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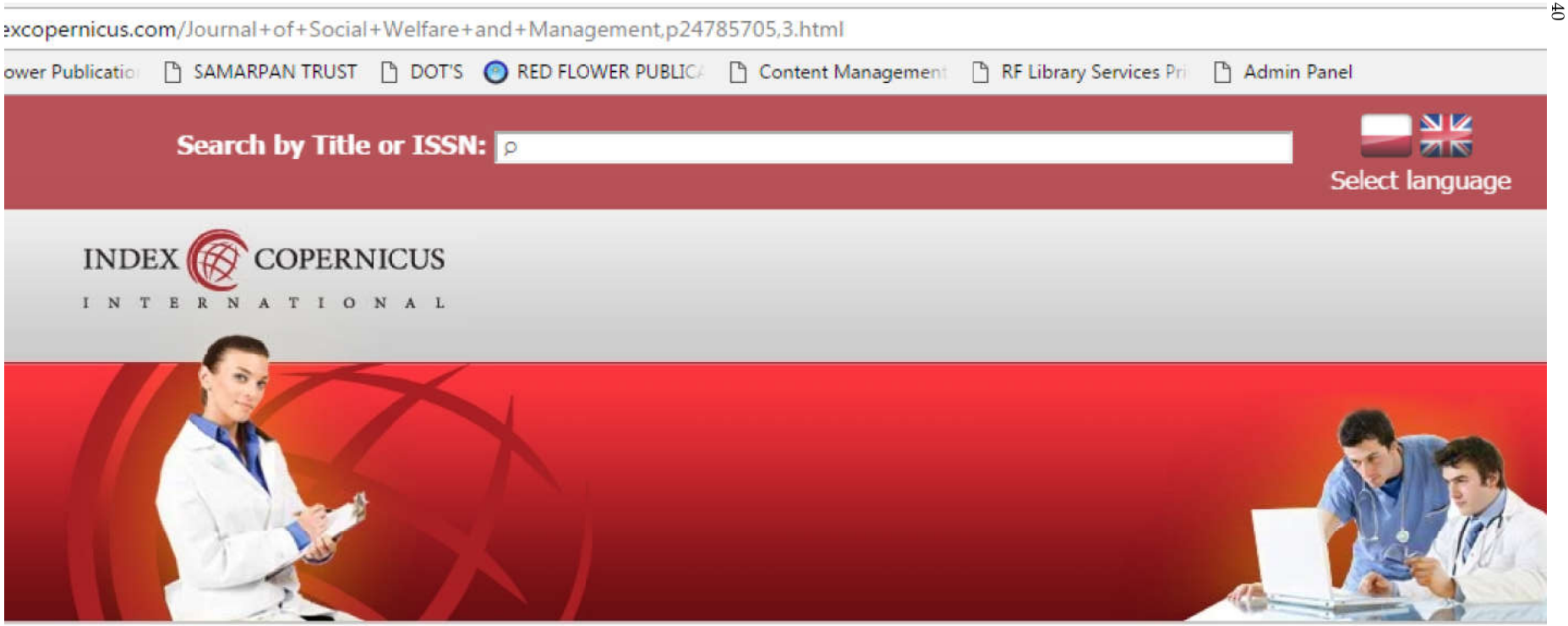
Contents

Original Articles

Review Articles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Assess the Occupational Stress and Coping Strategies among Staff Nurses Working in SRM Hospital

Abirami P.*, Bensha Benett**

Abstract

Nursing is a stressful profession. Caring for clients, individuals, families, groups, populations or entire communities, with multiple, complex and distressing problems can be overwhelming for even the most experienced person. Nurses regularly face emotionally charged situations and encounter intense interpersonal and inter professional situations and conflict in the workplace while trying to make appropriate and safe decisions. Research has shown that nursing is a high-risk occupation in respect of stress-related diseases.It is very essential to determine the magnitude of the problem and study the factors responsible for it. The aim of the study was to assess the level of occupational stress and coping strategies, to correlate the occupational stress with their coping strategies and to associate the occupational stress and coping strategies with their demographic variables among staff nurses. Quantitative approach and Non Experimental descriptive research design was used. The Study variables were Occupational stress and coping strategies. The study sample comprised of staff nurses working in SRM general hospital who fulfilled the inclusion criteria and the sample size was 100 staff Nurses. By using Non Probability Purposive Sampling technique they were Selected. The instrument Consist of two parts. Section A includes Self-administered structured questionnaire to assess demographic variables such as age, sex, working experience, marital status, degree and work area and Section B consists of modified mental health professional stress scale questionnaire assess the nurse's stress and coping strategies. The study was conducted at SRM General Hospital.Kattankulathur The data was analyzed and interpreted based on the objectives using descriptive and inferential Statistics. The Study concluded that 30% of staff nurses had mild occupational stress, 70% of staff nurses had severe occupational stress and 0% had moderate occupational stress. 12% of staff nurses had good coping strategies, 85% of staff nurses had average coping strategies and 3% of staff nurses had poor coping strategies and there is a significant negative correlation between stress and coping strategies. There is a significant association between the age and the level of occupational stress.

Keywords: Occupational Stress; Coping Strategies; Stress-Related Diseases; Staff Nurses.

Introduction

Health professionals frequently suffer from stress owing to the characteristics and working conditions typically found in hospitals. Pressure at work can be positive leading to increased productivity. However, when this pressure becomes excessive, it has a negative impact. The individual perceive themselves as being unable to cope and not to possess the necessary skills to combat their stress. Stress is acknowledged to be one of the main causes of absence from work. Prevalence of occupational stress amongst nurses in India is 87.4% [1].

Nursing is a stressful profession. Caring for clients, individuals, families, groups, populations or entire communities, with multiple, complex and distressing problems can be overwhelming for even the most experienced person. Nurses regularly face emotionally charged situations and encounter intense interpersonal and inter professional situations and

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conflict in the workplace while trying to make appropriate and safe decisions. Research has shown that nursing is a high-risk occupation in respect of stress-related diseases. Stress can reduce the enjoyment in life, cause hypertension, cardiac problems, reduce immunity, contribute to substance abuse, lead to frustration, irritability and reduce the overall status of mental and physical wellbeing. Stressful work may propagate substance abuse amongst workers, which they might use to reduce or cope with stress. It is very essential to determine the magnitude of the problem and study the factors responsible for it.

Identifying the various sources of occupational stress among the nurses through an evidence-based mechanism to highlight the difficulties in order to ensure a better health care delivery service will help in streamlining the stress management programs towards a specific direction, thereby ensuring that these health care providers remain healthy and stress free. This will lead to better delivery and enhanced quality of health services for the entire population.

