for identity, thus like to interact with others independently and internet facilitate in such need
- Internet helps in maintaining the romantic relationships by sharing photographs, video calling etc.

⊙ *Personality Factors*

- Being shy and introvert/extrovert need for recognition and approval

⊙ *Parenting Factors*

- Poor Inter Personal Relationship and family support. Decreased social life
- Absence of supervision during free time, some time may be because of both parents working, single parent.
- Frequent use of technology by parents.

Impact on Life

⊙ *Physical Problems*

- *Overweight* due to reduced physical activity, eating unhealthy food.
- *Pains and ache*s.g. stiffness, burning feeling and pain in hands due to continuous holding the mouse and moving the finger on the key board, headache, neck pain, back pain due to sitting in the same position for hours.
- *Eye problems* e.g. dryness andredness of eye and irritation etc. due to continuous stairing at the computer screen.
- *Sleep deficit*s.g. disturbed fragmented sleep patterns due to late night logins, day time drowsiness, lethargic etc.
- *Poor performance of daily activities* e.g. Poor personal hygiene asshowers, face washing, brushing hair and teeth, all get less priority.

⊙ *Psychosocial/Behavioural Problems*

- *Poor IPR/communications*: Poor Inter Personal Relationship, reduced communication, lack of cooperation and inability to build relationship, withdrawal from social activities, hiding feelings

from family and friends, likes isolation, poor participation in group activities, and lack of interest in social gathering etc.

- *Poor eating habits*: Eating irregularities, skipping meal, eating unhealthy food because don't want to take time to eat properly, rather than eating healthy, balanced meals, eat food that is quick and usually unhealthy.
- *Low frustration tolerance level*: Temper tantrum, irritable, aggressive, abusive, getting irritated easily if anyone interfere in internet use.
- *Poor time management*: Facing time management problem as maximum time spending in online activities.
- *Poor study performance among students*: Spending more time in "searching" than actually completing assignments, incomplete or missing assignments, doing assignments by simply copying and pasting contents thus, losing the skill of writing an essay, handwriting become worsen, facing difficulty in writing in exams, poor attention span, inability to concentrate on real life instruction, absenteeism, skipping classes to stay online, decreased intellectual ability, reduces thinking ability, grades / scores begin to decline.

⊙ *Struggles of Parents if Children become Internet Addicted*

Having children who are addicted to the Internet can be very stressful for the parents. They try to restrain their children's time spent on staying online, but for one reason or another, nothing work. They often are frustrated, stressed, scared, angry, and/or depressed. They have no energy left and they just want to give up. Some struggles that they may face are shown as below:

- *Self-Blaming*. Parents may have the tendency for self-blaming for not doing enough with their children and for allowing them to be addicted to the Internet.
- *Anger*. Parents may display acts of anger such as snatching away the gadgets, abruptly turning off the home WIFI connection, verbal or/and physical abuse. In extreme cases, they might resort to changing locks at home and withholding the keys in an attempt to keep the children at home.
- *Helplessness and Fatigue.* In certain situations, parents may feel helpless, fatigue and demoralized when all their efforts come to failure.
- *Anxiety*. Seeing children addicted to internet, parents may try a number of actions without considering the consequences but with the same end goal in mind and that is to attempt to break their children's addiction cycle.
- *Denial*. Some parents totally deny and disregard the existence of Internet Addiction on their children and attempt to lead lives as normal as possible.

Strategic Management

⊙ *Education for the Teens*

- Make the teens clear that for internet use, their other activities should not be suffered. Fix time slot for all daily activities e.g. sleep wake time, meal time, bath, study etc. Make a list of items, want to search online, to avoid unwanted search. Practice no technology during meal, driving, when talking to someone in person, during sleep time.
- Avoid prolong sitting in front of the computer. Take regular computer breaks, get up from the computer at regular intervals, use an alarm as reminder that it is time to go and see what a family member is doing in the next room. Computer chair must be adjustable with arm rest and full back support. Table height must be normal. Height of chair should be so adjusted that the eyes should focus at the middle of the monitor. Maintain proper posture while working on computer. Use of keyboard, mouse properly or by wearing a wrist-guard while working on the computer. The keyboard should be placed at approximately elbow height, slightly tilted while typing on the keyboard or using mouse. Keep the wrist straight, arm bent at right angle and at the side of the body. While using the mouse, keep the shoulder and arm in a relaxed position and close to the body. Use as little force as possible while using keyboard and mouse. It helps in preventing pains and aches in various parts of the body due to sitting in the same position. In severe case consult a doctor.
- Try to increase physical activity levels. Add some exercise to daily routine. Develop some nondigital hobbies e.g. painting, swimming, gardening, cooking, outdoor sports etc. Avoid eating junk foods, e.g. pizza, burger, french fry, pastries, carbonated soft drinks etc. Add green leafy vegetables, fresh fruits to everyday meals. Eat a healthy diet with all kinds of nutritional

supplements to avoid obesity.

