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Women and Child Nutritional Status among the Irular Tribe in Villupuram District of Tamil Nadu

Ajeet Jaiswal[1], Rajan J[2]

[1]Associate Professor, Department of Epidemiology and Public Health, Central University of Tamil Nadu, Tamil Nadu, India, [2]Research Scholar, Department of Anthropology, Pondicherry University, Pondicherry

Abstract

Malnutrition among children and women has serious long-term consequences in our India especially the deprived section of the people. In this case, tribal are the most vulnerable section of people compared with other population. According to NFHS IV report (2015-16), the percentage of under the weight of STs is 42 Percent The prevalence of underweight is almost one and half times higher in tribal children than other population tribal children continue to be the most malnourished. Stunting among children and low BMI among adults in tribal people is more than among the non-tribal population. Due to this concern researcher made to study the women and child nutritional status among the Irular tribe of Villupuram District of Tamil Nadu. A community-based cross-sectional study was undertaken to assess the nutritional status of children below 5 years and their mother of Irular Tribe by using inexpensive anthropometry method. Such as Weight for age, height for age and weight for height, BMI & Waist hip ratio for an adult was calculated by using WHO growth standards. The prevalence of underweight (weight for age), stunting (Height for Age) and wasting (Weight for Height) in the study population is 58.43 Percent 64.04 Percent and 51.69 Percent respectively. The proportion of moderate and severely underweight, stunting and wasting were highest in the age group of 36-59 months. Malnutrition is a major public health problem among children and women especially in the most vulnerable segment of people

***Keywords**: Malnutrition, Tamil Nadu, Irular Tribe, Women, Nutrition, Child*

Introduction

Malnutrition among children and women has serious long-term consequences in our India especially deprived section of the people According to FAO (2017), 155million children under five years of age across the world suffer from stunted growth, wasting affected 51.7million and 41 million were considered overweight in the children under five worldwide[1]. The prevalence of stunting is currently highest in Africa continent where as in Southern Asia and Oceania where more than 30 percent of under-five children are too short for their age. The vast majority of stunted and wasted children live in Asia and South Eastern Asia. According to the Report of Abhay Bang committee (2018), the percentage of STs Children underweight 42 Percent as per the NFHS IV 2015-16 compared to other population tribal children continue to be the most malnourished [2].

The prevalence of underweight is almost one and a half times in tribal children than in the other castes. Stunting among children and low BMI among adults in tribal people is more than among the non-tribal population and is unacceptably high [3,4,5] using the data on women from National Family Health Survey 3 and 4 in which they found that overweight and obesity among the women has been increasing past 10 years quite sharply. The percentage of overweight increased from 9.7 percentages NFHS-3 to 15.4 percentages in NFHS-4. In this case, tribal are the most vulnerable section of people compared with other population[6]. Basu (1993) addressed on some of the major health issues of the tribe in India through a thematic collection of various

Correspondent Author:
Rajan J
Research Scholar, Department of Anthropology, Pondicherry University, Pondicherry
E-mail: rajan.sj007@gmail.com

research papers in that author says health status of tribal population is very poor in India [7,8].

Dash (2013) and Jaiswal, (2015), reveals that education and health are the important indexes for the economic developments in any community[9]. Education plays a significant role in every human being specifically for the marginalize people whom they have fallen victims the exploitation from the middleman on account of their illiteracy and ignorance [10]. When we compare to the other population STs are the most vulnerable group, though the government of India provide a numerous of the developmental programme. For the upliftment of their life from the basic grass root levels, still now most of the health and educational service have inaccessible in their area [11], according to 11Sinu (2013), Irular has the one among the largest scheduled tribe of Tamil Nadu. The author article result shows the major significance factor indicating their poor socio-economic and occupational living condition and backwardness of the Irular tribe with this concern researcher made to study the women and child nutritional status among the Irular tribe of Villupuram District of Tamil Nadu.

Materials and Method

The study was conducted in the three-selected blocks. i.e. Marakkanam, Vanur, Tindivanam in the Villupuram District of Tamil Nadu. The data was collected among the irular tribe of under five-year children and their mother who inhabit in the three-selected blocks. Data were collected by using two segments of Interview Schedules. One was a semi-structure interview scheduled and another one-standardized interview scheduled. Part I consist of Socio-Economic condition, like age of the respondents, family size, family type, occupation of the respondents, toilet facility, bathroom facility and types of house Part II consists of Assessment of nutritional status of respondents like Anthropometric measurements, height, weight, waist and Hip. Anthropometric measurements are the most important part of the assessment of the nutritional status of individual or group of people which is being universally applicable. Inexpensive, and non-invasive for assessing, under and over nutrition of the individuals or groups. All the measurement has been done by WHO guidelines [12]. The total sample size is 198 in which half of under five-year children and their mother; some of the secondary data is collected through various official reports. The objective of the study is, to assess the Socio-Economic conditions of Irular tribe. Another one is, to Asses the Nutritional status of women and children among the irular tribe in Villupuram District of Tamil Nadu

Statistical Analysis

Data was entered in MS Excel and analyzed using the SPSS software v18. The z scores for the different nutritional indices –weight for age, height for age, weight for height BMI & Waist Hip Ratio were calculated by using WHO Anthropo Software[13].

Result

Socio-Economic Profile

Table No: I Socio- Economic Profile of the Respondents

Socio-Economic Particulars	Variables	(N=89)	%
Type of House	Kucha	55	61.8
	Semi Pucca	30	33.7
	Pucca	4	4.5
Type of Family	Nuclear	83	93.3
	Extended	6	6.7
Size of Family	1 to 2	2	2.2
	3 to 4	71	79.8
	5 to 6	16	18

Cont... **Table No: I Socio- Economic Profile of the Respondents**

Literacy Rate of the Respondents	Illiterate	52	58.4
	Primary School	8	9.0
	Middle School	5	5.6
	High School	5	5.6
	Higher Sec School	9	10.1
	UG	3	3.4
	PG	2	2.2
	Diploma	1	1.1
Bathing Facility	Open Bathing	17	19.1
	Thatched Rice Bag	44	49.4
	Bricks Hollow Block	1	1.1
	Attached Bathroom	27	30.3
Toilet Facility	Open Defecation	68	76.4
	Separate Toilet	21	23.6
Drinking Water	Individual Tap	3	3.4
	Common Tap	86	96.6
Electricity	Present	84	94.4
	Absent	5	5.6
Income of the Family	Rs.3000-3999	4	4.5
	Rs.4000-4999	11	12.4
	Rs.5000-5999	21	23.6
	Rs.6000-6999	53	59.6
Occupational Status of the Respondents	Agriculture Labour	4	4.5
	Unemployed	1	1.1
	House Wife	81	91.0
	Home Maid	2	2.2
	Coolie	1	1.1

The majority of the respondent houses (61.8 Percent) are belongs to kacha type, in that (68.2 Percent) houses have constructed in porampokku land and (31.8 Percent) houses have constructed in government allotted land. Majority of the respondents (54.2 Percent) are belongs to age group of 20 – 29 years. 93.3 Percent of the respondents belong to nuclear family so nuclear family was more prevalent among the study area. 79.8 Percent of the family consists of had 3 to 4 members and 18 Percent of the family had 5 to 6 members. The literacy rates of the respondents is 41.6 are literate, 58.4 Percent were found to be illiterate. 19.1 Percent of the houses do not have bathing facility, where as 80.8 Percent of the houses have bathing facility which have been made thatched with rice bag, 49.4 Percent of the houses have been constructed, by bricks hollow block and 1.1 Percent of the houses have been constructed with attached bathroom facility. 76.4 Percent of the respondent households does not have toilet facility, 23.6 Percent of the respondents households have separate toilet facility in their home. 96.6 Percent of the houses are depended upon the common tap water and 3.4 Percent of the houses have using individual tap for drinking water. 94.4 Percent of the houses have electricity facility and

5.6 Percent of the houses do not have electricity facility. Majority of 56.9 Percent of the houses were earned Rs. 6000-6999, 50 (91.0 Percent) of the respondents were housewife whereas 4 (4.5 Percent) of the respondents were agricultural labourar,

Nutritional Status Status of Women and Children

Table No: 2 Distribution of Respondents of 0-60 Month's Children according To Their Nutritional Status by SD Classification

Underweight (Weight for Age)				
Age Group (Months)	**Number**	**(≥Median-2SD)**	**(<Median-3SD to ≥Median-2SD)**	**(<Median-3SD)**
>12	14 (15.73)	4 (4.49)	3 (3.37)	7 (7.87)
12-35	20 (22.47)	9 (10.11)	8 (8.99)	3 (3.37)
36-60	55 (61.80)	24 (26.97)	20 (22.47)	11 (12.36)
X2= 6.659;p<0.155				
Stunting (Height for Age)				
>12	14 (15.73)	8 (8.99)	1(1.12)	5 (5.62)
12-35	20 (22.47)	11 (12.36)	0	9 (10.11)
36-60	55 (61.80)	13 (14.61)	36 (40.45)	6 (6.74)
X2=15.18;p<0.004				
Wasting (Weight for Height)				
>12	14 (15.73)	5 (5.62)	1 (1.12)	8 (8.99)
12-35	20 (22.47)	10 (11.24)	6(6.74)	4 (4.49)
36-60	55 (61.80)	28 (31.46)	12 (13.48)	15 (16.85)
X2=6.769;p<0.149				

(≥Median-2SD = Normal <Median -3SD to ≥ Median-2SD = Moderate <Median-3SD = Severe) [12, 13]

The above table shows that the distribution of respondents according to their weight for age, height for age, and weight for height. Out of the total respondents 89, 49 (55.1 Percent) of the respondents have belong to male children and 40 (44.9Percent) of the respondents have belongs to female children.

Underweight: The prevalence of underweight (Weight for Age) among the under five year children was 58.43 Percent in which 34.83 Percent was moderate and 23.60 Percent was severe condition, Statistically non- significant difference was observed among the study group.

Stunting: The prevalence of stunting (Height for Age) among the under five year children was 64.04 Percent in which 41.57 Percent was moderate and 22.47 Percent was severe condition. Statistically significant difference was observed among the study group.

Wasting: The prevalence of wasting (Weight for Height) among the under five year children was 51.69 Percent in which 21.35 Percent was moderate and 30.34 Percent was severe condition. Statistically non-significant difference was observed among the study group.

BMI and Waist Hip Ratio of adult women

The below table III explains about the distribution of respondents according to their waist hip ratio. Out of the total respondents, (28.1 Percent) of the respondents have low risk grade, (22.5 Percent) of the respondents have moderate risk condition similarly (49.4 Percent) of the respondents have sever risk conditions

Table III: BMI and Waist Hip Ratio of Adult Women

Waist Hip Ratio	Health Risk	%
<0.80	Low risk	28.1
0.81 – 0.85	Moderate risk	22.5
>0.85	Severe risk	49.4
BMI Classification %		
<16	III Degree	16.9
16 – 16.99	II Degree	7.9
17 – 18.49	I Degree	10.1
18.5 – 19.99	Low Normal	15.7
20 – 24.99	Normal	30.3
25 – 29.99	Obesity	19.1

The above table III depict about, the distribution of respondents according to their Body Mass Index. Out of the total respondents, (34.9 Percent) of the respondents have come under the CED Chronic Energy Deficiencies in which (16.9 Percent) of the respondents have come under the III Degree, (7.9 Percent) of the respondents have come under the II Degree and (10.1 Percent) of the respondents have come under the I Degree. Also (46 Percent) of the respondents have come under the normal BMI, in which (15.7 Percent) of the respondents have come under the low normal and (30.3 Percent) of the respondents have come under the normal BMI. Out of

the total respondents, (19.1 Percent) of the respondents have come under the obesity.

Discussion

Nutrition is a universally cherished goal. Health and Nutrition cannot be forced upon the people. It is a positive attribute be forced upon the people. It is a positive attribute of life and the organization of health services to all people is considered to be the key step towards development [14]. Health and Nutrition care is one of the most important of all human endeavors to improve the quality of life especially of the tribal people [15, 16]. It implies the provision of conditions for normal, physical and mental development and functioning of human being individually as well as in a group. Nutritional problems and health practices of tribal communities have been profoundly influenced by the inter-play of complex social, cultural, educational, economic and political practices [15]. The common beliefs, customs, traditions, values and practices connected with Nutrition and disease have been closely associated with the treatment of diseases. In most tribal communities, there is a wealth of folklore associated with health and nutritional belief [6, 10]. Tribal populations are particularly vulnerable to malnutrition due to their traditional socio-cultural practices and low literacy level. Several studies on growth and nutritional status were done in rural or urban India [17,18]. Studies on tribes are very few and there is very limited report on the nutritional status of Irular Tribe.

The finding in the present study opens a debatable point about the role of different indices of nutritional status assessment. The above finding reveals the women and children have been facing nutritional problems. Hence, the Government should implement the awareness and rehabilitation programmes. To know about the identification of the problem in early childhood to know about the identification of the problem in early childhood and adulthood and to improve the nutritional status of Irular Tribe along with socio-economic development.