Nursing is a rewarding and satisfying profession. But, at the same time, it can also be extremely stressful. Nurses in India, are overburdened as the nurse to patient ratio is low (1:3). They are responsible-along with other health care professionals-for the treatment, safety, and recovery of acutely or chronically ill, injured, health maintenance, treatment of life-threatening emergencies and medical and nursing research. Nurses not only assume the role of caregivers but are also administrators and supervisors of patients. These multiple work roles contribute to significant amount of occupation related stress amongst nursing staff [2].

Occupational stress is any discomfort which is felt and perceived at a personal level and triggered by instances, events or situations that are too intense and frequent in nature so as to exceed a person's coping capabilities and resources to handle them adequately. Anytime occupational stress occurs, it is an indication that the demands placed upon the person have exceeded the person's personal resources, whether these resources are physical, emotional, economic, social or spiritual. A worldwide shortage of nurses has been acknowledged by the Global Advisory Group of the World Health Organization (WHO). As the worldwide nursing shortage increases, the aged population becomes larger, there is an increase in the incidence of chronic illnesses and technology continues to advance, nurses continually will be faced with numerous workplace stressors.

The occupational stressors can be categorized into four major groups. Firstly, the working conditions, including shift and week-end work, inadequate remuneration, hours of work, discrimination and safety at the work environment. Secondly, relationships at work including quality of relationships with peers, subordinates and supervisors. Thirdly, role conflict and ambiguity including ill-defined role, functions, expectations, and duties. Fourthly, organization structure and climate which includes communication policy and practice, major changes in the workplace, culture of the organization, and lack of participation in decision-making. Another cause is career development including underutilization of skills or failing to reach full potential. Another contributing factor is the nature of the job which might amount to an immense amount of physical and emotional exhaustion. A study conducted in Rawalpindi found that almost all nurses reported their work related stress as either severe or moderate. However, over two-third of them reported as being in control of work life. Another study investigated the difference between female doctors and nurses regarding the home-work stress and burnout. Data were collected from 143 women (69 doctors and 74 nurses) working in public hospitals of Lahore. Results indicated that the nurses were significantly different from female doctors in the levels of depersonalization of others and reduced personal accomplishment dimensions of burnout. Results also suggested that the relationship between home-work stress and burnout was moderated by organizational sources of support predominantly in nurses.

Santos et al. (2003) found that among nurses in Missouri USA, occupational stress was related to the physical environment and responsibility. Studies indicate that, in addition to nursing itself, organizational and management characteristics influence the stress, nurses experience at work (Santos et al., 2003; Stordeur et al., 2001). Nurses are a group of professionals that work with patients, relatives, and hospital caregivers in various stressful life situations [3].

Through their dealings with suffering, illness and death they confront existential issues on a daily basis. They have to cope with stress at work and even in their private lives. Reasons for stress may vary in different areas of health care. In a literature review, four different areas that create stress were highlighted; these are also prevalent in studies of nurses: workload, leadership issues, professional conflict, and emotional nursing care demands *(Mc Vicar, 2003)* [4].

The presence of workplace stress imposes a cost factor on any work setting. Costs, directly related to workplace stress, can involve absenteeism, employee turnovers, and short- and long-term disabilities, medication expenses related to psychotherapeutic medications, workplace accidents, and worker's compensation claims and lawsuits. The Lluminari Landmark Study found, among workers examined, 1 in 5 were at risk for stress-related health problems, 2 in 5 experienced distress because of too much pressure or mental fatigue at work, 1 in 10 were so tired at the end of the work day that they did not enjoy their nonworking time, and 1 in 5Stated their work regularly interfered with responsibilities at home and kept them from spending time with their families. Researcher have several months of working experience in various intensive care units. Various ICU areas include Coronary Care Unit, Cardio Thoracic Care Unit, Neonatal ICU, Medical Surgical ICU and Respiratory Care Unit. The researcher realized the occupational stress faced by medical professionals especially, nurses in ICU. This inspired the researcher to conduct the study

Aim of the Study

1. To assess the level of occupational stress and coping strategies among staff nurses.
2. To correlate the occupational stress with their coping strategies among staff nurses.
3. To associate the occupational stress and coping strategies with their demographic variables.

Methodology

Quantitative approach and Non Experimental descriptive research design was used. The Study variables were Occupational stress and coping strategies. The study sample comprised of staff nurses working in SRM general hospital who fulfilled the inclusion criteria and the sample size was 100 staff Nurses.

By using Non Probability Purposive Sampling technique they were Selected. The instrument Consist of two parts. Section A includes Self-administered structured questionnaire to assess demographic variables such as age, sex, working experience, marital status, degree and work area and Section B consists of modified mental health professional stress scale questionnaire assess the nurse's stress and coping strategies. The study was conducted at SRM General Hospital

Ethical Consideration

Formal approval was obtained from the Institutional review board and Institutional ethical committee of SRM University, Kattankulathur, Chennai, Tamilnadu, India.In addition, the participants were informed of their right to withdraw anytime during the course of the study.

Instruments

The tool was developed by the investigator himself the tool developed for this study is a self administered questionnaire based on the review of literature discussion with experts and investigators personal experience.The tool comprise of three sections

The tool consists of two sections

Section A Self-administered structured questionnaire was used to assess demographic variables such as age, sex, working experience, marital status, degree and work area.

Section B Tool 1**-** modified mental health professional stress scale questionnaire was used to assess the nurse's stress and coping strategies.

Method of Data Collection

The investigator had collected data with effect from 05/02/2015 to 21/02/2015 in SRM General Hospital; Kattankulathur The investigator introduced her to the samples and the purpose of the study was explained to ensure better co-operation and collaboration during the data collection period. The written consent from the samples was taken and they were assured confidentiality. Using Questionnaire method, data collection procedure was completed. The questionnaire was administered regarding occupational stress and coping strategies among staff nurses. Approximately 10-15 minutes was spent to elicit the data for each staff nurse. The self-instructional module was distributed to each staff nurses at the end of the data collection procedure. The data gathering process was continued till the sample size was 100.

Statistical Analysis

The information collected from the study participants was scored and tabulated. The data was entered into the master coding sheet and saved in EXCEL.Statistical analysis was conducted with the help of the Statistical Package for Social Sciences (SPSS)-16. Mean, percentage and Standard deviation

was used to explain the demographic variables and Pearson Correlation was used to assess the Relationship between Occupational stress and Coping Strategies and Chi-square test was used to associate the demographic variables with Occupational stress and coping Strategies.

Results

Section A: Analysis of demographic variables of Staff nurses

The frequency and percentage distribution reveals that 97% of the nurses belong to the age group of 21-28 years and 3% of the nurses belong to the age group of 28-34 years. In gender female occupies 89% and male occupies 11%. In year of experience, 30% of nurses has less than 1 year experience, 62% of nurses has 1-4 years of experience, 6%of nurses has 4-10 years of experience and 2% of nurses has more than 10 years of experience. In marital status 26% of nurses are married and 74%are unmarried. In educational qualification 85% of nurse is BSc. Nursing staffs and 15% of nurses are diploma nursing staffs. In work area, 10% are from emergency department, 29% from intensive care unit, 35% from medical and surgical ward and 26% from other wards.