- Prevent computer vision syndrome by keeping a distance of about 45cm from the monitor. Adjust brightness and contrast properly. Blink consciously while working on the computer. Follow 20/20/20 rule: take 20seconds break in every 20minutes interval, and see objects 20 feet away, e.g. sky, windows. Adjust computer software, such as ensuring that the font, font size and screen display settings meet the visual needs of the user
- Avoid sleep disorder by establishing a regular sleep schedule both sleep time and wake time. Create a comfortable cool dark sleep environment. Establish relaxing habits at bedtime such as meditation. Take a warm bath before bed. Stop television or computer use one hour before you go to bed as the light from inhibit sleep onset.
- Take protection against electromagnetic radiation hazards. Keep some distance from computer accessories. Use ear phones or other measures of hand free, to keep distance from the smart phones
- Practice stress management technique e.g. meditation, relaxation etc.Identify and get treatment (counselling) for the underlying issues contributing to the addiction e.g. anxiety, depression etc.Increase time spend on sports, hobbies and other non-Internet activities
- Know how to delete something that posted in the past and deactivate a profile, remove comments from others on own profile or account, delete name from photos tagged to identify.
- Turn off notifications. Set a schedule in which you allow yourself to manually check email and social media once every two hours or so.
- Focus on studies.
- Talk to the friends about the problems you've been having with your internet usage, and ask them to spend more time with you. Instead of chatting with them online, invite them over to your house for dinner, or go meet up with them for dinner. It willimprove relationships with the people.

⊙ Keep computer somewhere in house where people are likely to walk by, so they can tell to get off it.Turn the computer off and store it out of sight when it's not in use.

⊙ *Education for the Teens' Parents*

- Set clear time management goals with the teen
- Negotiate a computer free day once each week
- Help teens to develop non digital hobbies
- Review ratings of games. No M-rated games for teens. It may contain intense violence, blood, sexual content, strong language etc.
- If internet gaming is interfering with teen's school or social life, parents should seek professional help.
- If a teen has a large amount of pornography, his or her parent may need to seek professional help.
- Be mindful of the source of pornography. If a teen has received pornography from another person, he or she may be at risk for abuse.
- Talk with teens about the risks of sexting. Remind them that there is no guarantee that a picture or post shared with someone else will remain private.
- Understand the range of technology that adolescents are exposed to inside and outside of the home.
- Learn what appropriate technology use is by age and stage of child development.
- Co-view, co-play, and actively discuss digital media.
- Start a conversation about media and technology use at home and explain why family disapproves of certain online behaviors.
- Set clear technology use rules that are specific to your child. Create limits on the amount of use (i.e., limit technology use by time of day or weekends) and content (i.e., limit access to specific sites).
- Encourage adolescents and young adults to think critically about digital media and develop their own self-monitoring skills.
- Create open, non-judgmental, lines of communication. Children should feel comfortable coming to parents with problems they experience offline and online.
- Remind children that what they do online affects their reputation and their future.
- Talk about the need to protect privacy online.
- Modeling- Use technology to find useful information and to engage in fun/productive sharing with family and friends.
- Monitoring, - Parents should know what their children are doing online. Here are some tips on how to monitor child's online activity: consider placing filtering and monitoring software on all

forms of technology, lights out, technology off. Consider gathering phones in a central place at night.

- Mentoring - Build interests that are not digital. Create offline environment for children that includes plenty of exercise, parent/child activities, family time/meditation, etc.Help children structure their daily routines (i.e., school, family meals, sports, clubs, religious practices, etc.)
- Parents should demonstrate appropriate use of technology: no technology while driving, at the dinner table while interacting with children, family members, or in social settings

Conclusion

One can use a matchstick to light a lamp or light a fire for cooking. It can also be used to light a fire that burns some one's house. The matchstick by itself is just a harmless object. In the hands of a mother lighting the lamp or the cooking fire, it becomes beneficial. The samematchstick in the hands of a small careless child could prove to be fatal. Thus every individual should learn to use internet smartly.

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Review Article

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Teens and Technology

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Technology is a double edged sword;
It can be used for good purpose or bad purpose!