Conclusion

From the above discussion, it can be attributed that the poor growth pattern of the Irular may be due to the poor socio-economic condition. Most of the Irula populations of Tamil Nadu live without modern health care and transport facilities. Hence, the Irular of the study area face many health and nutritional hazards due to poverty, illiteracy and ignorance. The health and nutrition status of the Irular tribes requires an immediate attention in the implementation of short-term supplementary feeding programmes, general medical, and awareness and health care facilities, improvement of food security are needed to overcome the nutrient deficits.

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Ethical Clearance- Taken from Pondicherry University Ethical Committee

Conflict of Interest – No conflict of interest.

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Impact of *m* Health to Improve Postnatal Visits among Postpartum Mothers in a Rural Community in Kakamega County, Kenya

Charles K. Ngigi[1], Justus O. Oseros[2], Anthony K. Wanyoro [3]

[1]Research Scholar, PhD (Epidemiology) Department of Community Health and Epidemiology, Kenyatta University, P.O Box 332 Kalimoni, Kenya, [2]Lecturer, Department of Community, Kenyatta University, [3]Professor, Department of Obstetrics and Gynaecology, Kenyatta University

Abstract

Background: There is an increase of mobile phone use globally with Kenya being among countries with increased usage both in rural and urban areas. Despite the widespread use of mobile phone, its use in health delivery services such as enhancing postnatal clinic (PNC) attendance is quite low. Countries such Kenya are exploring various interventions such as use of *m* health to improve the uptake of postnatal care. Postnatal visits have been reported in many studies to be low in many countries, and this has eventually affected the utilization of postnatal services. During the postnatal period the health care providers get opportunity to detect maternal and neonatal health problems in order to curb morbidities and mortalities.

Objective: This study aimed to determine the effect of mobile phone in enhancing postnatal visits among postnatal mothers in Kakamega County, Kenya

Methods: This was an experimental longitudinal and a facility based randomized control trial with a quantitative data. It was carried among 284 eligible postnatal mothers. Systematic sampling technique was used to recruit the study subjects. Data was analysed using SPSS version 21.

Results: There was a significant increase in attendance between control arm and intervention arm 3 (combination of SMS and voice call) by 40% in second PN, third 14% and 23% in fourth postnatal visit. There was a significant difference in adherence to second and third postnatal visit between control and intervention arms. We concluded that combination of voice call and SMS is 3.37 times more effective than voice call or SMS alone. The Kakamega County government should integrate use of mobile phone in delivery of health care services.

Key words*: m Health;Mobile phone technology; Maternal; postnatal mother;postnatal visits.*

Background to the Study

Postnatal period is the period starting from one hour after the placenta delivery and extends six months that follow.[1] During this period the mothers are expected to visit postnatal clinic to be offered postnatal services that are essential to the mother and the baby. Such visits provide the health worker with an opportunity to assess the mother and the baby and detect health problems early and offer appropriate interventions[2] with a goal to prevent morbidities and mortalities. Approximately 53% of mothers in Kenya attend postnatal clinic within two days after delivery whereas 34% do so in Kakamega County which is one of the counties with low attendance.

Studies suggest that improving postnatal services may increase the uptake of postnatal services and eventually prevent the maternal and neonatal deaths[3]. About 75% of neonatal deaths occur during the first week of life with majority of these deaths being found in developing countries[4]. About 300,000 maternal deaths occur within the first week after delivery and majority of them happen also in the developing countries[5]. Reducing

maternal and neonatal mortalities is of significant importance. In Kenya maternal mortality is at 362 per 100,000 live births with a neonatal mortality of 22 per 1000[6].

Mobile phone has a potential of transforming the health care sector such as postnatal clinic attendance[7]. Mobile telephone technology is one of the fastest channels of communication. World Health Organization[8] approximates about one hundred countries are experimenting mobile phone to improve the health indicators. There is an increasing popularity of mobile phone technology in passing health messages[9]. Mobile phone technology has attracted a lot of attention amongst the medical professionals just to evaluate whether it's use can improve appointment compliance [10] and health indicators of community members. Many studies have explored various strategies to improve maternal health and postnatal care. Chelagat*et al*. [11] proposed six strategies to improve maternal health especially postnatal care among them follow up care and coordinated postnatal care.

Materials and Methods

This was a facility based randomized control trial, a true experimental study, carried out in Kakamega County, Kenya. It was aimed to explore the effect of mobile phone in enhancing postnatal visits among the postnatal mothers in Kakamega County. The study sites included four selected sub county hospitals: Butere (control arm), Shibwe (arm 1-received voice calls), Malava (arm 2-received SMS), Navokholo (arm 3-received combination of SMS and voice call) where a study population of 284 postnatal mothers were recruited using systematic sampling. Two mobile phone reminders were sent 48 hours and 24 hours prior to the postnatal visit. We collected data using questionnaires from January to September 2020 with assistance of two trained research assistants in each study site. Adherence to second and third postnatal visit was dichotomized into adherence and non- adherence. Adherence was consistent attendance of both second and third PN clinic. Pretesting of the tools was done at Manyala Sub County hospital. Data was checked for accuracy and completeness and analysed using SPSS version 21. Chi-square was used to determine the significance of association where p-value was set at 0.05. Binary logistic regression was run to determine odds ratio. The study had been reviewed and cleared by Kenyatta University Ethical Committee. Informed consent was sought from all the study participants, privacy and confidentiality upheld throughout.

Results

Baseline and end line postnatal visits among study participants

Table 1 shows a summary of baseline and end line postnatal attendance by the study participants. In the baseline majority (29%) of participants attended second postnatal clinic in arm 2 with a low attendance (19%) reported in control arm. After sending reminders, majority of the participants (62%) from intervention arm 3 attended second postnatal visit whereas 53% of them from intervention 1, and only 25% in control arm visited. There was a significant difference in postnatal visits between control and intervention arms [(second postnatal visit (p=0.001), third postnatal visit (p=0.012) and forth postnatal visit (p=0.007)]. After running binary logistic regression postnatal visits increased 3.16 times after the voice call, 2.67 times upon sending SMS and 3.37 times after sending combination of SMS with voice calls.

Table 1 Baseline and end line postnatal visits

Postnatal visits	Control arm Frequency/%	Arm 1 Frequency/%	Arm 2 Frequency/%	Arm 3 Frequency/%	Totals	Significance
Baseline	n=80	n=80	n=80	n=80		
End line	n=67	n=72	n=71	n=74		

Cont... **Table 1 Baseline and end line postnatal visits**

2ND	Baseline	19(24%)	22(26%)	23(29%)	20(25%)	84(26%)	
	End line	18(25%)	38(53%)	34(48%)	46(62%)	136(47%)	p=0.001
3RD	Baseline	55(69%)	54(68%)	49(61%)	51(64%)	209(65%)	
	End line	48(67%)	56(78%)	54(76%)	61(82%)	214(74%)	p=0.012
4TH	Base line	10(13%)	5(6%)	6(8%)	9(11%)	30(9%)	
	End line	11(16%)	25(35%)	22(31%)	28(38%)	86(30%)	p=0.107

Baseline and end line adherence to second and third postnatal visit

Table 2 shows baseline and end line adherence to second and third postnatal visit. In the baseline participants (32%) adhered to second and third postnatal visit in arm 2 whereas after sending reminders 62% adhered in arm 3 with only 18% in control arm. There was a significant difference in adherence between control and intervention arms after sending the reminders (p=0.000).

Table 2: Baseline and end line adherence to second and third postnatal visit.

Adherence	Control Frequency/%	Arm 1 Frequency/%	Arm 2 Frequency/%	Arm 3 Frequency/%	Total	significance
Baseline	n=80	n=80	n=80	n=80		
End line	n=67	n=72	n=71	n=74		
Base line	17(21%)	21(26%)	26(32%)	23(29%)	87(27%)	
End line	12(18%)	32(56%)	36(49%)	28(62%)	133(47%)	p=0.000

Discussion

The study revealed mobile telephone reminders increased the postnatal visits. The postnatal mothers were being accessed using reminders in the homes just as Opuku[12] observed in his work. A higher attendance was observed in the intervention arm 3 because this arm had advantage of receiving both SMS and voice call reminders. Sending two reminders to the participants prior to the postnatal visit could have motivated them to adhere to the postnatal visits. This eventually increased the attendance and consequently utilization of postnatal services. It was noted that 47% of the postnatal mothers adhered to second and third postnatal visit. This is contrary to a study by Kikuchi *et al.*[3] in Combodia who observed only 5% of women completed the continuum of care. Lower adherence rate indicates the health workers are not able detect maternal and neonatal health problems early enough and make necessary interventions. However, this study may imply that for participants who adhered to second and third postnatal it was a good opportunity for them to prevent and be

treated for maternal and neonatal health problems. This study agrees with a study done in South Africa by Mokaya[13] that reported increased postnatal attendance after SMS and voice call reminders. Intervention arm 1 (voice call) had higher proportions than the intervention arm 2 (SMS) in all postnatal visits and even in adherence to second and third postnatal visit. This agrees with Bangal*et al.*[14] who found voice calls to be more effective than SMS. However, this study disagrees with Car (2012) who had indicated that SMS improved attendance more than voice calls. Studies done in Kenya[15] and another one in Tanzania [16] indicated significant rise in attendance among mothers who received SMS. The effect of voice call could be due to the possibility that through voice calls there was direct interaction with the participant as opposed to SMS where it was uncertain to confirm immediately whether the recipient read the SMS and understood it.

Conclusion

Combination of voice calls and SMS increased the postnatal visit 3.37 times whereas voice call increased by 3.16 and SMS by 2.67 times. There was a significant increase of postnatal clinic attendance in the second, third postnatal visit and forth postnatal visit between the control and intervention arms.

Recommendation

Kakamega County government should integrate the use of mobile phone technology in the delivery of postnatal services. This may help improve the low attendance and help in achieving Sustainable Development Goal 3 (SDG3).

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Ethical Clearance: This study was cleared by Kenyatta University Ethical Committee.

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Nursing Empowerment: A Concept of Professional Development in Nursing

Heaven Dahiya[1], Baby Bansal[2]

[1]Nursing Lecturer, Satya College of Nursing, VPO Sisar Khas, Meham, Rohtak, Haryana,
[2]Nursing Officer, Pt. B D Sharma PGIMS Rohtak, Haryana

Abstract

"Nurses dispense comfort, compassion and caring without even a prescription" -Val Saintsbury

The importance of empowerment in nursing profession is that the nurses will feel that they have the power to authorize their job, satisfaction in their job and feel appreciated. Besides, they will feel less worn-out in their work. It will also enhance the care of patient outcomes. Powerless nurses are less satisfied with their jobs and are more susceptible to burnout and depersonalization. Lack of nursing power may also contribute to poorer patient outcomes[1].

"The longer I'm in the profession, the more experiences shape my life, the more amazing colleagues influence me, the more I see the micro and macro power of nursing".- *Joni Watson*

Keywords - *Nursing Empowerment, Concept, Professional Development, Nursing*

Introduction

Empowerment is an inner strength and inner power transcending expected behaviors due to the importance and meaning that individuals derive from their work. It is a desirable and positive concept that incorporates energy and impetus to do good for oneself and others within a nursing context". Empowerment means it is a positive concept of a power or authority given on doing something. This is also a dynamic concept that can be shared, taken or given to others. "An individual is vested with power or authority legally or formally to perform certain tasks". It is also associated with growth and development of a person or an organization.

In Health care institutions, nurses encounter a lot of problems and challenges that make them stressed most of the time. So, it is necessary to have support and empowerment from Nursing Directors, Supervisors, Co-worker, and The General Manager of the hospital. A supportive workplace is highly valued by workers and makes a significant contribution to their productivity and effectiveness. Empowerment is one of the most important concepts in nursing and is most relevant to study of nursing professionals' job-related outcome.

Bish et al. (2014) Study conducted in rural and regional Victoria, Australia found that acknowledgement of structural empowerment by nurse leaders may assist in the process of formulating strategies to facilitate an open, honest and responsive culture of patient safety, removing silos, departmental turf issues and professional territoriality in healthcare services[2].

Wang et al. (2013) Findings suggest that empowered health profession may experience less emotional exhaustion. In contrast, disempowered employees experience greater levels of emotional exhaustion. Statistically significant positive correlation was also indicated between work empowerment and personal accomplishment[3].

Smith et al. (2012) Recent study conducted in California reported that nurses lacked the empowerment to influence their working conditions and perceived a lack of organizational support. A research conducted to examine the relationship between structural empowerment and anticipated turnover among behavioral health nurses stated that the factors that enhance nurses' perceptions of empowerment, particularly related to issues of retention and anticipated turnover among behavioral health nurses. The majority of participants

in this study perceived themselves as moderately empowered, there was a significant negative correlation between empowerment and anticipated turnover[4].