Table 1: Frequency and percentage distribution of demographic variables of Staff nurses N=100

Demographic Variables		Frequency	Percentage
Age	21-28 years	97	97%
	28-34 years	3	3
Gender	Female	89	89%
	Male	11	11%
Year of experience	<1 years	30	30%
	1-4 years	62	62%
	4-10 years	6	6%
	>10 years	2	2%
Marital status	married	26	26%
	single	74	74%
Educational qualification	Degree in nursing	85	85%
	Diploma in nursing	15	15%
Work area	Emergency department	10	10%
	Intensive care unit	29	29%
	Medical and surgical ward	35	35%
	others	26	26%

Section B: Analysis on level of occupational stress and coping strategies among staff nurses.

Table 2: Percentage distribution table of occupational stress and coping strategies

S. No.	Questions	Never	Sometimes	Often	Always
	Working Environment				
1	Noisy working area	22	64	12	2
2	Lighting is poor or inadequate	64	18	3	15
3	Skills are under-utilized	12	52	18	18
4	Unit is over crowded	18	46	31	5
5	Ventilation is poor causing suffocation	51	22	22	5
6	Co-workers are competent	25	62	5	8
7	Very frequent night shifts	26	46	23	5
8	Handling too many patients per shift	25	34	25	16
9	Have enough freedom to take work related decision	28	50	10	12
10	Equipments and supplies are not adequate	23	43	20	14
11	Break time during shift hours	20	29	29	22
12	Relationship with superiors, colleagues and subordinates are not friendly	26	33	19	22
	Patient Related Difficulties				
13	Patients in the unit are difficult and demanding	23	55	17	5
14	Harassment from aggressive relatives	24	50	21	5
	Organisational Structure And Processes:-				
15	Had good incentives for overtime	27	46	15	12

16	Inadequate delegation of responsibility	13	62	18	7
17	Poor or insufficient salary	21	16	19	44
18	Had appreciative promotions	56	25	7	12
19	Appreciation for good performance	31	41	14	14
20	Job insecurity	30	46	23	1
21	Poor communication from management	22	32	33	13
	Education and Training				
22	Orientation and induction program immediately after joining	20	37	24	19
23	Regular in-service education and training	11	47	27	15
24	Stress handling sessions/seminars	26	40	16	18
	Coping Strategies				
25	Going on holidays	31	61	5	3
26	Spending time with family weekly	43	47	6	4
27	Medication/yoga	53	29	15	3
28	Relaxation exercises	47	39	9	5
29	Taking drugs for coping stress	86	8	5	1
30	Explore ways to manage time	34	50	13	3
31	Accept things you can't change	26	47	16	11

Table 2: Percentage distribution of occupational stress

S. No.	Occupational Stress	Number of Respondents	Percentage
1	Mild	30	30%
2	Moderate	0	0%
3	Severe	70	70%
	Total	100	

From the above Table 2 it shows that 30% of staff nurses has mild occupational stress, 70% of staff nurses has severe occupational stress and 0% has moderate occupational stress.

Table 3: Percentage distribution of coping strategies

S. No.	Coping Strategies	Number of Respondents	Percentage
1	Good	12	12%
2	Average	85	85%
3	Poor	3	3%
	Total	100	

From the Table 3 it shows that 12% of staff nurses has good coping strategies, 85% of staff nurses has average coping strategies and 3% of staff nurses has poor coping strategies.

Section C: Correlation of occupational stress with their coping strategies among staff nurses

Table 4: Correlation between occupational stress and coping strategies N=100

Pearson's Correlation		Working Environment	Patient Related Difficulties	Organizational Structures and Processes	Education and Training	Coping Strategies
Coping Strategies	Pearson Correlation	-0.462	-0.021	-0.138	0.117	1.000
	Sig. (2-tailed)	0.000**	0.835	0.170	0.247	
	N	100	100	100	100	100

From the Table 4, it is seen that there is a significant negative correlation between working environment and coping strategies and the p value is -0.462, there is also significant negative correlation between patient related difficulties and coping strategies and the p value is -0.021. There is a significant negative correlation between organizational structures and coping strategies, the p value is -0.138. There is no significant correlation between education, training and copingstrategies, the p value is 0.117.

Section D: Association of occupational stress and coping strategies with their demographic variables among staff nurses

Table 5: Association between Demographic variables and Occupational Stress N=100

S. No.	Demographic Variable	Class	Level of Occupational Stress		Chi-Square Value	Degrees of Freedom	P- Value
			Less	More			
1	Age	21 - 28 Years	66	31	6.00	1	0.01**
		28 - 34 Years	0	3			
2	Gender	Male	6	5	0.72	1	0.40
		Female	60	29			
3	Working Experience	< 1 Year	19	11	1.32	3	0.72
		1 - 4 Years	43	19			
		4 - 10 Years	3	3			
		> 10 Years	1	1			
4	Marital Status	Married	16	10	0.31	1	0.58
		Single	50	24			
5	Educational Qualifications	B.Sc., Nursing	61	27	3.60	1	0.06
		Diploma in Nursing	5	7			
6	Work Area	Emergency Department	8	2	1.56	3	0.67
		Intensive Care Unit	19	10			
		Medical and Surgical ward	21	14			
		Others	18	8			

From the Table 5 it is seen that there is a significant association or relation between the demographic character Age and the Levels of occupational stress. The p value of age is 0.001. 66% from the age group of 21-28 years has more occupational stress when comparing to the age group 28-34 years. From this study it is concluded that as the age increases the stress level is decreased. Other demographic characters Gender, Working experience, marital status, Educational qualification and Work area not influence the level of stress.

Table 6: Association between: Demographic variables and coping strategies N=100

S. No.	Demographic Variable	Class	Level of Coping Strategies		Chi-Square Value	Degrees of Freedom	P- Value
			Good	Not Good			
1	Age	21 - 28 Years	30	67	0.01	1	0.93
		28 - 34 Years	1	2			
2	Gender	Male	4	7	0.17	1	0.68
		Female	27	62			
3	Working Experience	< 1 Year	8	22	2.32	3	0.51
		1 - 4 Years	22	40			
		4 - 10 Years	1	5			
		> 10 Years	0	2			
4	Marital Status	Married	6	20	1.03	1	0.31
		Single	25	49			
5	Educational Qualifications	B.Sc., Nursing	28	60	0.23	1	0.63
		Diploma in Nursing	3	9			
6	Work Area	Emergency Department	3	7	1.42	3	0.70
		Intensive Care Unit	11	18			
		Medical and Surgical ward	11	24			
		Others	6	20			

From the Table 6 it shows that there is no significant association or relation between the demographic characters and the levels of coping strategies.