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Abstract

Adolescence is a period of rapid, physical and psychological development. It is a time when critical behaviours are shaped that will have impact on the rest of the life. The invention of the cell phone, appearance of computers, laptops, and internet communication has become a vital link in communicating with others. Though technology has innumerable benefits, it can affect teens future, if not used cautiously. Overuse of technology *results in poor health, lack of interest in studying* and poor study habits. They may become screen slaved, socially challenged persons also as narcissist or violent persons. They may become victims of cyber criminals. Parents, elders, teachers and people interested in social welfare should take active measures.

Keywords: Adolescence; Teens.

Introduction

Adolescents constitute 1.2 billion of the world population. In India, there are 243 millions of adolescents in which 41% of India population is less than 20 years (UNICEF- *2011 in State of World's Children Report*). Adolescence is a period of rapid, physical and psychological development. It is a time when critical behaviours are shaped that will have impact on the rest of the life. It is also the period of excruciating shyness and self consciousness which makes self-presentation and self disclosure a perilous business. Technology when used wisely is a powerful tool which enhances and enriches the communication and also shapes the adolescents personality. No doubt, technological advancements have made the world a better place to live in.

History of Internet Technology-Important Achievements

- 1934: The first person who imagined a 'Radiated Library' in 1934 was Paul Otlet.
- 1974: The first Internet Service Provider (ISP) was born with the introduction of a commercial version of ARPANET also known as a 'Tele net'.
- 1976: Queen Elizabeth II sends her first e-mail.
- 1979: USENET forms to host news and discussion group
- 1981: The National Science Foundation (NSF) provided the Computer Science Network (CSNET) to university computer scientists.
- 1983: The Domain Name System (DNS) established the familiar .edu, .gov, .com, .mil, .org, .net, and .int system in order to name websites.
- 1986: The National Science Foundation's NSFNET goes online and connected supercomputer centers at 56,000 bits per second.
- 1990: Tim Berners-Lee develops HyperText Markup Language (HTML). This technology continues to have a large impact on ways how

humans navigate the Internet in present days.

- 1991: CERN introduces the World Wide Web to the public.
- 1992: The first audio and video were distributed in Internet and the phrase "surfing became popular.
- 1997: PC makers removed or hid Microsoft's Internet software on new versions of Windows 95.
- 1998: The Google search engine was born and changed the way users engage with the Internet.
- 2004: Face book went online and the era of social networking began.
- 2005: YouTube.com has been launched.
- 2010: 400 million active users have been reached in Face book.

Some Facts about Growing Technology….

1. Mobile phone sales totaled 349 million in 2016 and 78% of these are smart phones (The Indian Express May 19th 2016).
2. PC sales lowered 269.7 million in 2016 (Business Insider India – Jeff Dunn 2017).
3. Nearly three-quarters of teens have or have access to a Smartphone, while just 12% of teens say they do not own cell phone.
4. African-American teens are most likely to have a smart phone, (85%) compared with 71% of both White and Hispanic.
5. Fully 91% of teens go online from mobile devices. 23% of teens have a tablet and among these "mobile teens," 94% go online every day.
6. On an average, 8-18 year olds devote 7 hours and 38 minutes to games and other entertainments every day.

Varieties of Media Technology

The invention of the cell phone, appearance of computers, laptops, and internet communication has become a vital link in communicating with others. We can see a reflection of technology everywhere in our lives, such as TV, telephones, computers, cell phones, PDAs etc., email, online banking, online shopping, online education, online liberalities, online books, online gaming, paying bills all are made to be on our finger tips. The effects are much more than and as powerful as they were never before.

Use of Technology by Teens

One of the criteria that define teenagers is ***t****he degree to which they are connected*!

Face book is the most popular and frequently used social media platform among boys. Snap chat is popular among teens from affluent households. 71% of teens use more than one social network site. Girls prefer the *Instagram.* On an average, each teen have 145 Face book friends (Teens, Social Media & Technology Overview, 2015). According to Pew research centre, a typical teen sends and receives 30 texts per day. 18.7 billion text messages are sent every day excluding the Whatsapp and Face Book messages which were much more (60 billion per day).

Attractiveness of Technology

Why is the craze for technology? Technology allows its users a sense of increased controllability which in turn allows them to feel secure about their self-identity, communication and thus freer interpersonal relations**?** There is a saying that Curiosity killed the cat. Many teens without knowing the dangers become victims of cyber bullying. Boredom is the key factor in the initiation of internet use. The other factors include, availability at affordable cost, lack of limitations and conflicts in the families and in schools, over trusting, hyper vigilance and innocence on par of parents, lack of spirituality and emotional disorders.