Cai et.al. (2011) revealed that empowerment is seen to enhance individual competence and self-esteem which, in turn, increase perceptions of personal control which has a direct effect on improving health outcomes[5].

Perm (2011) In Jordan, limited representative evidence studied the level of empowerment and factors contributing empowerment among nurses and most of the studies conducted to assess nurses' support which is part of empowerment. Study findings revealed that disempowered nurses were ineffective, less satisfied with their jobs, and more vulnerable to burnout and leave their job or profession. Also, it has a negative impact on quality improvement process, decision making ability and job performance development[6].

Ahmad & Oranye (2010) Comparative study entitled "Empowerment, job satisfaction and organizational commitment among nurses working in Malaysia and England" revealed that Malaysian nurses felt more empowered and committed to their organization as compared to English nurse and does not generate the same results in all countries, and there is difference in the outcomes of empowerment between nurses in different countries[7].

Armellino et al. (2010) Study conducted to examine the relationship between structural empowerment and patient safety culture among registered nurses (RNs) within adult critical care units revealed that structural empowerment and patient safety culture were significantly correlated. So, in order to foster patient safety culture, nurse leaders should consider providing structurally empowering work environments for RNs[8].

Richardson & Storr (2010) conducted a study implies that nurses' background variables significantly correlated with nurses' empowerment. Nurses who are Skillful, motivated, independent and experiencing less stressors during performance of nursing care associated with higher behavioral, verbal and outcome empowerment. Efforts to build safer health care systems have seen the global creation of organizations with the sole purpose of improving patient safety[9].

Wagner et al., (2010) Study revealed that empowered workplace can contribute to a healthy, productive and innovative registered nurses (RNs) workforce with increased job satisfaction and retention[10].

Irene et al., (2009) Study conducted in USA to evaluate the relation between psychological empowerment, service quality and Job satisfaction among certified nursing assistants with random sample of 60 certified nursing assistants and 56 employees from other management and non-management employee working in 12 different physical and mental health nursing home showed that certified nursing assistants awareness of empowerment and facility level service quality were strongly related to job satisfaction[11].

Lautizi et al., (2009) Study conducted in Italy adopted Kanter theory to investigate the relationship between staff nurses structural empowerment, work stress and job satisfaction in two health care settings revealed that there is a strong relationship between high levels of structural empowerment and job satisfaction, this study implied that organizational administration must make every effort to create organizational structures and systems that empower nurses to practice according to professional standards and optimize the use of their knowledge and expertise[12].

Laverack (2006) Nurses empowerment effect on patient health care outcome. Nurses who perceived themselves as empowered, use more effective work practices that will encourage others to be active participants and lead to positive patient outcomes. In addition, empowered nurses will be more satisfied and will empower their patients and will do all assignments in an efficient way; so that the quality of care will be improved[13].

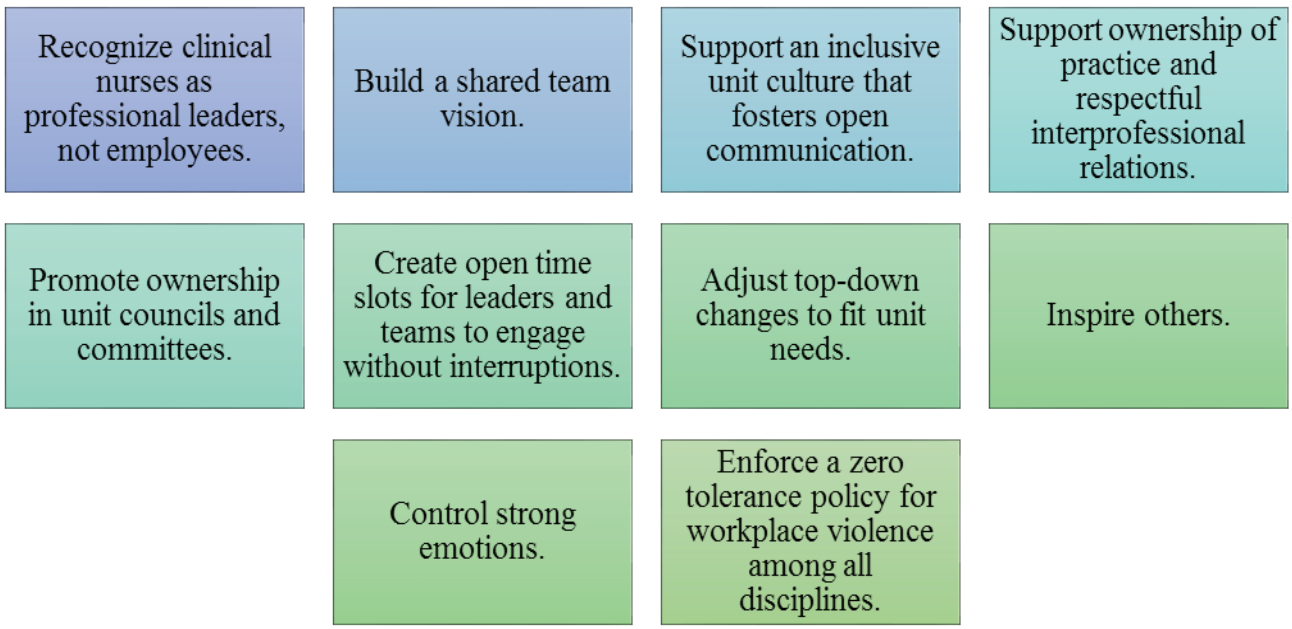
Discussion

Many nurses leave their positions because of negative experiences with heavy or unrealistic workloads and due to feeling unheard and undervalued, if not worse. Clinical nurses' sense of disempowerment can be related to deficient leadership interventions. For instance, these nurses feel managers are insensitive to their staffing needs, don't support employee well-being, and don't invest enough in staff education or clinical advancement. Even seemingly positive changes, when introduced to a unit without staff input, might result in lack of buy-in because nurses perceive this as being told "how to do our job." In contrast, empowered teams are supported by inclusive, nonauthoritarian, visionary, and emotionally intelligent leadership.

"Nothing about me without me" is the key phrase for more empowerment of clinical nurses. Staff RNs must see themselves as professional stewards of their unit, rather than as employees who clock in and out for a paycheck. Empowerment isn't something to be bestowed by hospital managers and executives. Nurses are leaders by virtue of their responsibilities; for them, empowerment isn't a privilege, but a professional necessity.

Conclusion

Ways to Empower A Nursing Team



The literature has clearly identified a relationship between nursing empowerment and important nursing outcomes as work stress, burnout, emotional exhaustion, individual competence, self-esteem, retention, nurse's accomplishment, job commitment, job satisfaction and job performance. All these variables are important in the field of nursing profession and lead to positive outcomes in health care.

Ethical Clearance– Taken from Research Committee

Source of Funding – Self

Conflict of Interest – Nil

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A Quasi Experimental Study to Evaluate the Effectiveness of Demonstration on Practice Regarding Breast Self-Examination among Girls of Selected Arts Colleges of Jalandhar, Punjab

Ramandeep Kaur

Professor cum Vice Principal, PhD Scholar, Himalayan University, Arunachal Pradesh, Lala Lajpat Rai Institute of Nursing Education, Gulab Devi Hospital, Jalandhar

Abstract

Breast budding in girls-their first sign of puberty starts at age 10 on average, with some girls starting as early as 8 and other not starting until 13.Breast cancer is the most commonlyoccurring cancer in women and the second most common cancer overall. The rates are increasing in nearly every region globally. Breast self- examination is a cost -effective and easy method that the every women can perform their own basis. So investigator thought that demonstration is a good method to give education with the help of teaching aids to make the topic more interesting and understandable. So decided to organize demonstration for creating awareness and to enhances practice of the girls regarding breast self -examination. The study was conducted on the girls of selected arts-colleges of Jalandhar i.e. take a sample of 100 girls belongs to arts colleges from three different villages i.e. Lyallpur Khalsa college, St .Solider group of institute, Banarsi Dass Arya college, Kanya Maha vidyalaya, Apeejay college of Arts, Government sports and arts college, D.A.V college and Doaba college, Jalandhar, Punjab. Non probability technique i.e. convenience sampling technique was used to select the sample. The sample was comprised of 100 girls'i.e. 50 in control group and 50 in experimental group. To obtain necessary data for the study, the tool was developed and for data collection self -structured checklist was used. The result of the present study revealed that the pre-test mean practice score of control group was 9.34 and the pre-test practice score of experimental group was 9.12, whereas the post test mean practice score of control group was 9.78 and post test mean practice score of experimental group was 17.16. The research hypothesis of the study was accepted, as the post test mean practice score regarding practice of breast self -examination among girls in experimental group was significantly higher than the post test mean practice score in control group so there was effectiveness of demonstration regarding practice of breast self-examination among girls in experimental group. There is no any association of practice regarding breast self- examination with their selected socio demographic variable among girls.

Keywords- *Demonstration, practice, breast self-examination, girls, arts colleges.*

Background of Study

Adolescence is a transitional stage in life when an individual is no longer a child, but not yet an adult. It is a period in which an individual undergoes enormous-physical and psychological changes,that brings transformation from childhood to adulthood.[1] Breast budding in girls-their first sign of puberty starts at age 10 on average, with some girls starting as early as 8 and other not starting until 13[2]. Breast development in the adolescent brings change in their body image. According to researchers, in today's scenario of modernization some women are exposed to use of alcohol, tobacco, cigarette smoking and some are using new technology equipment's of comfort like mobile phones and laptops which produce certain radiations which lead to development of cancer. Environmental factors and genetic factors also lead to the occurrence of cancer. Sometimes due to environmental changes our body cells are not able to adapt to the new

Corresponding author:
Ramandeep Kaur
Professor cum Vice Principal, PhD Scholar, Himalayan University, Arunachal Pradesh

environment which lead to accumulation of cells which later on converted into cancerous cells. So, there is need of providing knowledge to the women regarding breast self-examination. So, that they can detect and screen out any of the abnormality in breast in advance to get treatment in early stage.[3] Breast cancer is the most commonly occurring cancer in women and the second most common cancer overall[4].There were over 2 million new cases in 2018. The rates are increasing in nearly every region globally. Various methods have been evaluated as breast cancer screening tools, including mammography clinical breast examination. Breast self-examination is a cost-effective and easy method that the every women can perform their own basis.[5] As many studies indicated the practices of breast self-examination are low among University students. A study conducted in Cameroon among female undergraduate students in the university of Buea indicated that only 90% in the university of Buea knew to how to perform breast self-examination, only 13.9% knew what to look for while performing breast self-examination, and only 3% had perform breast self-examination regularly.[6] As a breast cancer is a current issue which people should be aware of breast examination. So they can diagnose the problem of breast cancer at early stage. So researcher wanted to conduct a research study on breast self- examination by giving demonstration to the girls of Arts college of Jalandhar Punjab, to spread awareness regarding importance of practice on breast self- examination. As no study was conducted on demonstration regarding breast self- examination in India and if done it is not published. So investigation thought that demonstration is a good method to give education with the help of teaching aids to make the topic more interesting and understandable. So decided to organize demonstration for creating awareness and to enhance practice of the girls regarding breast self- examination.

Objectives

1. To assess the pre-test practice regarding breast self-examination among the girls in control and experimental group

2. To plan and implement demonstration on breast self-examination among the girls in experimental group.

3. To assess the post-test practice regarding breast self-examination among the girls in control & experimental group.

4. To compare the pretest and post-test practice regarding breast self- examination among girls in control group and experimental group.

5. To find out association between post-test practice regarding breast self- examination among girls and their selected socio demographic variables in control and experimental group.

Hypothesis

H_o:-There is no significant difference between pre-test and post-test practice score regarding breast self-examination among girls in control and experimental group.

H_1:-There is significant difference between pre-test and post-test practice score regarding breast self-examination among girls in control and experimental group.

Materials and Methods

A quasi experimental research design was used to accomplish the stated objectives. Non-equivalent pretest post-test Control Group Design which was carried out to evaluate the effectiveness of the demonstration on practice regarding breast self-examination among girls.

Experimental group →O1→X→O2

Control group →O1→ O2

O1 =Pretest Practice

X = Demonstration regarding breast self-examination

O2= Post test Practice

Tool for data collection was described into following parts:

Part 1: socio-demographic variables consists of 12items for obtaining personal information about breast self-examination related to their age , religion, type of family, dietary pattern , educational level, regularity of menstruation, do you practice breast self-examination, knowledge and source of information regarding breast self-examination and usage of any hormonal therapy.

Part 2: It consists of procedure of breast self-examination.

Part 3: Self structured Check list consisted of 20 statement to assess the practice regarding breast self-examination among girls of Arts College. The maximum score was 20 and minimum score was 00. The response were qualified by giving score as follows:-Yes = 1 and No = 0.