Discussion

Stress has become the number one malady of our time. The constant pressure associated with living in a fast-paced world has created an environment where nearly everyone feels the effects of stress. Stress is a term used to describe the wear and tear the body experiences in reaction to everyday tensions and pressures, change, illness, injury or career and lifestyle changes, are common causes of stress, however, it's the effects of stress, like pressure and tension, that we feel in response to the little everyday hassles-like rush hour traffic, waiting in line, and too many emails-that do the most damage

Stress is therefore a response to pressure. To some degree pressure can be beneficial, when it inspires motivation and commitment, but excessive pressure becomes stress, which is harmful and can lead to major illness, even death. There is no such thing as "good" stress.

Work-related stress is the result of a conflict between the role and needs of an individual employee and the demands of the workplace. Research has shown that feeling stressed at work is not confined to particular occupations or levels within organizations. Workers with management responsibilities also show stress symptoms. Different individuals may react differently to stress and the same person may react differently to stress at different times and the responses were also different.

Varendi. L (2010) conducted a study by Centro Universitario, Brazil on Stress among nurses who work at the intensive care units. Stress has been observed among various professionals, including intensive care unit (ICU) nurses, due to their close contact with patients in distress and at the risk of death. This situation becomes worse due to the need for direct and intensive care. This study was performed to characterize nurses working at ICU and verify the presence of stress among them. A total of 21 ICU nurses from five hospitals located in the state of Sao Paulo answered a series of questions about the ICU and completed the Nurse Stress Inventory. Study results showed that 57.1% of nurses consider the ICU a stressful place, and 23.8% achieved a high score, indicating the presence of stress. Stress continues to affect these professionals, and institutions do not offer any special care for nurses in the sense of promoting comprehensive health care [5].

Hall J. (2012)conducted a study by Pakistan Psychiatric Society on Occupational Stress and Job Satisfaction among Nurses in Intensive Care Units at a Tertiary Care Hospital. A Cross sectional study was conducted at Rawalpindi General Hospital with 50 female staff nurses working in ICUs as samples. Pressure Management Indicator in terms of Job Satisfaction, Organization, Mental wellbeing, Physical well-being, a 120 item self-report measure, encompassing many areas of stress evident in the workplace, was used. On the scale for sources of pressure, the mean score on workload was 19.28 + 5.77, on personal responsibility the mean score was 14.04 + 2.99 and on the home/work balance the score was 19.92 + 4.36. The mean scores of participants on all these items were more than the standard scores. Results showed that the nurses in ICUs at a tertiary care hospital have a high index of occupational stress and majority of it generates from the administrative disorganization of the firm and less from the personal or the monitory factor [6].

Sari Goldstein Ferhen (2012) conducted a study by University of Medical Sciences, India on job satisfaction of intensive care unit nurses in different hospitals in Jammu And Kashmir State. 126 nurses were selected as samples. Stress Rating Scale was used as the method of data collection. Results showed that only 8% were highly satisfied with the job because of the work itself and with competency of supervision. 92% were under severe stress [7].

Hence all these above studies describes that Nurse face stress and it affect their work productivity also. Here the organization play a Major role that they have to take some steps to reduce the stress for their employees and staff nurses themselves should take some initativeness to reduce their stress and to enhance their coping strategies.

Conclusion

The Study concluded that 30% of staff nurses had mild occupational stress, 70% of staff nurses had severe occupational stress and 0% had moderate occupational stress. 12% of staff nurses had good coping strategies, 85% of staff nurses had average coping strategies and 3% of staff nurses had poor coping strategies and there is a significant negative correlation between stress and coping strategies. There is a significant association between the age and the level of occupational stress

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Conflict of Interest

Dr.Abirami.P,Ms.Bensha Benett declares that no conflict of interest. In addition, this study wa not funded

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008

Statement of Informed Consent

Informed consent was obtained from all the study participants for being included in the study.

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Attitude towards Blood Donation among Undergraduate Engineering Students of SRM University, Kattankulathur, Kancheepuram District

M. Hemamalini*, Sherab Dema**

Abstract

Introduction: Safe blood is a critical component in improving health care and in preventing the spread of infectious diseases globally. Millions of lives are saved each year through blood transfusions, yet the quality and safety of blood transfusion is still a concern particularly in the developing countries. *Objective:* To assess the attitude towards blood donation among Engineering students. *Methodology*: Quantitative research approach and descriptive research design was adopted for the study. The study was conducted among the undergraduate Engineering students of SRM University. A Total 150 Undergraduate Engineering students who fulfilled inclusion criteria. were selected as samples by adopting non probability purposive sampling technique. Three point Likert scale developed by the investigator was used for assessing the attitude of undergraduate students regarding blood donation. *Results:* Majority of the students (93.35%) had favorable attitude towards blood donation and 6.7% had moderately adequate attitude.. *Conclusion:* Nurses need to take up the responsibilities to create awareness among the students about blood donation.

Keywords: Blood Donation; Attitude; Students; Health Care; Blood Transfusion.

Introduction

Blood is universally recognized as the most precious element that sustains life. It saves innumerable lives across the world in a variety of conditions. The need for the blood is great on any given day; approximately 39,000 units of red blood cells are needed. More than 29 million units of blood components are transfused every year [1].

This red liquid carries oxygen and nutrients to all parts of the body, and carries carbon dioxide and other waste products back to the lungs, kidneys and liver for disposal. It fights against infection and helps heal wounds, so we can stay healthy. There is no substitute for blood. If people lose blood from surgery or injury or if their bodies can't produce enough, there is only one place to turn' Voluntary blood donors' [2].

The theme of World Blood Donation day 2015 was "Thank you for saving my life". It focuses on thanking blood donors who save lives every day through their blood donations and strongly encourages more people all over the world to donate blood voluntarily and regularly with the slogan "Give freely, give often. Blood donation matters." It highlight stories from people whose lives have been saved through blood donation, as a way of motivating regular blood donors to continue giving blood and people in good health who have never given blood to begin doing so [3].

The theme of the World Blood Donor Day 2016 was "Blood connects us all". It focuses on thanking blood donors and highlights the dimension of "sharing" and "connection" between blood donors and patients. In addition, we have adopted the slogan "Share life, give blood", to draw attention to the roles that voluntary donation systems play in encouraging people to care for one another and promote community cohesion [4].

Safe blood is a critical component in improving health care and in preventing the spread of infectious

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diseases globally. Millions of lives are saved each year through blood transfusions, yet the quality and safety of blood transfusion is still a concern particularly in the developing countries. About 5 to 10 percent of new HIV infections worldwide are transmitted through unsafe blood transfusions. The reason for this includes blood collection from unsafe donors, poor laboratory procedures and inadequate testing of blood. Blood will be safe if there is a nationally coordinated blood transfusion service, non-remunerated donors, testing of blood for transfusion transmissible infection and by transfusion of the right blood to the right patient through the appropriate clinical use of blood (WHO, 2001) [5].