Advantages of Technology

- Anonymity- establishing identity without embarrassment of self.
- Power to reflect and change what you want to communicate before sending.
- Any time (All time) availability (Billions of websites are available)
- You can be in touch with innumerable members and you have wider social contact.
- Any type of information you can access. Communications are made quicker, easier, to anybody and to any part of the world.
- From or to, any part of the world, in no time, without involving anybody, to anyone, from anywhere you can communicate
- Gives feelings of confidence, helps to overcome shyness, awkwardness which are present in face-to face communication.
- Technology is an effective educational tool. Technology helps to access incredible array of

information without any obstacles. Users can learn almost everything and this promotes independent learning in students.

- Helps to develop skill in handling computer. Technology also allows teachers to create an exciting ways and means to educate students with the use of Smart Boards, email Skype, Power Point etc.
- Development of new teaching methods, such as podcasts, blogs and social media stimulates and sustains interest among students.
- Technology enables teachers to educate all types of students, including those with special needs as assistive technologies like voice recognition, text-to-speech converter, translator and software for word prediction are available.
- Technology allows us to perform activities of our own interest from the comfort of our home. Millions of money can be earned through e-business sitting in a chair or even in wheelchair.
- It is an excellent job search tool. It helps us to prepare the resume, teaches how to answer in the interviews and helps to find appropriates jobs. Profile of prospective employees can be checked by employees leading to rejection of candidates for jobs
- It helps to store, image, letter, videos of earlier days which bring happiness when recalled.
- Playing games and sports in the net, keeps our brain active, and away from boredom.
- The use of technology in the field of Medicine and Defense cannot be described in words adequately and is beyond the scope of this article.

Disadvantages of Overuse of Technology

Majority of the time spent on online virtual world plays major impact on the real world.

- Linguistic performance of children is affected, communications can be easily misunderstood.
- Diminished ability to build relationships in the real set up. Information may be unrealistic and children may thus live in an imaginary world. Constant self confirmation may turn teens not only to become screen slaved, socially challenged persons also as narcissist or violent persons.
- Teens being productive can become more impulsive may not respond as adults and may not realize about the consequences of online communication.
- The average age at which a child first sees porn online is 11 and 12% of websites on the internet have pornographic videos which is the cause of worry of 60% of parents about their kids reputation (Pew Research Center, 2013).
- Teens using online often are rich source of information for predators involved in cybercrimes, bullying, etc 13% of teens, ages 14-18, report being bullied online and 7% report being bullied via their cell phone text messages.

Disadvantages of Technology in Education Overuse of technology results in a lack of interest in studying and students are likely to develop poor studying habits. Students can skip school because they can study lessons, online. Students may forget the basics of studying e.g. spelling of words because they often use spell checkers. Their ability to solve mathematical problems also decline as they get instant assistance from computers.

Technical problems and computer malfunctions can cause loss of study materials, resulting in high levels of stress. While using a tablet students may easily get diverted to play games or spend time on social media compared with textbook learning.The overall value of in-person education and face-to-face interaction between teacher and student provides a more satisfying experience than on online learning. Students enrolled in online courses have higher chances of failing, dropping out and are less likely to benefit from them compared with students studying at school.

Technology Addiction

Ekimberly Young, *Director of the Center for Internet Addiction Recovery,* defines technology addiction as a habitual compulsion to use technology instead of addressing life's problems. It is also called, Internet use or Internet addiction disorder (IAD) a new phenomenon, prevalent commonly among adolescents.

Characteristics of Addiction

According to Dr. Hilarie Cash, Co-founder of the Restart Internet Addiction Recovery Program, symptoms of IAD include the following:

- Compulsive checking of text messages
- Frequent changing of display picture and "selfies"
- Euphoric while using the Web
- Social isolation
- Lack of interest in activities that don't involve a

computer,

- Feelings of restlessness when unable to go online
- IAD has also been linked to stress, sleep disorders and depression.
- Change of attitude, loss of self-esteem, attention deficit and depression are the symptoms of addiction.

Though boredom is the key factor in the initiation of these communications, compulsion to use technology in favor of exciting life events. (e.g. vacations, parties) signify addiction. Uncontrollable use can lead to problems with relationship, physical ill health, disorganized behavior, lack of confidence and slowed academic achievement. Health, nutrition, sleep are affected adversely.

Behavioural changes due to IAD , at school include, repeated surfing or e-mailing during class time, difficulty concentrating more hours of night-time use, frequent complaints of being tired, falling asleep in class, school lateness or absenteeism and withdrawal from all activities such as sports practice, friends meet, social engagements music lessons etc,.