Data was collected from 100 girls' i.e.50 in control group and 50 experimental group. Data was collected by using self –structured checklist related to breast self-examination among girls of selected Arts College written informed consent was taken from each study sample. The researcher introduced herself to the respondent and explained the purpose of gathering the information. They were assured that taken response would be kept confidential and used only for researcher purpose on the first day pre-test was taken from girls in control and experimental group demonstration regarding breast self-examination was given to girls in experimental group and on the seventh day posthaste was taken from girls in control and experimental group.

1. It took approximately 5 minutes to get basic information from both groups.

2.10-15 minutes were spent for pre -test.

3. One hour was spent on demonstration and clarifying doubts of experimental groups.

4. Post-test was taken after seven days.

Findings of the Study

Data was entered in master sheet for tabulation and statistical processing in order to analyzed and interpreted by using descriptive and inferential statistics. The data was represented under following heading.

SECTION 1:-Distribution of socio-demographic variables.

SECTION 2:-Analysis of pretest practice regarding breast-self-examination among girls in control and experimental group.

SECTION 3:-Analysis of post test practice regarding breast-self-examination among girls in control and experimental group.

SECTION 4:-Analysis of comparison of pre-test and post-test practice regarding breast-self-examination among girls in control and experimental group.

SECTION 5:-(a) Analysis of association between post-test practice regarding breast-self-examination among girls and selected socio-demographic variables in control and experimental group i.e. type of family, place of living, marital status, dietary pattern, menstruation process, knowledge about breast-self-examination and taking any hormonal therapy and practice of breast-self-examination.

(b) Association between post-test practice regarding breast-self-examination among girls and selected socio-demographic variables in control and experimental group i.e. religion, education level and source of information regarding breast-self-examination.

In pretest practice findings, out of 50 girls in control group score regarding practice of breast self-examination majority 28 (56 %) girls had poor practice, minority 22 (44 %) girls had average practice and none had good practice score, in comparison the pretest practice score of experimental score out of 50girls , majority 30 (60 %) had poor practice score minority 20 (40 %) had average practice score and none had good practice score.

In Post test practice score, out of 50 girls in control group majority 27 (54 %) had poor practice score , followed by 21 (42 %) had average practice score and minority2 (4 %) had good practice score in comparison with the post-test practice score of experimental group majority 44 (88 %) had good practice score and minority 6 (12 %) had Average practice score and none had poor practice score .

In comparison, the post-test mean practice score17.16 in experimental was higher than the post-test mean practice score 9.78 in control group and it was statically significant at $p < 0.0\ 5$ level as tcal18.0882>ttab1.98 at $p < 0.05$ level of significance. It showed that the post test of control and experimental group were significantly related. Pretest and post-test of experimental group was also significantly related as tcal32.9659 > ttab1.98at $p <$ o.o5 level of significance. Hence H_1 was accepted and Ho was rejected. It showed that demonstration was

effective in increasing the practice regarding breast self-examination among girls in experimental group.

Conclusion

It was concluded that the demonstration regarding Breast self-examination was found effective in enhancing the practice of Breast self-examination among girls of Arts Colleges.

Ethical Considerations

1. Ethical clearance was taken from ethical clearance committee.

2. Written informed consent was taken from subjects.

Source of Funding- Self

Conflict of Interest- Nil

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Effectiveness of Laughter Therapy on Level of Stress and Assertiveness among Elderly at Old Age Homes in Selected Areas

Rupali Subhash Walke

Lecturer, Vijaysinh Mohite Patil College of Nursing and Medical Research Institute, Akluj, Dist Solapur, State Maharashtra, India

Abstract

Background: Elders usually exhibit multiple health problems with complex interactions. Elderly people come voluntarily and some by force to the old age home. The level of stress and depression is more in those elderly people residing in old age home than those elderly people living with families. Elderly people residing in old age home have a feeling of hopelessness, helplessness and worthlessness. Now a day's most of the elderly people are isolated from families.

Aim of the Study: The present study was conducted to assess the effectiveness of laughter therapy on level of stress and assertiveness among elderly at old age homes in selected areas.

Methods: Evaluative approach. A one group pre test and post test (pre experimental) design was used for study. Probability cluster sampling technique was used for selection of sample.60 elderly people were selected as per availability and fulfillment of the preset criteria. A modified stress assessment scale and modified Lloyed SR assertiveness scale was used to assess the study variables.

Results: Before administering the laughter therapy, they had level of stress score in pretest, 53.3% of the elderly had moderate stress (Score 43-63) and 46.7% of them had severe stress (Score 64-84). After administering the laughter therapy, they had in posttest, 41.7% of the elderly had mild stress (Score 22-42) and 58.3% of them had moderate stress (Score 43-63). This indicates that the stress level of the elderly improved remarkably after laughter therapy. Before administering the laughter therapy, they had level of assertiveness score in pretest, 53.3% of the elderly at old age home had difficulty being assertive (score 10-20), 43.3% of them were nonassertive (Score 20-30) and 3.3% of them were naturally assertive (Score 30-40). After administering the laughter therapy, they had level of assertiveness score in posttest, 86.7% of them were nonassertive (Score 20-30) and 13.3% of them were naturally assertive (Score 30-40). This indicates that the assertiveness of the elderly at old age homes improved remarkably after laughter therapy.

Conclusion: The findings showed that laughter therapy had a positive effect on level of stress and assertiveness among elderly at old age homes in selected areas and improved the signs of physical, psychological as well as their social function.

Key words: *Laughter Therapy, Stress. Assertiveness, Elderly, Old age homes.*

Introduction

Although no period of the life cycle is free from stress, the later years can be a time of especially high risk. Frequently observed sources of stress for the older population include rapid environmental changes that require immediate reaction, changes in lifestyle resulting from retirement or physical incapacity, acute or chronic

Corresponding Author:
Rupali Subhash Walke
Lecturer, Vijaysinh Mohite Patil College of Nursing and Medical Research Institute, Akluj, Dist Solapur, State Maharashtra, India.

illness, the loss of significant others, financial hardships, and relocation.[1]

Assertive behavior promotes equality in human relationships, enabling us to act in our own best interests, to stand up for ourselves without undue anxiety, to express honest feelings comfortably, to exercise personal rights without denying the rights of others. (Alberti & Emmons)

Assertive behavior helps us feel good about ourselves and increases our self- esteem. It helps us feel good about other people and increases our ability to develop satisfying relationships with others. This is accomplished out of honesty, directness, appropriateness, and respecting one's own basic rights as well as the rights of others.[2]

Laughter is a great antidote to social anxiety. It provides us with physical, psychological, and social benefits, and distracts us from negative thinking habits by adding laughter to our daily lives; our therapy becomes more efficient and effective.[3]

Need of The Study

(WHO) Globally, the rate of growth of aging population is exceeding the general population. By 2036, three fourth of the world elderly population will be from the developing countries. World Health Organization (WHO) reported that, there are 80 million people above 60 years of age constituting 8 % of the total population in India. This is likely to reach 179 million by 2036 forming 13.3 % of the population. In India elders are being traditionally honored and respected. The urban migration has broken up the joint family system and changed the role of women in this modern society. These changes have altered the position and the status of the elderly. There are currently 354 old age homes in India. Many of the elderly complains about poor quality of life as being marked by the poverty, ill health and emotional insecurity.[4]

Problem Statement

'Effectiveness of laughter therapy on level of stress and assertiveness among elderly at old age homes in selected areas.'

Objectives of the Study

1. To assess the level of stress among elderly at old age homes.

2. To assess effectiveness of laughter Therapy on level of stress among elderly at old age homes.

3. To assess the level of assertiveness among elderly at old age homes.

4. To assess effectiveness of laughter therapy on level of assertiveness among elderly at old age homes.

5. To find the association between selected demographic variables and pretest study finding.

Methodology

Approach and design: - Evaluative approach. A one group pre test and post test (pre experimental) design was used for study.

Sampling technique: - Probability cluster sampling technique was used for selection of sample.

Sampling Size: - 60 elderly people were selected as per availability and fulfillment of the preset criteria.

Setting: - Selected old age homes.

Data collection:-

Pre test done with the help of modified stress assessment scale and modified Lloyed SR assertiveness scale through structural interview schedule. After assessment of stress and assertiveness level prior to intervention than 20 minute laughter therapy given to group up to 21 days. On 21st day onward post test was done in group.

Results

The information about the effectiveness of laughter therapy on level of stress among elderly at old age homes. In pretest, 53.3% of the elderly had moderate stress (Score 43-63) and 46.7% of them had severe stress (Score 64-84).In posttest, 41.7% of the elderly had mild stress (Score 22-42) and 58.3% of them had moderate stress (Score 43-63). This indicates that the stress level of the elderly improved remarkably after laughter therapy.

Table 1: Paired t-test for the effectiveness of laughter Therapy on level of stress among elderly at old age homes

N=60

	Mean	SD	T	df	p-value
Pretest	62.4	4.3	29.3	59	0.000
Posttest	43.2	4.9			

In pretest, 53.3% of the elderly at old age home had difficulty being assertive (score 10-20), 43.3% of them were nonassertive (Score 20-30) and 3.3% of them were naturally assertive (Score 30-40).In posttest, 86.7% of them were nonassertive (Score 20-30) and 13.3% of them were naturally assertive (Score 30-40). This indicates that the assertiveness of the elderly at old age homes improved remarkably after laughter therapy.

Table 2: Paired t-test for the effectiveness of laughter therapy on level of assertiveness among elderly at old age homes.

N=60

	Mean	**SD**	**T**	**df**	**p-value**
Pretest	20.8	3.6	13.4	59	0.000
Posttest	27.3	3.2			

Measure Findings of the Study:

1. Description of samples (elderly) based on their personal characteristics

Here are the findings related to the demographic data. 21.7% of the elderly had age 60-65 years, 15% of them had age 66-70 years, 35% of them had age 71-75 years and 28.3% of them had age above 75 years.

55% of them were males and 45% of them were females.

55% of them were married, 6.7% of them were single, 16.7% of them were divorced and 21.7% of them were widow/widower.

28.3% of them had primary education, 21.7% of them had secondary education, 36.7% of them had higher secondary education and 13.3% of them had graduation and above.

40.0% of the elderly from old age home were residing from 0-2 yrs, 18.3% were residing from 3-4 yrs, 33.3% were residing from 5-6 yrs and 8.3% were residing from Above 6 yrs respectively.

2. Analysis of data related to the effectiveness of laughter Therapy on level of stress among elderly at old age homes

Before administering the laughter therapy, they had level of stress score in pretest, 53.3% of the elderly had moderate stress (Score 43-63) and 46.7% of them had severe stress (Score 64-84). After administering the laughter therapy, they had in posttest, 41.7% of the elderly had mild stress (Score 22-42) and 58.3% of them had moderate stress (Score 43-63). This indicates that the stress level of the elderly improved remarkably after laughter therapy.

Researcher applied paired t-test for the effectiveness of laughter Therapy on level of stress among elderly at old age homes. Average stress score in pretest was 62.4 which reduced to 43.2. T-value for this test was 29.3 with 59 degrees of freedom. Corresponding p-value was

0.000, which is small (less than 0.05), the null hypothesis is rejected. This is evident that the stress level of the elderly improved significantly after laughter therapy.

3. Analysis of data related to the effectiveness of laughter therapy on level of assertiveness among elderly at old age homes

Before administering the laughter therapy, they had level of assertiveness score in pretest, 53.3% of the elderly at old age home had difficulty being assertive (score 10-20), 43.3% of them were nonassertive (Score 20-30) and 3.3% of them were naturally assertive (Score 30-40). After administering the laughter therapy, they had level of assertiveness score in posttest, 86.7% of them were nonassertive (Score 20-30) and 13.3% of them were naturally assertive (Score 30-40). This indicates that the assertiveness of the elderly at old age homes improved remarkably after laughter therapy.

Researcher applied paired t-test for the effectiveness of laughter Therapy on assertiveness among elderly at old age homes. Average assertiveness score in pretest was 20.8 which reduced to 27.3. T-value for this test was 13.4 with 59 degrees of freedom. Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. This is evident that the assertiveness level of the elderly improved significantly after laughter therapy.

4. Analysis of data related to the association between selected demographic variables and pretest study finding

For the association between selected demographic variables and pretest study finding the investigator used Fisher's exact test.

Since p-value corresponding to duration of staying in old age home is small (less than 0.05) , Duration of staying in old age home was found to have significant association with the stress among elderly at old age homes.

5. Analysis of data related to the association between selected demographic variables and stress among elderly at old age homes

For the association between selected demographic variables and stress among elderly at old age homes investigator used Fisher's exact test.

Since p-value corresponding to duration of staying in old age home is small (less than 0.05) , Duration of staying in old age home was found to have significant association with the stress among elderly at old age homes.

6.Analysis of data related to the association between selected demographic variables and assertiveness among elderly at old age homes

For the association between selected demographic variables and assertivness among elderly at old age homes investigator used Fisher's exact test.