According to the World Health Organization that clubs India in the South Eastern Asian Region, the estimated blood requirement for the region is about 15 million units, the blood collection annually amounts to just over 9 million units, leaving a gap of 6 million units [6]. India is able to collect only 9 million units of which 70% is from voluntary blood donors while the remaining 30% is from family/ replacement donors. India has 2 760 blood banks (new BLOOD BANKS INIDA, February, 2015). The Indian Red Cross Society has 166 blood banks all over the country, where the voluntary blood donation is 90%. At the Model blood bank in National HQ of the IRCS, more than 90% of donations are by voluntary blood donors. However, we still have a long way to go as the need today is also for safe blood [7].

The community health nurse can play a pivotal role in promoting voluntary blood donation. Youth are healthy, active, dynamic, and receptive and constitute a greater proportion of population. Every year a large number of young adults are attaining the age of blood donation.

Every year regular blood donors are moving out from donor base owing to old age, ailment or change of residence. Blood donor motivation is, therefore, an ongoing process to change the behavioral pattern of non-donors.

College students are healthy, enthusiastic and approachable as a group. These students if 'caught young' are future donors and motivators. In the scenario it is very important to understand their attitude regarding blood donation. Voluntary blood donation will reduce the risk of blood borne diseases getting transmitted to innocent poor patients.

A healthy Attitude among college students will bring change, as they are the backbone of the country. They have to be encouraged, inspired and motivated to donate blood voluntarily.

Methods and Materials

Quantitative research approach and descriptive research design was adopted for the study . The variables includes demographic and study variables. Demographic variables comprises of age, sex, year of study, residence area, religion, type of family, family income and the Study variable was attitude regarding blood donation. The study was conducted among the undergraduate Engineering students of SRM University, Kattankulathur.

A Total 150 Undergraduate Engineering students who fulfilled inclusion criteria.were selected as samples by adopting non probability purposive sampling technique.

The tool consists of two sections; section A: demographic data which consist the item for obtaining information about the selected background factors such as age, sex, year, residence, type of family, religion, family income. Section B: 3 point Likert scale developed by the investigator was used for assessing the attitude of undergraduate students regarding blood donation. A three point Likertscale consisting of 20 statements with a total score of 60 was used. The 3 point Likert scale was framed with a number of statements that would reflect their inner feelings towards blood donation. Reliability of the tool was established by using split half method. The r value of the tool was r=0.83 which indicates positive co-relation.

Ethical Considerations

The study was approved by the Dean of SRM College of Nursing, SRM University, Kattankulathur, Kanchipuram District. Permission was obtained from Director of SRM Engineering College and the written consent was obtained from the participants. Prior permission for the conduct of the study was obtained from the HOD of concerned Department. Consent was obtained from the students and they were explained about the purpose of the study and ensured that their response will be kept confidentially.

Questionnaire was distributed to students. Clarifications were given to students in between to obtain accurate data. On an average each student took around 5-10 minutes to complete the tool. The collected data was coded and analyzed using descriptive and inferential statistics.

Results

Table 1: Frequency and percentage distribution of engineering students N = 150

Demographic variables		Engineering students	
		Number	%
Age	18 Years	50	33.3
	19 Years	39	26.0
	20 Years	36	24.0
	>20 Years	25	16.7
Sex	Male	64	42.7
	Female	86	57.3
Year of study	I Year	50	33.3
	II Year	58	38.7
	III Year	42	28.0
Residential area	Rural	30	20
	Urban	120	80
Type of family	Nuclear	110	73.3
	Joint	36	24
	Extended	4	2.7
Religion	Hindus	113	75.3
	Christians	18	12
	Muslims	10	6.7
	Others	9	6
Income	Rs.10000-20000	29	19.3
	Above Rs.20000	121	80.7

Table 2: Assessment of the level of attitude regarding blood donation among engineering students N = 150

Level of attitude	Number	Percentage
Un favorable attitude	0	0
Moderately favorable attitude	10	6.7
Favorable attitude	140	93.3

Table 3: Association between the levels of attitude regarding blood donation among engineering students with their demographic variables N=150

Demographic variables		Level of attitude						Chi square test
		Un favorable		Moderately favorable		Favorable		
		N	%	N	%	N	%	
Age	18 Years	0	0	4	40	46	32.9	$X^2 = 2.80$
	19 Years	0	0	4	40	35	25	P = 0..42
	20 Years	0	0	2	20	34	24.3	NS
	>20 Years	0	0	0	0	25	17.8	
Sex	Male	0	0	7	70	57	40.7	$X^2 = 3.27$
	Female	0	0	3	30	83	59.3	P = 0.07
								NS
Year of study	I Year	0	0	7	70	43	30.7	$X^2 = 6.52$
	II Year	0	0	2	20	56	40	P = 0.038
	III Year	0	0	1	10	41	29.3	**Significant**
Residential area	Rural	0	0	6	5	50	25	$X^2 = 6.02$
	Urban	0	0	5	50	115	82.2	P = 0.015
								Significant
Type of family	Nuclear	0	0	3	30	107	76.4	$X^2 = 12.47$
	Joint	0	0	7	70	29	20.7	P = 0.002
	Extended	0	0	0	0	4	2.9	**Significant**
Religion	Hindus	0	0	3	30	110	78.6	$X^2 = 24.31$
	Christians	0	0	6	60	12	8.6	P = 0.000
	Muslims	0	0	1	10	9	6.4	**Significant**
	Others	0	0	0	0	9	6.4	
Monthly Income	Rs 10000-20000	0	0	4	40	25	17.9	$X^2 = 3.03$
	>Rs 20000	0	0	6	60	115	82.1	P = 0.21
								NS

The Table 2 reveals that among 150 Engineering students, 10 (6.7%) students had moderately favorable attitude, 140 (93.3%) students had favorable attitude and none of them had unfavorable attitude.

Table 3 reveals that there was significant

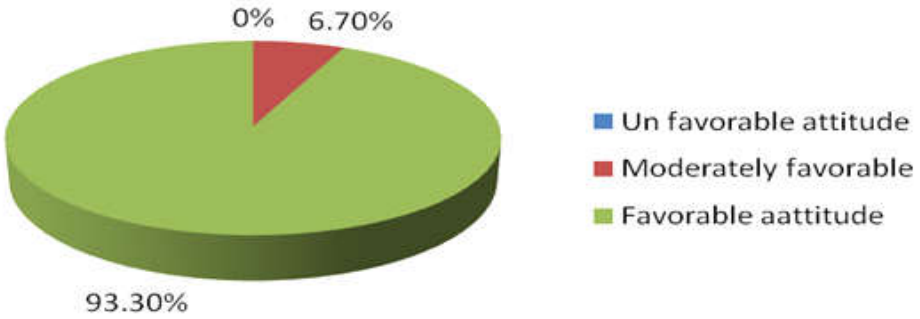

Fig. 1: Percentage distribution of level of attitude regarding blood donation among engineering students

association between the level of attitude on blood donation among engineering students and with their demographic variables of year of study, residential area, type of family and religion. There was no association with respect to other variables.