The World Health Organization states very clearly that there are serious health risks from current exposure levels to electronic fields coming from Wi-Fi, laptops, mobile phones and iPods. Exposure increases the health related risks such as cancer, brain tumors, autism, diabetes, chronic fatigue, neck and back pain, head ache ,vision and hearing problems, hay fever, tumors of brain, depression etc,

Technology can damage your health and only one group of people benefit. *It is not you!*

What can parents do?

Talk to your teen! Experts agree, if you suspect your teen is up half the night chatting on- line, something else might be going on. You need to watch them to come out of it.

Recommendations

- Limit the time your teenager spends on the internet
- Disconnect the router
- Turn the machine off
- Use technology to restrict access on the web
- Have family sessions- bring the computer out in the family room so everyone is involved
- Don't allow an internet connection in your teenager's room
- Become a safety sleuth- observe these websites for yourself
- Give them alternatives to boredom i.e. positive outlets through family centered alternatives
- Join them- listen and become involved
- Discuss with them what they are watching
- Change locations- move computers to a common area

Delete Day Programs can be Celebrated with the Following Objectives.

- Delete inappropriate pictures or comments from their Face book pages.
- Delete "friends" whom they didn't know personally.
- Delete personal information that could be dangerous to share.
- Delete their membership in groups that might be hurtful or offensive.
- Delete Form spring pages.
- At each computer station a "*Delete Day Pledge*" can be kept for the participant to sign and take home, as well as a comment card with solicited information, ideas, and reactions about the student's experience at the event.

Conclusion

Anybody could be one of the next two billion sufferers, your sister, brother, mother, father, grandparent, grandchild, friend or colleague, ***o****r even you!* It is high time to take responsibility for guiding our teenagers. Parents, elders, teachers and people interested in social welfare should take active measures.

It is time to take responsibility!

It is time to take action!

It is time to DELETE!

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Peadiactric Post Operative Cardiac Intervention & Nursing Management of MVR+ Tricusped Valve Repair for RHD

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Abstract

Rheumatic heart disease (RHD) remains one of the largest preventable burdens of disease in the world. It is perceived as a disease of childhood, acquired by streptococcal throat infection of the tonsillo-pharynx, leading to an inflammatory reaction that involves many organs, including the heart. However, cases in children of 5 to 14 years of age are likely to represent only 15% to 20% of all cases within all age groups of vulnerable populations. Rheumatic heart disease is the most common cause of multivalvular disease in developing countries. Unless aggressive and timely intervention in the form of valve replacement is pursued, the condition progresses rapidly to disability and death. Hemodynamic superiority and thromboresistance are the normal selection criteria for these prostheses, although the surgeon's experience, and the ease of insertion, availability and cost of the valve also play important roles. A strict adherence to optimal anticoagulation levels optimizes protection against thromboembolism and anticoagulation-related hemorrhage, and helps to provide the patient with a good quality life.

Keywords: Rheumatic Heart Disease; Valve Repair; Mitral Valve Regurgitation.

Introduction

Rheumatic fever is an inflammatorydisease which may develop after a Group A streptococcal infection (such as strep throat or scarlet fever) and can involve the heart, joints, skin, and brain.

It is a Acute Autoimmune Collagen disorder characterized by inflammatory lesions present in the connective as well as endothelial tissues especially heart layers, joint, skin, & CNS.

Rheumativc heart disease is damage to one or more heart valves that remains after an episode of acute rheumatic fever is resolved. It is caused by recurrent episode of ARF, where the heart has become inflamed. The valve can remain stretched or scarred, and the normal blood flow through damaged valve is interrrpted blood may flow backward through stretched valves that do not close properly. When heart is damaged in this way ,the heart valves are unable to function adequately, and heart surgery may required.

Incidence and Prevalence

Rheumatic fever primarily affects children between ages 6 and 15 years and occurs approximately 20 days after strep throat or scarlet fever.

Etiology

Streptococcal infection Group A β hemolytic streptococci. Gram positive bacteria having M-protein – it is a more antigenic.

Risk-Factors

- Recurrent throat infection
- Upper respiratory tract infection

- Low socioeconomic status
- Over crowding
- Lack of environmental sanitation

Pathophysiology of Rheumatic Fever

Sign and Symptom

Due to Etiological Factors

⇩

Group A β Hemolytic streptococci enters into throat

⇩

Antigen formation (M-protein)

⇩

Antibody formation

⇩

Formation of cystokinase, macrophage, lymphocytes, eosinophil's

⇩

Antigen –antibody reaction

⇩

Aschoff's body formation (fibrin deposition)

⇩

Damage of heart layers

⇩

Thickening & calcification of heart valves

⇩

Fusions of heart valves

⇩

Thickness of cardiac tendenae(it connect papillary muscle to heart valves especially mitral & aortic valve

⇩

Mitral, Tricuspid & Aortic Valve Stenosis

⇩

Regurgitations

⇩

CCF

Jones Criteria for Diagnosing Rheumatic Fever

The Jones criteria are used to standardize the diagnosis of rheumatic fever. Diagnosis requires that the patient have either two major criteria, or one major criterion and two minor criteria, plus evidence of a previous streptococcal infection.