Since all the p-values are large (greater than 0.05), none of the demographic variables was found to have significant association with the assertiveness among the elderly at old age homes.

Conclusion

The findings showed that laughter therapy had a positive effect on level of stress and assertiveness among elderly at old age homes in selected areas and improved the signs of physical, psychological as well as their social function.

Ethical Clearance – Taken from ethics committee of college.

Source of Funding- Self

Conflict of Interest- Nil

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Stress due to Travel Ban for Pandemic during Vacation among Expatriates of Saudi Arabia

Sahbanathul Missiriya Jalal[1], Sheeba Kumari Chacko[2], Mary Sheela David[2], Zahra Mohammed Bo Khamseen[3]

[1]Assistant Professor, [2]Lecturer, Nursing Department, [3]Intern, Nursing Department, College of Applied Medical Sciences, King Faisal University, Al-Ahsa, Kingdom of Saudi Arabia

Abstract

Objectives: The government of Saudi suspended international flights for an indefinite period temporarily to many countries after the World Health Organization announcement of Corona Virus Disease (COVID-19) as a pandemic. Saudi expatriates used to visit their native country during summer vacation. However, this pandemic crisis is generating stress to the expatriates. Hence, the study aimed to investigate the stress due to the travel ban in the pandemic crisis among expatriates of Saudi Arabia and associate the demographic variables with stress.

Methods: A cross-sectional study was conducted from May 2020 to August 2020 in the Al-Ahsa region of Saudi. Totally 264 expatriates, who met the inclusion criteria were selected by convenient sampling technique. The data collected through a structured questionnaire and ten points perceived stress scale (PSS) using the electronic method. The collected data were analysed by applying descriptive and inferential statistics using SPSS 20.0.

Results: Among 264 expatriates, 25(9.5%) were low stressed, 157(59.5%) were moderately stressed, and 82(31%) were severely stressed. The findings revealed that females faced higher stress than males($p<0.01$) and married than unmarried ($p<0.001$). The expatriates felt more stressed ($p<0.001$) when their dependents stayed outside the kingdom. There was a significant association between age, occupation, nationality, and family type with the level of stress ($P<0.05$).

Conclusion: The level of stress was high among expatriates due to the travel ban. There is a need for psychological counselling and support. Pandemic control and safe international travel access can be the future solution to reduce stress.

Keywords: *COVID-19; Expatriates; Pandemic; Stress; Travel ban*

Introduction

The coronavirus disease (COVID-19) is a serious pathogenic infection caused by the novel coronavirus in human beings.[1] COVID-19 affected a large number of people who were exposed to an infected person. Most of the countries and territories around the world were in the sustained risk of further global spread.[2] The World Health Organization (WHO) on March 11, 2020, declared COVID-19 outbreak as a global pandemic.[3]

National responses towards the control and prevention of the COVID-19 pandemic were different and the actions *have* been varied. Most of the countries around the world have implemented major precautionary and protective measures like implementing state-wise

Corresponding Author:
Dr. Sahbanathul Missiriya Jalal, Ph.D.
Assistant Professor, Building No.110, Nursing Department, College of Applied Medical Sciences, King Faisal University, Al-Ahsa, Kingdom of Saudi Arabia. Email-sjalal@kfu.edu.sa.

or country-wise lockdowns, quarantines, and travel ban to control virus spread.[4]The government of Saudi suspended international travel for an indefinite period temporarily to many countries. Similarly, the other national countries of expatriates also suspended the flight landing.

In 2020, the total population of Saudi Arabia stands at 34.81 million according to the data provided by the World Bank in which approximately 10.4million people are expatriates from various countries such as Syria, India, Pakistan, Egypt, Yemen, Bangladesh, Sri Lanka, Philippine, Indonesia, Turkey, Jordan, Palestine and Westerns.[5,6]

A cross-sectional study conducted to investigate the immediate impact of mental health and its related lifestyle habits and quality of life among Chinese adults in mainland China due to the COVID-19 pandemic one week after Wuhan locked down and travel restrictions which were imposed by the Chinese government. The pandemic crisis was associated with mild stressful impact.[7] However, the results were not specific about the impact of the COVID-19 pandemic on the psychological responses among the general population. That may be due to the disease outbreak was not regarded as severe during the time that the study was conducted.[8]

Most of the expatriates of Saudi used to visit their native during the summer vacation. This will enhance the refreshment of mind and relaxing by spent with their relatives which increases family bonding[9]. Because of the travel ban in almost all countries, prevent the expatriates to go to meet their loved ones and relatives. However, this pandemic crisis may be generating stress[10] to the expatriates which may have impacts on their health and well-being[11]. There is inadequate information about psychological issues due to unavailable studies. Hence, the study aims to investigate the stress due to the travel ban in the pandemic crisis during summer vacation among expatriates of Saudi Arabia and associate the stress level with selected demographic variables.

Materials and Methods

Study Design and Setting

In the descriptive method, a cross-sectional study was conducted from May 2020 to July 2020 in the Al-Ahsa region of the Kingdom of Saudi Arabia, which has around 293,179 total population. Approximately 10000 expatriates from various countries were residing in this area. Sample size calculation was done using open-source epidemiologic statistics for public health tools software. The sample size calculation was done on the target population size of 320 according to the estimated proportion of 0.3 with a specified level of confidence interval at 0.95 (95%) with significance at 0.05 (5%). Total number of 264 expatriates participated in this study with their willingness.

Sampling

The other nationality people aged from 20 years and above including both male and female gender residing in the Al-Ahsa region and who showed a willingness to participate in the study were selected by using a convenient sampling technique.

Measurement tool

A well-structured questionnaire was developed concerning the research topic. Based on the objectives of the research, the tool was created and made easy to understand by reading in the English language commonly. The tool was validated by 3 experts in the medical field for getting the proper results. The instrument consisted of 3 parts. The first part has 9 questions related to demographic information consists of age, gender, education, occupation, marital status, nationality, family type,and duration of living in Saudi. The second part has 8 questions which are related to travel information of native visits during summer and the third part includes ten points perceived stress scale (PSS). This is one of the precise measures of a tool to assess the psychological stress among people. This was developed in the year 1983 originally, and it is a good classic instrument for stress assessment[12]. It helps to understand the various situations that may affect the feelings and emotions. The questions on this scale usually ask about the thoughts and feelings that happened during the last month and that will indicate how often the people felt or thought in a certain way. However, the tool used here to determine the thoughts and feelings that happened in the samples from the period of April 2020 to June 2020 during the travel ban to visit their native place by the way to determine the perception of stress. For each question the options were given with score as follows: 0 – never; 1

- almost never; 2 – sometimes; 3 – fairly-often; 4 - very often. But, the scores reversed for questions 4, 5, 7, and 8 {0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0). Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress. The score can be determined by the directions of scores ranging from 0-13 would be considered low stress, scores ranging from 14-26 would be considered moderate stress, and scores ranging from 27-40 would be considered high perceived stress.

Data collection

The data was collected from the expatriates residing in the Al-Ahsa region of Saudi Arabia from May 2020 to August 2020. The written consent was obtained from all participants who were willing to participate in the study. The structured questionnaire was administered through Whats-app or email or face-book electronically as a link privately by using google form which is an online survey tool. This survey tool was created by the principal investigator and the responses were kept confidential. All the participants were very familiar with handling this online method of survey.

Analysis Method

The frequency and percentage distribution of expatriate's demographic information analyzed using descriptive statistics. According to the PSS score interpretation, the level of stress was categorized into none, mild stress, moderate stress, and severe stress which was analyzed by descriptive and inferential statistics. The chi-square analysis was used to associate the stress level with selected demographic variables. All analyses were performed using the Statistical Package for the Social Sciences. For the normality test, the level of significance equal to .05 was calculated for all statistical analyses.

Results

A total of 264 expatriates completed and submitted the structured questionnaires.

Table 1: Frequency and percentage distribution of demographic variables of expatriates

Demographic variables (n=264)		F (%)
Age in years	20 - 30 years	16 (6.1)
	31 - 40 years	96 (36.3)
	41 - 50 years	136 (51.5)
	51 - 60 years	16 (6.1)
Gender	Male	121 (45.8)
	Female	143 (54.2)
Education	Higher secondary	26 (9.8)
	College & others	238 (90.2)
Occupation	Dependent	65 (24.6)
	Government employee	87 (33.0)
	Private employee	112 (42.4)
Nationality	Indian	143 (54.2)
	Philippine	47 (17.8)
	Egyptian	51 (19.3)
	Pakistan	14 (5.3)
	Others	9 (3.4)

Cont... **Table 1: Frequency and percentage distribution of demographic variables of expatriates**

Marital status	Unmarried	12 (4.5)
	Married	252 (95.5)
Family Type	Bachelor	19 (7.2)
	Husband & Wife	32 (12.1)
	Spouse with Children	213 (80.7)
Duration of living in Saudi	< 1 year	24 (9.1)
	1-5 years	86 (32.5)
	6-10 years	91 (34.5)
	>10 years	63 (23.9)
Chronic Health Illness	DM	23 (8.7)
	HT	19 (7.2)
	Others	31 (11.7)
	None	191 (72.4)

The frequency and percentage distribution of demographic variables of expatriates are shown in (Table 1). The majority of the participants 136 (51.5%) were aged between 41 to 50 years. The mean age was 40.8 (±2.4) years. Among them 143 (54.2%) were females and 238 (90.2%) were graduates. Regarding occupation, 112 (42.4%) were in private and 87 (33%) were in government organizations. There were 143 (54.2%) Indians and the remaining were from Pakistan, Philippine, Egypt, and few 9 (3.4%) from Sudan, Bangladesh, and Syria. The majority of the expatriates 252 (95.5%) were married and 213 (80.7%) were living with their spouse and children. About the duration of living in Saudi, 91 (34.5%) were staying around 6-10 years. Mostly, 191 (72.4%) were not having any chronic health illnesses.

Table 2: Frequency and percentage distribution of travel informationof expatriates

Travel information(n=264)		**F (%)**
How often you used to go on vacation to your native country?	Yearly Once Twice yearly Two years once If necessary	202 (76.5) 28 (10.6) 12 (4.6) 22 (8.3)
Is anybody of your dependent outside Kingdom now?	Yes No	196 (74.2) 68 (25.8)
If yes – Who? (What was the relationship for You) (n=196)	Husband Wife Child Both life partner and Children Parents	24 (12.2) 32(16.3) 64 (32.7) 17 (8.7) 59 (30.1)

Cont... **Table 2: Frequency and percentage distribution of travel informationof expatriates**

When did you plan to go to native in this year 2020?	April May June July	16 (6.1) 113 (42.8) 37 (4.0) 98 (37.1)
How many months did you plan to stay in your native country?	1 month 2 months 3 months	27 (10.2) 191(72.4) 46 (17.4)

The frequency and percentage distribution of travel information during the summer vacation of expatriates are shown in (Table 2). Most of the participants 202 (76.5%) answered yearly once visit their native country. Around 196 (74.2%) were stated that their dependents were in the outside of the kingdom. In that, 64 (32.7%) mentioned children, 59 (30.1%) told parents 17 (8.7%) answered both life partners and children, and the remaining told either husband or wife stayed outside of Saudi. Nearly 113 (42.8%) were planned to go to native this year 2020 and the majority 191 (72.4%) wanted to stay 2 months in their native country.

The PSS frequency and percentage distribution were indicated in (Table 3). For questions 1, 2, 3, 6, 9, and 10 the options were given with score as 0 for never, 1 for almost never, 2 for sometimes, 3 for fairly-often, and 4 for very often. But, for questions 4, 5, 7, and 8 the scores-were given reversely. The results showed that most of the people were mentioned sometimes which is (scored 2) for all the 10 questions asked in PSS. Some of them answered very often.

Among the total of 264 expatriates,25 (9.5%) were low stressed with scores between 1-14, the majority of the participants157 (59.5%) were moderately stressed, and 82 (31%) were severely stressed which was depicted in (Figure 1). The mean value and standard deviation for low stress were 10.44+2.063, for moderate stress 21.59-+3.42, and high stress 31.06+3.42. The overall minimum score obtained was 5 and the maximum score was 39 in PSS which was shown in Table 4.