Discussion

India with a population of over one billion is naturally the country which requires lot of blood to save lives of its citizens. It has been quoted that there is a need of about 8 million units of blood every year in our country. Out of this, only half, that is around 4 million units, can be obtained from voluntary blood donors. Rest all comes from replacement blood donation from relatives or paid donors.

It was evident from the present study, that the majority of the students (93.35%) had favorable attitude towards blood donation and 6.7% had moderately adequate attitude. None of the subjects have unfavorable attitude.

At this stage in the development of the transfusion service, the current study tests the very basic nature of the attitude of students to blood donation, in the hope of illuminating the way forward toward emphasizing vital aspect of many emergency and non-emergency at large scale.

A similar study was conducted by *Okpara RA* which probed the attitude of University students to blood donationfound that 80% of the respondents were prepared to donate freely. Similarly, in a study among Dhaka University students, [33] 93% of the respondents objected to money incentives. Similarly the attitude of the students in this study was 90% percent positive attitude towards blood donation [8].

Kriebardis A.G also conducted a similar study among health professionals regarding voluntary blood donation in Greece found that 97% of respondents were aware of the shortage of blood and responded correctly to most questions regarding blood donation and transfusion. The results also showed that women and young people donate the least in Greece and only 17% were volunteers [9].

It was also revealed that there was significant association between the levels of attitude on blood donation and year of study, residential area, and type of family, religion.The result of the present study was consistent with the study done by *Ownby (1999)* which reported that rate of donation increased with age and education and the results of another cross sectional study in India by Singh (2002) concluded that donor status was significantly associated with age, sex, literacy status, occupation and knowledge about other aspects of blood donation [10].

One can almost say that blood is that magic potion which gives life to another person. Though we have made tremendous discoveries and inventions in science, we are not yet able to make the magic potion called Blood. Human blood has no substitute. Requirement of safe blood is increasing and regular voluntary blood donations are vital for blood transfusion services.

Conclusion

The study concluded that majority of the undergraduate engineering students had (93.3%) good attitude towards blood donation. There was significant association between the levels of attitude

on blood donation among engineering students with their demographic variables such as year of the study, residential area, type family and religion. Hence the investigator felt that specific campaigns are needed to convert favourable attitude towards blood donation into regular voluntary blood donation. Nurses need to take up the responsibilities to create awareness among the students about blood donation. The school health nurse can utilize educational material for teaching higher secondary school children and inspire students to donate blood on attaining the age of 18. The nursing curriculum should provide opportunity to conduct blood donation education programme in various settings.

Community health nurse should play a vital role in sensitization of the population using motivational advocacy messages, introducing culturally relevant social incentives to voluntary donors, launching promotional programmes with an emphasis on the elimination of certain indigenous misconceptions regarding blood donation.

Acknowledgement

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Conflict of Interest

The authors have no conflict of interest to declare.

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Menopausal Problems among Rural Postmenopausal Women: A Study in Anantapuramu District, Andhra Pradesh

P. Jayasree*, G. Venkata Ramana**

Abstract

Menopause is an unspoken, unattended, reality of life, the cause of which is still deciphered completely by man. This phase of life is shrouded with lots of myths and taboos. During the transition to menopause, women may experience vasomotor, uro-genital, psycho-somatic and psychological symptoms as well as sexual dysfunction. The prevalence of each of these symptoms related to menopause varies across ethnic and socio economic groups. Early recognition of symptoms can help in reduction of discomfort and fears among the women. *Objectives:* To assess the prevalence of menopausal problems and to identify the strategies adopted by rural postmenopausal women to prevent the menopausal problems. *Methodology:* A cross sectional descriptive survey design was used to conduct the study at Government General Hospital, Anantapuramu, Andhra Pradesh. A total of 112 rural post menopausal women were selected by purposive sampling technique. *Results:* 63 percent of respondents had somatic symptoms, 58 percent uro-genital and 36 percent psychological symptoms. 64 percent had not adopted strategies and 36 percent adopted strategies to prevent menopausal problems. *Conclusion:* The prevalence of menopausal problems was very high and strategies adopted were less. The awareness about menopausal problems was inadequate necessitating to educate the rural post menopausal women to make them fully aware about menopausal phenomena.

Keywords: Menopause; Postmenopausal Women; Menopausal Problems.

Introduction

Aging is a natural process of maturation. All facts of aging are important to consider from a women's health perspective. Women experience various turning points in their life cycle, which may be developmental or transitional. Mid life is one such transitional period which brings about important changes in women. One of those important changes is menopause.

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The term "Menopause" was derived from the Greek and Latin words, "Meno" (Month) and "Pausis" (a pause, cessation). It is the cessation of woman's reproductive ability, the opposite of menarche. It is a natural process where as unnatural in some instances like hysterectomy, a surgical removal of uterus. The World Health Organization defines natural menopause as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity without an obvious intervening cause and is confirmed only after 12 consecutive months of amenorrhea. Menopause is an accepted, universal phenomenon in a woman's life normally occurs between 45 to 50 years of age.

As our population ages, the number of post menopause women grows. According to Centers for Disease Control and Prevention, in the developed world it is estimated that there are over 477 million post menopausal women and the mean age of menopause range from 45 to 55 years. The number is projected to rise to 1.1 billion by the year 2025. In India, there are 96 million women aged 45 years and above and this number is expected to increase to 401

million in 2026. It is estimated that 40 million postmenopausal women and the average age of Indian menopausal women is 47.5 years.

The reproductive aging in women is the depletion of ovarian follicles which results in profound fall in the production of hormones estrogen and progesterone. The deficiency of these hormones causes various menopausal symptoms like vasomotor, urogenital, psychosomatic and psychological symptoms. The commonly observed symptoms are irregular skipped periods, hot flushes, insomnia, mood swings, fatigue, depression, irritability, headache, vaginal dryness, muscle ache, bladder control problems. Sudden depletion in estrogen level during menopause may results in various complications like heart diseases, osteoporosis, fracture, cerebrovascular disorders, metabolic disorders, increased weight gain, dementia, Alzheimer's disease and endometrial cancer. However, every woman's experience of the menopause is unique; she may experience all of the above symptoms or none of them.

The nature, severity and frequency of symptoms of menopause are based on the concepts of local biology, reproductive characteristics, socio cultural aspects and ethnicities. As the woman spends one third of her life in menopausal phase, severe menopausal symptoms reduce the quality of life of a woman. Early recognition of symptoms and its treatment alleviate this distressing condition of many a woman. Hence menopausal health demands high priority in India.