Major Criteria	Minor Criteria
Carditis	Fever
Migratory polyarthritis	Arthralgia
Sydenham's chorea	Elevated acute phase reactants
Subcutaneous nodules	Prolonged PR interval
Erythema marginatum	

Major Criteria

- *Carditis:* inflammation of the heart muscle which can manifest as congestive heart failure with shortness of breath, pericarditis with a rub, new heart murmur, Percardial effusion & chest pain.
- *Migratory Polyarthritis:* a temporary migrating inflammation of the large joints, usually starting in the legs and migrating upwards.
- *Subcutaneous Nodules* painless, firm collections of collagen fibers on the back of the wrist, the outside elbow, and the front of the knees. These now occur infrequently.
- *Erythema Marginatum*: A long-lasting reddish rash that begins on the trunk or arms as macules due to deposition of fat.
- *Chorea:* abnormal rapid involuntary jerkeymove-ments seen all motor area.A characteristic series of rapid movements without purpose of the face and arms. This can occur very late in the disease for at least three months from onset of infection.

Minor Criteria

- Fever temperature elevation(101-102 F)
- Arthralgia: Joint pain without swelling
- Laboratory abnormalities: increased Erythrocyte sedimentation rate, increased C reactive protein, leukocytosis
- Electrocardiogram abnormalities: a prolonged PR interval
- Abdominal pain
- Nosebleeds

Diagnosis

- *History Collection:* About history of recurrent throat infection.
- *Physical Examination*: about major and minor criteria can examined by physician.
- *Laboratory Testing* may reveal an elevated white blood cell count and erythrocyte sedimentation rate during the acute phase.
  - ❖ Hemoglobin and hematocrit may show slight anemia due to suppressed erythropoiesis during inflammation.
  - ❖ C-reactive protein may be positive, especially during the acute phase.
  - ❖ Cardiac enzyme levels may be increased in severe carditis.
  - ❖ Antistreptolysin-O titer may be elevated in 95% of patients within 2 months of onset.
- *Throat Cultures* may continue to show the presence of group A beta-hemolytic streptococci; however, they usually occur in small numbers.
- *Electrocardiography* may show changes that are not diagnostic, but PR interval is prolonged in 20% of patients.
- *Chest X-Rays* may show normal heart size or cardiomegaly, pericardial effusion, or heart failure.
- *Echocardiography* can detect valvular damage and pericardial effusion, and can measure chamber size and provide information on ventricular function.
- *Cardiac Catheterization* provides information on valvular damage and left ventricular function.

Management

Children with rheumatic fever are often treated in the hospital, depending upon the severity of the disease.

Treatment for rheumatic fever, in most cases, combines the following three approaches:

Treatment for Streptococcus Infection

The immediate goal is to treat the infection with antibiotics (such as penicillin, sulfadiazine, or erythromycin). This is done even if the throat culture is negative. Following the initial treatment for strep infection, child may continue to receive monthly doses of antibiotics to help prevent further complications.

High dose of Antibiotics

- Procaine pencilline-4 lacks unit.
- Benzathine pencillin-1.2 mega unit
- Oral pencilline- 250 mg

Anti-Inflammatory Medications

Based on the severity of child's condition, may prescribe medications to help decrease the swelling that occurs in the heart muscle, as well as to relieve joint pain. (corticosteroids. Salicylates)

- Methyl prednisolone-40-60 mg/day
- Aspirin-90-120/kg/day

Diazepam-1.2mg/kg/day

Bed Rest

The length of bed rest will be determined by your child's physician, based on the severity of your child's disease and the involvement of the heart and joints. Bed rest may range from two to twelve weeks.

Some patients develop significant carditis which manifests as congestive heart failure. This requires the usual treatment for heart failure: diuretics, digoxin, and etcetera. Unlike normal heart failure, rheumatic heart failure responds well to corticosteroids.

Diet

Eat Plenty of

- Fresh fuits and vegetables, foods with vitamin C, beta carotene and other anti-oxidant nutrients
- Poultry, seafood, wheat germ, and fortified cereals for vitamin E.
- Apples, or bran, and other foods high in soluble fibres

Cut Down On

- Meat, especially fatty cuts.
- Eggs, whole milk, organ meats, and other high-cholesterol foods
- Fats, especially those that are saturated
- Iron-fortified foods (unless recommended by your doctor.)