Table 3: Frequency and percentage distribution of PSS as reported by expatriates:

S. No.	Perceived Stress Scale Questions(n=264)	Never	Almost never	Sometimes	Fairly often	Very often
1.	How often have you been upset because of something that happened unexpectedly?	12 (4.5)	17 (6.4)	104 (39.4)	79 (29.9)	52 (19.8)
2.	How often have you felt that you were unable to control the important things in your life?	9 (3.4)	21 (8)	95 (36)	98 (37.1)	41 (15.5)
3.	How often have you felt nervous and stressed?	19 (7.2)	57 (21.6)	146 (55.3)	29 (11)	13 (4.9)
4. *	How often have you felt confident about your ability to handle your personal problems?	77 (29.2)	38 (14.4)	117 (44.3)	21 (8)	11 (4.1)
5. *	How often have you felt that things were going your way?	16 (6.1)	69 (26.1)	83 (31.4)	54 (20.5)	42 (15.9)
6.	How often have you found that you could not cope with all the things that you had to do?	14 (5.3)	29 (11)	95 (36)	73 (27.7)	53 (20)

Cont... **Table 3: Frequency and percentage distribution of PSS as reported by expatriates:**

7. *	How often have you been able to control irritations in your life?	23 (8.7)	68 (25.8)	128 (48.5)	28 (10.6)	17 (6.4)
8. *	How often have you felt that you were on top of things?	22 (8.3)	96 (36.4)	92 (34.8)	35 (13.3)	19 (7.2)
9.	How often have you been angered because of things that happened that were outside of your control?	12 (4.5)	34 (12.9)	76 (28.8)	91 (34.5)	51 (19.3)
10.	How often have you felt difficulties were piling up so high that you could not overcome them?	16 (6.1)	29 (11)	89 (33.7)	72 (27.3)	58 (21.9)

**Score reversed (0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0).*

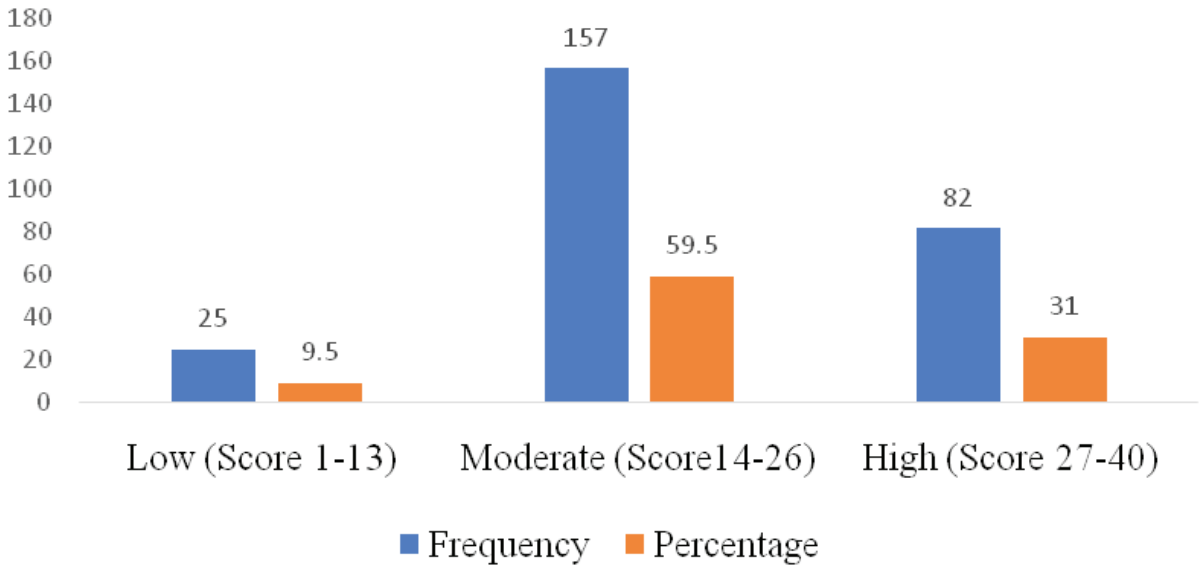


Figure.1 Frequency and percentage distribution of level of stress (n=264)

Table.4 Mean and standard deviation of level of stress (n=264)

Stress Level	Mean	SD	Minimum Score	Maximum Score
Low (1-13)	10.44	2.063	5	13
Moderate (14-26)	21.59	3.42	14	26
High (27-40)	31.06	3.42	27	39

Table.5 Association between demographic information and level of stress (n=264)

Demographic Information	Lowstress	Moderate stress	High stress	Chi-square test
Age in years 20 - 30 years	3	11	2	χ^2 =18.1861 P=0.005784*
31 - 40 years	7	67	22	
41 - 50 years	11	70	55	
51 - 60 years	4	9	3	
Gender Male	12	85	24	χ^2 =13.4742 P=0.001186*
Female	13	72	58	
Education Higher secondary	3	13	10	χ^2 =1.0738 P=0.584553 (NS)
College & others	22	144	72	
Occupation Dependent	4	28	33	χ^2 =41.8955 P=0.00001*
Government employee	7	42	38	
Private employee	14	87	11	
Nationality Indian	12	75	56	χ^2 =20.9858 P=0.007185*
Philippine	5	38	4	
Egyptian	3	33	15	
Pakistan	3	7	4	
Others	2	4	3	
Marital status Unmarried	5	6	1	χ^2 =16.0421 P=0.000328*
Married	20	151	81	
Family Type Bachelor	11	6	2	χ^2 =60.5498 P=0.00001*
Husband & Wife	4	22	6	
Spouse with Children	10	129	74	
Duration of living in Saudi < 1 year	2	18	4	χ^2 =8.6016 P=0.197255(NS)
1-5 years	8	42	36	
6-10 years	9	58	24	
>10 years	6	39	18	

Cont... **Table.5 Association between demographic information and level of stress (n=264)**

Chronic Health Illness Diabetes Mellitus	**3**	**14**	**6**	**χ^2 =10.5591 P=0.102995(NS)**
Hypertension	4	8	7	
Others	6	18	7	
None	12	117	62	

** p-value ≤ 0.05 considered statistically significant; NS considered Nonsignificant.*

Table.6 Association between travel information and level of stress (n=264)

Travel Information		**Low stress**	**Moderate stress**	**High stress**	**Chi square test**
How often you used to go on vacation to your native country?	Yearly Once	18	118	66	χ^2 =4.7538 P=0.57575(NS)
	Twice yearly	2	18	8	
	Two years once	3	6	3	
	If necessary	2	15	5	
Is anybody of your dependent outside Kingdom now?	Yes	6	109	81	χ^2 =60.723 P=0.00001*
	No	19	48	1	
If yes – Who? (What was the relationship for You) (n=196)	Husband	1	9	14	χ^2 =6.42923 P=0.59926(NS)
	Wife	1	22	9	
	Child	2	35	27	
	Life partner & Children	1	9	7	
	Parents	1	34	24	
When did you plan to go to native in this year 2020?	April	3	9	4	χ^2 =20.8 P=0.001992*
	May	12	79	22	
	June	4	23	10	
	July	6	46	46	
How many months did you plan to stay in your native country?	1 month	14	9	4	χ^2 =81.6398 P=0.00001*
	2 months	7	132	52	
	3 months	4	16	26	

** p-value ≤ 0.05 considered statistically significant; NS considered Nonsignificant.*

The findings revealed (Table 5 and 6) that females faced high stress than males ($p<0.01$) and married than unmarried ($p<0.001$). The expatriates felt more stressed ($p<0.001$) when their dependents stayed outside the kingdom. There was a significant association between age, occupation, nationality, and family type with the level of stress ($P<0.05$).

Discussion

Stress is a feeling of physical or emotional tension and the reaction of the body to a demand comes from any thought or event which will make the people feel more frustrated, angry, or sometimes nervous[13]. COVID-19 pandemic causes people to be stressful[14]. In addition to this crisis, the travel ban makes the expatriates more stressed. The present study evidenced that among the total of 264 expatriates, 9.5% were low stressed, 59.5% were moderately stressed, and 31% were severely stressed. A cross-sectional study conducted on the psychological distress in Saudi[15], in that the data was collected from the participants via an online self-reported questionnaire which is consistent with the current study. However, the results revealed that 40% of the population were distressed of whom approximately 33% were mildly distressed, while 7% were severely distressed. This result was compared by another study in which 7.5% were highly stressed[16]. Similarly, the study results reported that people had 24.5% mild stress, 39.6% moderate stress, and 18.9% high stress[17].

The distress levels are particularly high amongst the females and private sector employees which is supporting the present study[15].The mean stress score for healthcare workers[18] was 13.70 ± 10.68 which was compared to our study the mean score of stress among the expatriates was 23.48 ± 6.87. The overall minimum score obtained was 5 and the maximum score was 39 in PSS.

Several variables such as age, gender, and history of contact with confirmed COVID-19 cases were significantly associated with higher DASS-21 scores[18].Similarly, in this study, there was a significant association between age, occupation, nationality, and family type with the level of stress according to PSS scores ($P<0.05$).

Stress during such kind of pandemic crisis period affects not only the people psychologically and emotionally[19] but is also likely to identify the mental health problems in future years. Therefore, the relevant authorities take some initiatives to implement early identification and preventive measures to prevent further consequences in their health.

Limitations of the study

The study was conducted to assess the stress level which was measured by a self-reported online questionnaire, in which there might be a chance for bias because of the expatriate's inaccurate responses.

Conclusion

This study showed that there was a high level of stress among expatriates due to the travel ban. The pandemic of COVID-19 and due to that travel restrictions has had a significant impact on the mental health of the expatriate population. Since March 2020 onwards many expatriates were more stressed and unable to handle the crisis situation. However, there is a need for psychological counselling and support to the expatriates. Pandemic control and safe international travel access can be a future solution to reduce stress.

Source of Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interest: There is no conflict of interest.

Ethical approval: This study was approved by the Institutional Review Board of College of Applied Medical Science, King Faisal University.

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Role of Mass Media on Behavioural Patterns among School Children of Selected Educational Institutes at Gandhinagar

Vijesh Patel

Assistant Professor, Apollo Institute of Nursing, Gandhianagar, Gujarat
(A Unit Apollo Hospital Internationals Limited)

Abstract

Children learn better when they socialise with items, tools and people in their environment. Provision of creative fun-filled environment boosts children's learning.[6] Objectives of the study was to assess the exposure level of Mass Media in School children**,** To determine the impact of Mass Media on behavioural patterns of School children and To determine the relationship between the behavioural patterns of School children and selected demographic variable. The research design adopted for this study is descriptive design**.** The subjects consisted of 80 School children who fulfilled the inclusion criteria of this study and Stratified random sampling was used to select respondents from each strata. A likert scale was used to assess use of mass media and the impact of mass media on behaviour pattern from the subjects. The data analysis was done with descriptive and inferential statistics. The data was analyzed using the frequency distribution and percentage. The association of the mass media usage & behaviour pattern with the demographic variable was done. The level of significance was set at 0.05.The findings indicates that more than half (53.8%) of the School children had moderate impact of mass media on behavioural pattern, 41.3% of them had mild impact and 5% of them had severe impact of mass media on behavioural patterns. Conclusion of the findings in the study conducted indicate that more than half (53.8%) of the School children had moderate impact of mass media on behavioural pattern, 41.3% of them had mild impact and 5% of them had severe impact of mass media on behavioural patterns also affected academic performance, daily activities & isolation, sleep, dietary pattern.

Key Words*: Mass media, Behavior patterns, School children.*

Introduction and Background

The continuing modernization and technical advancement of the developing world has brought rapid life style changes.[5] All these changes have their root in childhood. Physical activity is an important component of a healthy life style, in case of children but moreover it is seen due to increased use of mass media now days it causes various problems especially related to behavioural changes along with physical problems.[1]

Jaffar Abbas and etc. had done study on The Impact of Social Media on Learning Behaviour for Sustainable Education: Evidence of Students from Selected Universities in Pakistan on 2019. This study aims to examine the constructive and adverse factors that impact on students' minds and how these helped students to share positive and negative aspects with others. This study adapted the cluster sampling method, and respondents participated from five selected regions. Researchers distributed 1013 questionnaires among the targeted sample of university students with an age range of 16 to 35 years, and they collected 831 complete/valid responses. This study applied the social gratification theory to examine students' behaviour practicing social media usage. This study specifically identified 18 adversarial and constructive factors of social media from the previous literature. The findings revealed that the usage of social media in Pakistan has a negative influence on a student's behaviour as compared to positive aspects. This study presents a relationship between antithetical and creative characteristics of social media and exhibits avenues for future studies by facilitating a better understanding of web-based social network use.[2]

Esther W. Mwangi and etc. had study on the role of mass media as a socialisation agent in shaping behaviour of primary school pupils in thika sub-county, Kenya on 2019.The main goal of this study was to assess the role of mass media as a socialisation agent in shaping pupils' behaviour in primary schools in Thika Sub-County, Kenya. The study was guided by Albert Bandura's Imitative Observation Theory. This theory indicates that behaviour depicted by others is easily imitated by young children. The study adopted the descriptive survey research design. The target population comprised of 69 head teachers, 570 teachers, 3256 pupils and one Sub County Education officer. The study applied Gay Principle to determine the sample size of 7 head teachers, 57 teachers and 35 primary school pupils. Simple random sampling was applied to select the respondents who participated in the study. The main research instrument was the questionnaire. Data was analysed descriptively using Statistical Package for Social Sciences (SPSS) version 20. The study found that majority (88.0%) of the teachers agreed that their pupils had access to mass media in form of television and Internet based media. The study noted only a very small proportion of children did not have access to mass media at home. The study concluded that at home, most children spend most of their time listening to radio, watching television programmes, or playing video games.[4]

Material and Method

A descriptive study was conducted on 80 School children of selected educational institutes at Gandhinagar. Stratified random sampling technique was used for selecting the samples. A written consent was taken from the subjects. The tool was administered to the students. Assurance was given regarding the confidentiality and conducive environment was maintained.