Anita Punia et al., (2016) conducted a cross sectional study to assess the magnitude of menopausal problems and associated factors among rural women in Sonipat District, Haryana, India. A random sample of 400 eligible women was selected and data were conducted by semi structured schedule by house to house visits. The results showed the mean age of menopause was 46.2±1.61 standard deviation years. The most frequent menopausal symptoms were joint and muscular discomfort (77.5%), sleep problems (76.5%), hot flushes (62%), irritability (58.5%) and the bladder problems (54.5%).

A. Salini Lisa Cyriac et al., (2016) conducted a descriptive survey in selected rural area, Kerala State to identify the menopausal problems among post menopausal women and find association between menopausal problems and selected variables. A sample of 108 postmenopausal women selected by using probability one-stage cluster sampling technique. The results showed that 46.2 % sample attained menopause between 45 and 50 years of age, symptoms were muscle and joint pains (92.7%), headache (88%), loss of interest in most things (87.9%) feeling dizzy or faint (86.1%) and the loss of interest in sex (84.3%). All of them experience vasomotor symptoms.

The quality of life of the increasing aging female population is now becoming an important issue. In view of the above studies and magnitude of the problem, the researcher is interested to assess the magnitude of the menopausal problems among rural women and to plan interventions for remedial measures and also to create awareness among women for improving their health status and quality of life.

Objectives

The objectives of the study were

- To assess the prevalence of menopausal problems among rural postmenopausal women.
- To identify the strategies adopted by rural postmenopausal women to prevent the menopausal problems.

Methodology

A cross sectional descriptive survey design was used to conduct the study at Government General Hospital, Anantapuramu, Andhra Pradesh between 14/2/2017 to 10/4/2017. A total of 112 menopausal women attendants in the age group of 45 to 55 years of hospitalized patients and who were accompanying the patients were selected by non probability purposive sampling and were studied at inpatient and outpatient departments. Data were collected by using structured interview questionnaire and analyzed by using descriptive statistics.

Results

The data obtained analyzed in terms of the objectives of the study using descriptive statistics.

Table 1 shows the frequency and the percentage distribution of postmenopausal rural women with their selected demographic and reproductive variables. Majority of the respondents 74 percent were in the age group 45-50 years, 53 percent attained menopause between 44 and 47 years of age, 79 percent were Hindus, 91 percent married, 96 percent illiterates, 65 percent had cultivation, 92 percent belonged to joint family, 51 percent had monthly

Table 1: Frequency and Percentage distribution of postmenopausal rural women with their selected socio demographic and reproductive variables

Variable	Frequency	Percentage
Age		
45 - 50 years	83	74
51 - 55 years	29	26
Age at menopause		
40 - 43 years	11	10
44 - 47 years	59	53
48 - 51 years	38	34
52 - 55 years	04	03
Religion		
Hinduism	89	79
Islam	11	10
Christianity	09	08
Others	03	03
Marital Status		
Married	102	91
Widow	08	07
Separated	02	02
Education		
Illiteracy	108	96
Primary	02	02
Secondary	02	02
Intermediate & above	--	--
Occupation		
Daily wage	34	30
Cultivation	73	65
Others	05	05
Type of family		
Joint	103	92
Nuclear	09	08
Monthly Income		
Rs. ≤ 1,000	06	05
Rs. 1,001 to 5,000	57	51
Rs. 5,000 to 10,000	44	39
Rs. > 10,000	05	05
Parity		
Parous	110	98
Nulliparous	02	02
Nature of menopause		
Natural	110	98
Unnatural (Hysterectomy)	02	02

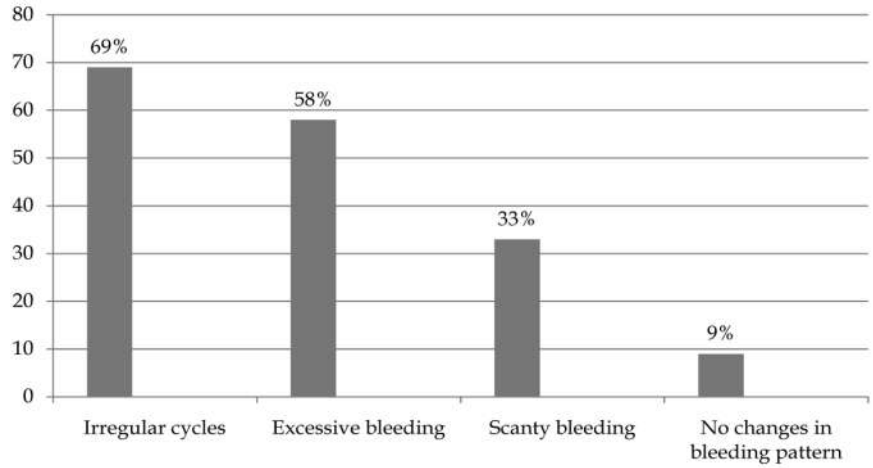

Fig. 1: Percentage distribution of post menopausal rural women according to the change in menstrual pattern prior to menopause

income Rs. 1,001–5,000, 96 percent parous and 98 percent attained natural menopause.

Figure 1 shows the changes in menstrual cycle prior to menopause. 69 percent respondents had irregular menstrual cycle prior to menopause, 58 percent excessive bleeding, 33 percent scanty bleeding and 9 percent had no changes in menstrual cycles.

Figure 2 shows the percentage distribution of

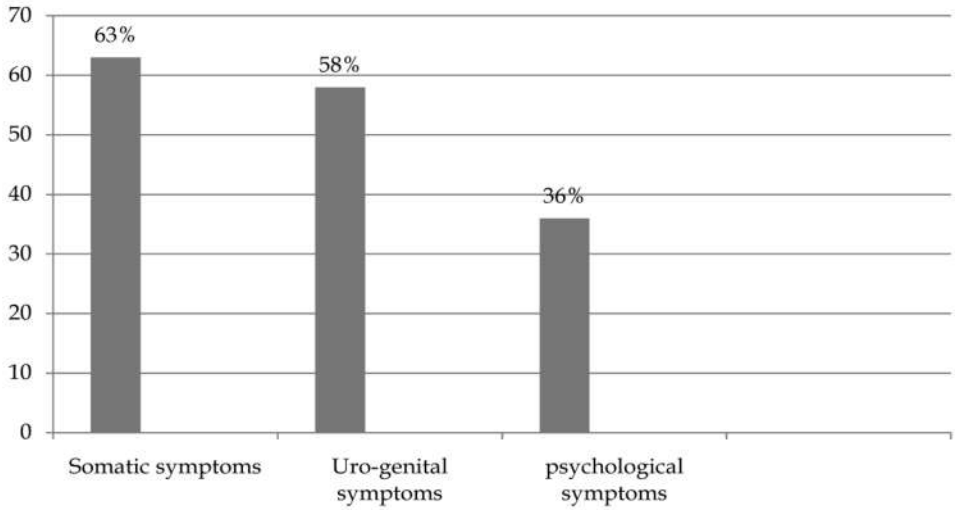

Fig. 2: Percentage distribution of menopausal symptoms among rural postmenopausal women.