Avoid

- Tobacco in any form
- Salty foods (if you have hypertension.)

Case Report

9 year old female child H/O RHD severe MR +TR with CHF, severe anemia with Rt side pnemonia as well as child H/O fever / arthralgia//rsah /nodules came to hospital with complaints of pedal oedma7 -8 days, abdominal distension, dyspnea, peripheral cyanosis and cold skin. Echo was done child is having severe RV & moderate LV dysfunction than child admitted in cardiac unit vital signs are takenHeart Rate-88 b/mts, Respiratory Rate- 22 b/mts, Bp-84 /54 mm hg SP02-88%, S1 present but S2 inaudible and low rumbling diastolic murmur along the left sternal border also present. blood investigation done urea-115, creatine- 4.3, na-142 k-4.2, Ca- 8.4 Uric Acid-.6.3, Bilirubin-7.5, SGOT/SGPT-218/261 alkaline phosphate-2 12, HB-11.7 RBC-4.80 HCT – 34.4 , TLC – 19.4, Platlet- 159, ESR- 28. Child received treatment INJ.cefotaxime 250mg iv tds, tab ciplar 10 mg, t.lasix 10mg bd, t.aldactone 15 mg od, tab.digoxin 0.125 mg than patient posted for surgery .

- After surgery, this patient received with MVR+ TRICUPED VALVE REPAIR on Prvc FIO2 80% RR- 18 mts/ min ABG analysis done- PH- 7.33, po2- 75, pco2-48.7, Be- -3.6, HCO3-19.6, Na-140., K-3.33,ca- 1.0, Hb-12.5 Hct -37.5, Lac-4.6, Cl-105, vita signs are Bp-60/42 Mmhg, HR-112 b/mts, RA-18, pherpheral temperature-26.3,core temperature. 40.7c, child received inotrops support, inj DOPA 200/50@3.Ml/hr, inj DOBUTAMINE 250/50@3.3 ml/hr, ADR 2/50@ 3.3mil/hr, NOR-ADR 2/50@ 4.2 mil/hr, inj: MILIRINONE 10/50 @4.0 ml/hr .child received treatment inj; Cefotaxime 500 mg iv tds, injAmikacin150 mg iv od, inj; pantocid 20 mg iv od, injTremadol 25 mg iv tds, injPerfalgan 250 mgiv qid, inj Lasix 20 mg bd, IVF-RL@ 30 ML/HR. I/O chart moniotoredWith favorable urine output. The patient regained clear consciousness after 12 hours, acceptable arterial blood pressure (90-100/50-60 mmHg) after 5 days of treatment than patient weaned off from ventilator 7th post of day. After 4 weeks patient discharged successfully.

Nursing Management

Decreased Cardiac Output related to increased afterload, decreased myocardial contractility and reduced stroke volume, as evidenced by: decreased peripheral pulses, peripheral temperature, decreased systemic vascular resistance, pulmonary edema, increased pulmonary vascular resistance, Expected outcomes are:

- Patients showed reduced levels of dysponea experienced.

- Patients participating in participating in the activity and demonstrate increased tolerance.

Nursing Interventions

- Monitored vital signs such as: blood pressure, apical pulse and peripheral pulse.
- Monitored cardiac rhythm and frequency.
- Checked signs and symptoms of decreased output.
- Performed a comprehensive appraisal of peripheral circulation (e.g., check peripheral pulses, edemas, capillary refill, color, and extremity temperature).
- Rewarming the child with double blanket & warmer.
- Checked RA, pulmonary artery, pulmonary capilarry wedge , systemic pressures.
- Monitored sensory and cognitive capacities especiley level of consciousness.
- Observed cannulas for kinks or disconnection.
- Administered positive inotropic/contractility medications such as adrenaline , nor adrenaline, dopamine, dobutamine&milrinone according to physician order.
- Monitoring disarrythimias, urine output,intake output hourly and than checked serum electrolytse especially sodium, potatsium, calcium BE, HCO3, Lactate.
- Assessed the 02 saturation.
- Assessed heart sounds for gallops.
- Monitored laboratory test such as CBC, NA+, K, CA urea and creatinine level.
- Positioned of the patient semifowlers to high fowlers position .

Evaluation

- Patient saturation was maintained.
- Pulse and BP maintained norma.l
- Patient perfusion status was improved.

Impaired Gas Exchange related respiratory acidosis as evidenced by: decreased pO2, decreased SaO2, and increased pCO2.

Expected Outcome

To improve the spontaneous ventilation.