Tools and Techniques:

The tools and techniques used in the present study were as follows" Baseline Performa.

1. Questionnaire related to exposure to mass media.

2. Rating scale on behavioural patterns of School children

3. Rating scale for impact of mass media on behaviour pattern assessment

Findings

Table 1: Impact of Mass media on behavioural patterns of School children

Impact of mass media	Freq	%
Mild (Score 20-33)	33	41.3%
Moderate (Score 34-47)	43	53.8%
Severe (Score 48-60)	4	5.0%

More than half (53.8%) of the School children had moderate impact of mass media on behavioural pattern, 41.3% of them had mild impact and 5% of them had severe impact of mass media on behavioural patterns.

Conclusion

The findings reveal that the use of mass media has major impact on the behavioural patterns of School children. Thus various interventions can be planned based on this study which would help the School children improve the behaviour related problems in relation to the exposure to the mass media.

Ethical approval: Obtained from institutional ethical board and formal permission was taken from school.

Source of Funding: Self

Conflict of Interest: None

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Nurses' Clinical Skill Utilisation: An Opinion from Public Health Institutions

Santosh Mahindrakar[1], Mansingh Jat[2], Besty Ann Varghese[3]

[1]Research Coordinator IAPH New Delhi, [2]Nursing Officer, All India Institute of Medical Sciences, New Delhi, [3]Nursing Officer, All India Institute of Medical Sciences, New Delhi

Abstract

Background: Nurses are the backbone of health care systems worldwide. In India, the assessment of existing knowledge of nursing workforce and the utilization of skills is not evaluated and properly used to ensure good quality in health care.

Methods: Using the Delphi technique a survey was developed and sent to nurses. Self- rating methods (on a likert scale) were used in order to operationalize the personal skills.

Results: Almost half (48%) of the participants have a Bachelor degree. Out of this 27.2% qualified for a higher education (e.g. Master in related subject). Most nurses (56% in sample were females) are permanent employed working as staff nurse or nursing officers in the public sector. Among the participants. 20% have sufficient teaching experience between 1 to 3 years. Self-rating of skills was high in almost all topics.

Conclusion: Having attained higher education most of the participants remain working as staff nurses. The good self-rating of participants underlines their ability to take over much higher positions and responsibilities. Moreover, teaching experience is hardly acknowledged by institutions since teaching staff is usually recruited from outside. The study suggests that a majority of the population has an interest to work in rural area .Better work conditions are needed in order to gain workforce in this areas.

Skills should be effectively utilized in areas of administration, management, research and education, with a proper distribution to rural and urban areas in order to ensure a good health care system in India.

Keywords: *Utilization of nursing skills, nursing skills, public health nurses, India*

Introduction

Admittedly, human resources for health, which are involved in the production, protection and improvement of population health, still remains as an underdeveloped zone without receiving much attention for metamorphism.[1] This situation pertains since decades in India, irrespective of the various measures employed by the World Health Organization (WHO) for the same. Unfortunately, India still lacks adequate health workforce. Nurses, being the backbone of health sector, play a pivotal role in placing the population into the trajectory of a healthy nation. However, as stated by Rao et al, [2] nurses are not given appropriate power to implement various health measures, as observed in other developed countries. As per WHO, there is a wide disparity in the distribution of human resources, and there are major concerns based on their number, deployment, inadequacy of training as well as improper expertise mix. [3] Mentioned disparities are usually observed along with poor human resource management, absence of appropriate career ladder, inadequate work conditions, and without much room for professional development. Hence, it is the need of the hour to obtain adequate, latest and trustworthy data of this major workforce to obtain an evidence base, without which adequate planning

Corresponding Author:
Santosh Mahindrakar,
Research Coordinator IAPH New Delhi

would be inappropriate. It involves a delve into the matter, to analyze whether the right people are placed at right quantity in the right position, and without this information, a proper decision making in the health care development, would be an impossibility. It was found that many studies are not undertaken in this area and among this health care population.

Thus, a study was undertaken among the nurses working in public health institutions with the objective to assess the existing knowledge and skill utilization of nursing workforce in the public health sector.

Methodology

Survey method was adopted to achieve the defined objective. A tool was formed using the Delphi technique. A set of expertise was identified and the tool was sent to them for validation and the same was adopted. Google form inbuilt consent form was sent to a list of friends and later they sent to their known. A snow-ball technique was used to select the convenient samples. Reminders were sent to the first set of known participants and then requested to spread a word among their friend group. There were 409 responses in total during the period of 30 days.

Result

Around half (48%) of the participants had Bachelors degree as a basic education, few of them had additional qualification like Bachelors in other subject, certificate courses related to skill, post graduate diploma in hospital management/administration and masters in other health subjects like Public Health, Human Resource management. The clinical nurses were pursuing additional and higher education to update their skills and knowledge but these skills are not yet recognized. There is a further needto evaluate the lack of their skill recognition.

More than ¾ of the participant's designation was clinical nurse/nursing officer, 56% were female, and 79.2% were permanent workers in the public health institutions.

Most of the participants want to work in the native places when they are provided with good working conditions. There were many studies reporting non-availability of the specialist at rural public health institutions. Nurses who are experienced in the tertiary care hospitals with hand on skills are not allowed to go back and work in their native places. Around half of the participants had more than five years and ¼ of the participants had more than a decade of clinical experience.

Table 1: Baseline information of the participants

Variables	Frequency	Percentage
Educational status		
General Midwifery and Nursing	101	24.8
BSc	196	48.0
MSc	103	25.2
PhD	8	2.0
Additional qualification		
None	325	79.6
Bachelor of Arts	11	2.7
Certificate	15	3.7
Diploma	28	6.8
Masters	27	6.6
Multiple	2	.5
Designation		
Clinical Nurse	311	76.2
Nurse educator	54	13.2
Research	20	4.9
Supervisor	8	2.0
Community Health Officer (CHO)	5	1.2
Public Health Nurse (PHN)	5	1.2

Cont... **Table 1: Baseline information of the participants**

Unemployed	5	1.2
Type of contract		
Contract	85	20.8
Permanent	323	79.2
Years of clinical experience		
Up to 5 yrs	208	51.0
5 – 10	96	23.5
10-15	62	15.2
15-20	17	4.2
20 +	25	6.1
Teaching experience		
No	212	52
0-5	154	37.7
5-10	22	5.4
10 +	20	4.9
Utilization of knowledge		
1.0	31	7.6
2.0	36	8.8
3.0	81	19.9
4.0	118	28.9
5.0	115	28.2
Missing	27	6.6
Utilization of Skill		
1.0	25	6.1
2.0	33	8.1
3.0	84	20.6
4.0	113	27.7
5.0	125	30.6
Missing	28	6.0
Rural area work		
No	42	10.5
Yes	310	76.0
May be	55	13.5
Specialty		
No	63	15.4
Yes	304	74.5
Not mentioned	41	10
Gender		
Female	228	55.9
Male	173	42.4
Not mentioned	7	1.7
Institution		
Public	349	85.5
Private	46	11.3
Not mentioned	13	3.2

Table 2: Cross table between the qualification and clinical nurses

	Clinical		Non clinical		P Value
	Frequency	Percentage	Frequency	Percentage	
GNM	85	25.8%	15	20.3%	.000
BSc N	176	53.5%	18	24.3%	
MSc N	67	20.4%	34	45.9%	
PhD	1	.3%	7	9.5%	
Total	329	100%	74	100.0%	

Table 3: Comparison of clinical and non-clinical nurses with their clinical and teaching experiences

		N	Mean	Std. Deviation	Std. Error Mean	P Value
Clinical experience	Clinical	329	7.998	6.5274	.3599	.001
	Non Clinical	74	5.014	6.7634	.7862	
Teaching experience	Clinical	329	1.2678	2.79670	.15419	.000
	Non Clinical	74	5.7677	6.74320	.78388	

Mean clinical experience among the clinical nurses is higher than non- clinical and mean teaching experiences among the non- clinical higher than clinical nurses and statistically significant. It is a point to note that among the clinical nurses, 20.4 % of them completed and have teaching experiences of 1.3±2.8 years and clinical experiences of 8±6.5 years. Most of these tertiary hospitals are attached with nursing institutions and are doing direct recruitment of the teaching staff rather than promoting these skilled nurses with adequate qualification within an institution.

Discussion

Nurses and their demographic profile

In the study, it was found that the larger population had Bachelor's Degree (48%) and it almost constituted half of the population. The remaining half was almost equally composed of Diploma holders and postgraduates. However, this is in contrast to the Delhi Nursing Council (DNC) Statistics of 2015,[4] where the largest group was that of Diploma holders (55.1%), followed by that of B.Sc Nurses (39.4%) and the least (5.5%) was that of auxiliary nurses. Unfortunately, they did not have an account of the nurses who have attained any other higher degrees.

A characteristic, which was revealed from the study, was that the larger proportions of nurses (55.9%) were females. Only 42.4% were males, and 1.7% of the population, did not mention their gender. These findings are similar to a study conducted by Gupta et al., 2003, to assess the health workforce, in which it was proved that about 62% of health sector was occupied by women and it was attributed that this skew was due to the female dominance in nursing. It was also commented in the study that nursing, in spite of being a highly complex skilled profession, has not received a market value in accordance to the level of skills involved in it, courtesy, perception of it as "women's work". [5]

Nurses' interest to work in rural or urban areas

The study reveals that a majority of the population has an interest to work in rural areas. However, as per the

WHO report on human workforce by Anand and Fan,[6] only 39.6% of nurses work in rural sector and among them, only 9.9% of them had a medical qualification. The rest 67.1 % had qualification less than secondary schooling, 9.3% had technical or non- technical diploma, 23.7% had basic or post graduate degree. Also, 73 districts had no nurses with a medical qualification. According to the study, about 85.5% of the nurses are working in public sector. But, this is in contrast to the study done by Karan et al, [7] where about three- fourth of the nurses were employed in private sector. An appropriate and equal distribution of nurses in rural and urban areas, and in public and private sector is a mandate to ensure universal access to healthcare.

Utilization of nursing competencies- skill and knowledge

According to the study, when the participant nurses were asked to rate the utilization of their knowledge on a 5- point scale, the highest proportion of them rated it as 4 and 5, accounting to about 28.9% and 28.2%, respectively. At the same time, 19.9 % of them rated it at 3, 8.8% at 2 and 7.6% at 1. On the other hand, when the utilization of skills were assessed, largest group of them, that is 30.6% and 27.7% of them felt that it was at 5 and 4, on the rating scale, respectively. However, 34.8% of them felt that their skills were under- utilized, irrespective of the high level of training and expertise they have attained. About 6-7% of participants missed to give this information. Though there are few studies on assessing the competencies of nurses, this was a pioneer study in the perception of the extension to which nursing competencies are exploited.

Implications

It is evident from the study that, our nation has a handful of qualified experienced efficient nurses, but unfortunately, their knowledge and skills are not employed, as how it should be ideally done. The resources, that a developing nation like India possess, is ample enough to uplift the existing skewed health care system to a better and balanced one, where "Health For All" can be assured. However, a comprehensive and practical system should be introduced for the same to deploy qualified nurses in the right areas. Implementation of dual system of nursing will be a great step towards proper utilization of clinical knowledge and skills for the betterment of the patients, nursing students and nurses. The administrative and decision-making skills of post-graduate nurses should be exploited right from their productive young age, rather than waiting for a minimum of two decades for them to get promoted to the post of nurse manager. If promotion system is re-structured based on knowledge, skills, qualification, experience and the interest to keep oneself updated with the recent evidence-based practices, that will be a great impetus to the nursing practice, administration, education and the profession itself.

Some of the recommendations for further studies are: Comparative study on the skills of nurses as perceived by self and rated by an observer and analytical study to find the hindering factors in proper utilization of nursing skills

Conclusion

Nurses, the mainstay of health sector face many challenges today, which demand an interrogation and analysis into the situation. We have an ample supply of qualified nurses, but their skills and abilities remain obscure, as they lack adequate and fair opportunities. If these skills are effectively utilized in areas of health practices, administration, management, and research with a proper distribution to rural and urban areas, then the quality of health care services will improve with better outcome.

It is recommended that, in institutions where nursing colleges are also a part of it, they should recruit the nursing faculty within the clinical pool of nurses; at least a higher percent of the seats if reserved for them, would be beneficial for both the employee and the employer. This would not only motivate the former, but also, would aid in reducing the cost burden for the latter in appointing and training an external candidate.