Nursing Intervention

- Noted chest movement, watching for symmetry, use ofaccessory muscles, and supraclavicular and intercostal muscle retractions.
- Monitored chest x-ray reports.
- Routinely monitored ventilator settings.
- Check all ventilator connections regularly.
- Monitored for adverse effects of mechanical ventilation: infection, barotrauma, reduced cardiac output.
- Monitored patient's respiratory secretions.
- Determined the need for suctioning by auscultating for crackles and bronchi over major airways.
- Monitored for respiratory muscle fatigue.
- Ensure that ventilator alarms are on nor off.
- Monitored for decrease in exhaled volume and increase in inspiratory pressure.
- Provided routine oral care.

Evaluation

Saturation was 98%, Po2- 112 mmhg (increased), Pco2 –38 mmhg(reduced), ABG values shows normal.

Ineffective Airway Clearance related to thick sputum secondary to right lung pneumonia as evidenced by rapid respiration, diminished and adventitious breath sounds, and thick yellow sputum secretion.

Expected Outcome

To improve the airway pattern

Nursing Intervention

- Monitoredrate, rhythm, depth and efforts of respiration.
- Ausculatated breath sounds, noting areas of decreased or absent ventilation and presence of adventitious sounds.
- Auscultated lung sounds after treatment to note results.
- Monitored the client s ability to cough effectively.
- Encouraged the client to take several deep breaths.
- Encouraged the patient ues of incentive spirometry, as appropriate.

- Monitored the client respiratory secretion.
- Provided nebulizertherapy as needed.
- Monitored for increased restless, anxiety, air hunger.
- Encouraged the client to take a deep breath, hold for 2 seconds and cough two or three times in succession.

Evaluation Saturation was 98% , every 4th hourly patient airway cleared by performing suctioning , respiratory secretion color, quantity was assessed , ABG values shows normal.

4. *Excess Fluid Volume* related right ventricular failure as evidenced by elevated CVP, bounding pulses, shortness of breath and dependent oedema.

Expected outcome: To reduce the excessive fluid overload.

Nursing Intervention

- Assess for signs and symptoms of excess fluid volume overload like a elevated CVP, bounding pulses, shortness of breath, dependent oedema, and distended neck and peripheral veins.
- Monitored vital signs and CVP.
- Assessed the presence and location of dependent oedema.
- Monitored fluid intake hourly.
- Checked the urine output hourly.
- Monitored intake and output chart at least every shift.
- Monitored infusion rate of parenteral fluids closely use infusion pump.
- Administered oral fluid with caution .don t give more oral fluid.
- Monitored laboratory values like NA, K, Ca, and arterial blood gas 3rd Hourly.
- Maintain semi to high fowler position.
- Administer diuretics as per physician order.

Evaluation: Patient Intake and output chart shoes negative balance, Pulse and BP normal , Decreased pedal oedema.

5. *Impaired Skin Integrity* related to dependentoedema & prolonged immobilization as evidenced by skin pelling, redness, damage of epidermis and dermis.

Expected Outcome: To improve the tissue perfusion.

Nursing Intervention

- Monitored site of impaired tissue integrityatleast 2 times daily for skin pelling, color, changes, redness, swelling, warmth, pain or other sin of infection.
- Patient turned every 2 hours as evidenced by nursing documentation.
- Applied air matters & airc ushion especially bony prominence area like sacrum.
- Air filled gloves kept under heels.
- Applied soft pad (Alwin pad) under bony prominence area like shoulder blade, sacrum and occipit.
- Kept some soft pad under ear cartilage & massage should be given with olive oil every 6-8 hours.
- Pt wound changed daily per wound care orders and proper hand hygiene will be performed before and after dressing changes.
- Advised the family members about leg exercise and olive oil massage.

Evaluation

Patient tissues perfusion function improved for example redness reduced, wound healed.

6. *Fear and Anxiety* related to prolonged ICU care.

Expected Outcome: To reduce anxiety level of the child.

Nursing Intervention

- Assessed the child behavior pattern during hospitalization.
- Encouraged to express felling and concerns about illness and hospitalization.
- Familiarize patient with the environment and new experience.
- Interacted with child in peaceful manner.
- Conversed using a simple language and brief statement.
- Avoided unnecessary reassurance this may increase undue worry.
- Encouraged child to write or ask the questions and to discuss with the health team members

Evaluation: Patient doubts clarified.

Conclusion

RHD is most common disease in female. RHD is results in valvular disease and heart failure, nurses

play important role in educating public on regarding in RHD early detection of disease. Post valve surgerypatient care nurses play major role in prevention of surgery complication and good outcome of patient .

Conflict of Interest

Author don't have any conflict of interest

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[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.

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