If all these pitfalls of nursing workforce are not addressed in the right manner, at the right time, our well- qualified nurses will go in search of greener pastures to foreign nations, where they can grow multi- dimensionally, thereby, resulting in a crisis in our nation's healthcare sector, with acute shortage of efficient nurses, in the near future itself.

Ethical Approval: We did not take ethical approval

from any ethical committee but we followed the ICMR guidelines in all the steps verified by experts.

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Conflict of Interest: Nil

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The Effectiveness of a Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Syndrome (PCOS) among Adolescent Girls at a Selected School of Raipur

Jissa Donel[1], Bagavathi.R[1], Neha Choudhary[2], Neha Sharma[3], Nisha[3], Nitika Garg[3], Nikita[3]

[1]Nursing Tutor Con, AIIMS Raipur, [2]Nursing Officer, AIIMS Delhi, [3]Nursing Officer, AIIMS Raipur

Abstract

Polycystic ovary syndrome (PCOS) is one of the most common female endocrine disorders. PCOS is a complex, heterogeneous disorder of uncertain etiology. PCOS produces symptoms in approximately 5% to 10% of women of reproductive age (12–45 years old). It is thought to be one of the leading causes of female infertility and the most frequent endocrine problem in women of reproductive age. Adolescents aged between 10-19 years account for more than one fifth of the world's population. In India, this age group forms 21.4 percent of the total population. Menstrual abnormalities are one of the common problems of adolescents. Polycystic ovary syndrome (PCOS) is the commonest cause of an-ovulatory infertility. This study was carried out to evaluate the effectiveness of a structured teaching programme on knowledge regarding polycystic ovarian syndrome (PCOS) among adolescent girls at a selected school of Raipur.

Quantitative research approach with pre-experimental design (one group pretest- posttest design) was adopted for this study. The study was conducted in a selected school at Raipur i.e. Maharshi Vidya Mandir. The sample size was 100. Adolescent girls between the age of 13-17 years were selected. Non probability convenient sampling was used. The Structured Teaching Programme was effective for adolescent girls according to the level of knowledge before and after the intervention. The obtained t- value (24.92) was statistically highly significant at 0.05 levels.

Keywords: *Polycystic Ovarian Syndrome (PCOS) and Structured Teaching Programme*

Introduction

PCOS is a complex endocrine disorder which is most common in women of reproductive age.[1] It affects 2.2 to 20% of reproductive-aged women[2]. It begins as early as in teenagers and mostly affect adult girls at childbearing age. The primary underlying defect in PCOS remains unknown, but key features include insulin resistance, impaired gonadotropin dynamics, and androgen excess. Polycystic ovarian syndrome (PCOS) is a syndrome manifested by amenorrhea, hirsutism and obesity associated with enlarged polycystic ovaries. Some risk factors of PCOS are family history, lack of exercise, obesity, consumption of junk food etc. [1, 2]

India has witnessed about 30% rise in polycystic ovarian syndrome (PCOS) cases in the last couple of years. Two main reasons for the increase of PCOS diagnoses in Indian women are unhealthy eating habits and a sedentary lifestyle. [3] Due to lack of awareness and proper guidance, a number of cases remain undiagnosed.

Polycystic ovarian syndrome (PCOS) has a wide spectrum of consequences in adolescent girls and thus

Corresponding Author:
Mrs. Jissa Donel
Nursing Tutor, College of Nursing,
All India Institute of Medical Sciences (AIIMS)
G.E Road, Tatibandh, Raipur, Chhattisgarh (C.G)
492099, Email - doneljis@gmail.com

needed to be treated completely and as soon as possible. The prevalence has been increasing in the adolescent population.[4] In more than 40% of cases, PCOS is associated with obesity, as well as impaired glucose tolerance, type 2 diabetes, and the metabolic syndrome.[5] Several articles have been published on the short- and long-term effects of PCOS on the women's health due to an increased incidence of early complications such as a worsening of fertility and obstetric outcomes and to an increased rate of late complications as well as enhanced cardiovascular, metabolic, and oncology risks.[6]

Although there is no cure for PCOS, there are several ways to treat and manage the condition. If a girl is overweight, weight loss can be very effective in lessening many of the health conditions associated with PCOS. Sometimes weight loss alone can restore hormone level to normal, causes many of the symptoms to disappear or become less severe. Healthy food habits and exercise helps to combat the weight gain. Lifestyle modifications are vital for treating PCOS.[7, 8]

The study was conducted to assess the knowledge on the polycystic ovarian syndrome (PCOS) among adolescent girls and to educate them about polycystic ovarian syndrome.

Materials & Methods

Quantitative research approach with pre-experimental design (one group pretest- posttest design) was adopted for this study. The study was conducted in a selected school at Raipur i.e. Maharshi Vidya Mandir. The sample size was 100. Adolescent girls between the age of 13-17 years were selected. Non probability convenient sampling was used. Prior to the data collection, the permission from the ethical committee & from the head of the institutions were obtained. The objectives were explained and an informed consent was taken from the participants. The tools were constructed to obtain the data included a demographic proforma, a clinical proforma and a structured knowledge questionnaire.

Demographic proforma was intended to identify the baseline information of the samples. It comprises of seven items such as age, religion, mother's occupation and education status, type of family, area of residence and previous information about PCOS. Clinical proforma was developed to collect information regarding aspects that predisposes adolescent girls to develop PCOS like lifestyle, diet pattern, exercise habits, etc. Information pertaining to menstrual history, physical features suspicious of PCOS were also included in this proforma. Structured knowledge questionnaire was designed to assess the adolescent girl's knowledge regarding PCOS. It consisted of 10 yes/no questions & 20 multiple choices questions. Total score was 30. A score of 16-30 was considered as having good/ adequate knowledge. A score of 0-15 was considered poor /inadequate knowledge.

Structured teaching programme was designed to enhance the knowledge of adolescent girls regarding Polycystic Ovarian Syndrome. The content validity of the tools and the structured teaching module was established by the suggestion of five experts from the field of psychiatric nursing, community health nursing, obstetrical and gynecological nursing. The reliability of the tool was found out by split half method and was 0.8. Pilot study was conducted in another selected school on10 adolescent girls. Pretest was done followed by administering the structured teaching program on the same day by dividing the samples into two groups of 50 each. The post – test was conducted by using the same questionnaire on 7th day.

Results

In present study, 91% of the girls were girls in the age group of 13-15 years. 98% of the samples were Hindus and more than half of the mother's of the adolescent girls (65%) had higher secondary education and above. (77%) of the adolescent girls were living in rural areas.94% of the samples were not having any previous knowledge about PCOS at all.

Table 1: Weight & BMI Distribution of adolescent girls

BMI	No. of samples (N=100)
<18.5 kg/m^2 (Underweight)	42
18.5-24.9 kg/m^2 (Normal)	54
>24.9 kg/m^2 (Overweight)	4
WEIGHT	
35-55 kg	77
55-75 kg	21
>75 kg	2

In present study, 54% girls had normal BMI and 77 % belongs to the weight range of 35-55 kg.

Table 2: Menstrual History of adolescent girls

Menstrual History	No. of samples (N=100)
Age of Menarche (10-14 years)	92
Irregular Menstrual Cycle	23
Abnormal Hair Growth	28
Frequent Acne/Pimples	43
Duration of menstrual flow (>5 days)	28
Frequency of cycles (>30 days)	27

60% of samples reported the consumption of some sort of junk foods on daily/ weekly basis. 70 % of girls reported that they are not doing any sort of exercises or involved in any sort of physical activity.

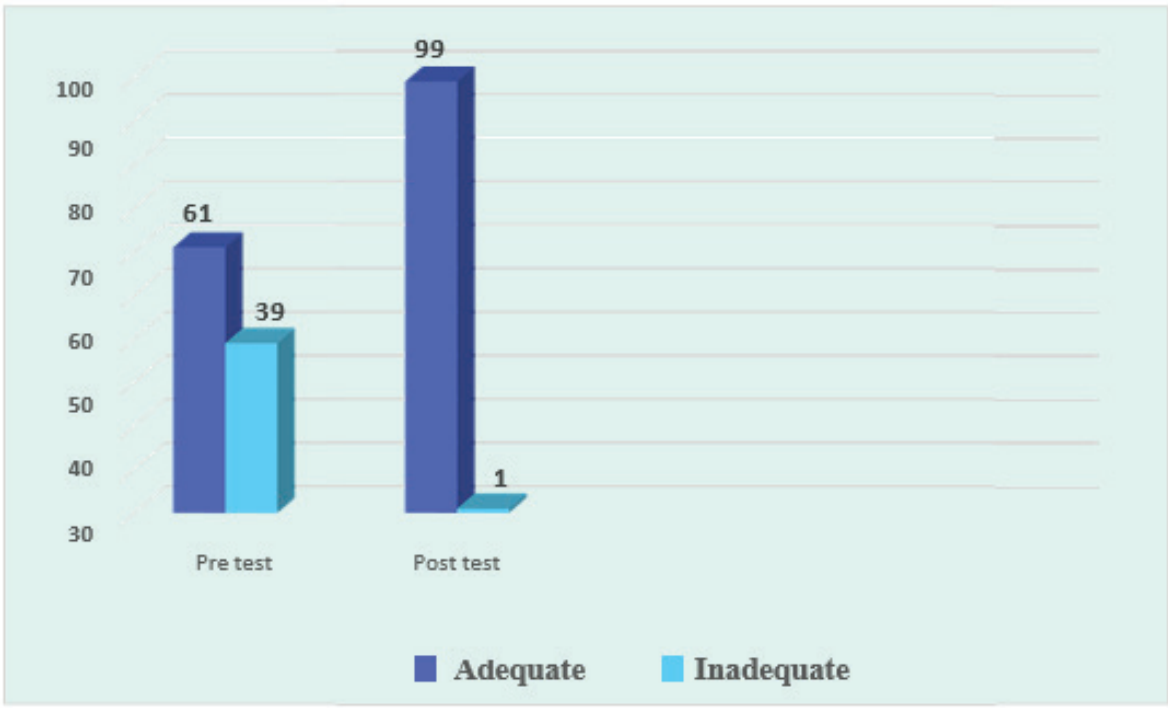


Fig 1: Frequency distribution of pretest and posttest knowledge scores of adolescent girls on PCOS.

In the pretest, 61 samples were having adequate knowledge about PCOS. After the structured teaching programme,99 samples reported to have adequate knowledge about PCOS.

Table 3: Comparison of pre-test and post-test knowledge level of adolescent girls on PCOS.

Level of knowledge	Mean	Mean difference	SD	t – value
Pre test	16.28	9.97	4.23	24.92*
Post test	26.25		2.7	

*Significant at 0.05 level

The above table depicts comparison of mean pre-test and post-test knowledge level on PCOS among adolescent girls. The post test mean score (26.25) was high when compared to the pre test mean (16.28) score on knowledge. The obtained t value (24.92) was greater than table value at 0.05 level of significance, which shows that there was a significant difference between pre test and post test level of knowledge regarding PCOS among adolescent girls.

Discussion

Several studies had been conducted in India & abroad about the effectiveness of different educational interventions in increasing the awareness of women about PCOS, since it is a clinical and public health issue that adversely affects women's health and health-related quality of life and puts a significant strain even on healthcare resources. This study has proved the effectiveness of a structured teaching programme on improving the level of knowledge

regarding PCOS among adolescent girls.

Sivasankari K, Vanitha Jain, conducted a quasi experimental study to evaluate the effectiveness of planned teaching programme on PCOS towards improving knowledge among adolescent girls and the sample size consists of 50 adolescent girls. The study results revealed that the comparison of mean value depicted that post test mean value (10.3) is greater than the pre test mean value (5.8). The paired t test value showed 16.36 which was highly significant at P< 0.0001 level.[9]

Sowmiya et.al, conducted a experimental study to assess the effectiveness of structured teaching programme on knowledge of polycystic ovarian syndrome among adolescent girls. A significant difference between pre test and post test knowledge was found (t 2.0 79=p<0.05).The study findings showed that the structured teaching programme was effective in improving knowledge of adolescent girls regarding polycystic ovarian syndrome.[10]

An Interventional Study on Effectiveness of Structured Education Programme in Improving the Knowledge of Polycystic Ovarian Syndrome among Female Students of Ras Al Khaimah Medical & Health Sciences University, UAE was carried out. Study results showed that the mean pre and post intervention knowledge scores of participants were 7.59 ± 2.64 and 12.77 ± 1.13 respectively. A statistically significant difference was observed between these scores with p value 0.000. A statistically significant difference was also observed between pre and posts intervention knowledge scores.[11]

Conclusion

The study shows an improvement in knowledge of participants on PCOS and its management through structured education programme. Provision of structured education to the target population can play a vital role in prevention and early diagnosis of PCOS. Also, structured education programmes on strategies for effective management of disease will help in preventing many long term complications such as obesity, diabetes mellitus and cardiovascular diseases in patients diagnosed with PCOS.

Ethical Clearnace: Ethical clearance for the study is obtained from Institutional Ethics Committee of AIIMS, Raipur

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