Table 2: Frequency, percentage distribution of menopausal symptoms among rural postmenopausal women

Menopausal Symptom	Frequency	Percentage
Somatic symptoms		
Hot flushes	98	86
Night sweating	84	75
Joint and muscle discomfort	107	96
Sleeping problems	28	25
Headache	93	83
Backpain	42	38
Loss of feelings in hands, feet, numbness	63	56
Tiredness, easy fatigue	81	72
Palpitations, heart discomfort	73	65
Breathing difficulties	31	28
Hair loss	70	63
Uro-genital symptoms		
Incontinence of urine	93	83
Vaginal dryness	39	35
Vaginal discharge	08	09
Loss of interest in sex	72	64
Lower abdominal pain	39	35
Psychological symptoms		
Feeling tense or nervous	84	75
Excitable	57	51
Anxiety	43	38
Difficulty in concentration	40	36
Lack of interest in most things	41	37
Irritability	89	79
Feeling unhappy or depressed	47	42

menopausal symptoms. 63 percent of respondent had somatic symptoms, 58 percent uro-genital and 36 percent psychological symptoms.

Table 2 shows the frequency and percentage distribution of respondents regarding the somatic, uro-genital and psychological menopausal symptoms. Regarding the somatic symptoms majority

of the respondents 96 percent had joint and muscle discomfort. Regarding the uro-genital symptoms majority of the respondents 83 percent had incontinence of urine. Regarding the psychological symptoms majority of the respondents 79 percent had irritability.

Figure 3 shows the percentage distribution of rural post menopausal women regarding the strategies adopted to prevent the menopausal symptoms. Majority of the respondents 64 percent had not adopted strategies and 36 percent had adopted strategies to prevent the menopausal symptoms. 78 percent respondents adopted pain balms for headache, backpain, joint and muscle discomfort, 62 percent adopted adequate ventilation and sleeping

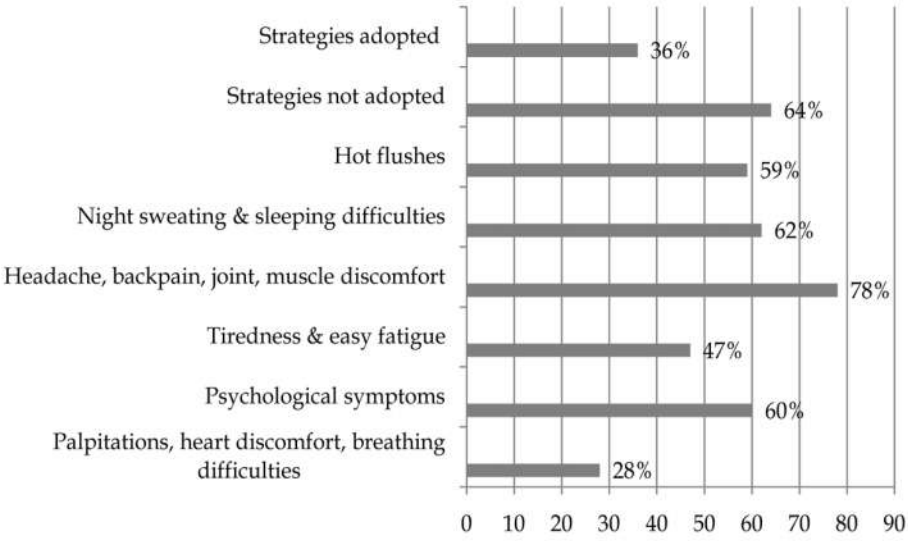

Fig. 3: Percentage distribution of rural post menopausal women regarding the strategies adopted to prevent menopausal symptoms.

in natural air for night sweating and sleeping difficulties, 60 percent adopted being silence, shading with neighbors, visiting temples for psychological symptoms, 59 percent adopted buttermilk, plenty of water for hot flushes, 47 percent adopted intermittent relaxation for tiredness and easy fatigue and 28 percent adopted occasional medical services for breathing difficulties, palpitations and heart discomfort.

Discussion

In the present study majority of the rural women 53 percent attained menopause between 44 and 47 years of age, 98 percent found natural menopause, 69 percent had irregular menstrual cycles prior to menopause, 63 percent had menopausal somatic symptoms, 36 percent adopted some kind of strategies to prevent menopausal problems.

Conclusion

As menopausal health demands priority in Indian scenario due to increase life expectancy and growing population of menopausal women, large efforts are required to educate and make these women aware of menopausal symptoms. This will help in early recognition of symptoms, reduction of discomfort and fears and enable to seek appropriate medical care if necessary.

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Original Article

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Community Radio Listening Habits of Women Living in the Resettlement Colonies of South Delhi District, Delhi

Ritu S. Sood

Abstract

The paper highlights relevance of radio in the marginalized communities with specific reference to women. With the advancement of 21st century, the position of women is also changing at a fast pace. The country's overall development rests greatly on the inclusion of women in its development programs. Community radio plays an important role in the lives of women as it creates awareness, provides information, improves their abilities and empowers them. The women in the target area lack knowledge about preserving the good environment for future generation and about their good health which are the essence of the day. Hence, a study was conducted with an objective to assess the listening habits of women, living in the resettlement colonies, about environment and health programs. The research findings show that women are listening to the radio, but for entertainment and not for information. However, women are willing to contribute and participate in the community radio stations.

Keywords: Community Radio; Listening Habits; Marginalized Communities; Radio Station; Resettlement Colonies; Empowerment.

Introduction

UNESCO has outlined community radio as a broadcast station that "has operated in the community, for the community, about the community and by the community"

In developing countries, the radio is looked upon as a catalytic instrument for development. The Vidyalankar Committee set up by the Indian Planning Commission in 1963 envisioned an active role for radio when it observed "our development task is so great and our population, so large that only by the most efficient possible programs of public information can we hope to reach our people often enough and effectively enough to activate on the needed scale, discussion processes and subsequent actions in the cities, towns and villages". According to a policy document of the Government of India, "radio should become an input in the nation building tasks and must strengthen the confidence of the people, promote the concept of self-reliance and encourage the forces of unity and national harmony." Radio is the main source of news and entertainment for most of India. All India Radio is the top tier in radio coverage, as the public service broadcaster. Community radio is often built around perceptions of participation and access, and so that the people can receive the message and participate in the creation of such messages. The concept of Community radio is the most noteworthy development in radio broadcasting all over the world. It is today known as the 'narrow casting' as against 'broadcasting'. The introduction of the community radio is a milestone not only in reaching out to the remote area, but also persuading the citizen to share in the vision and excitement of developing. From the time Radio was introduced in India, the main goal of AIR (All India Radio) was to, educate, inform and entertain the public. In 2006 when community radio policy guidelines were issued for launching of community radio stations in the country, the principal aim was the development of the community with the

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help of community radio, which can promote the development of the country, indirectly it will promote the welfare of women.

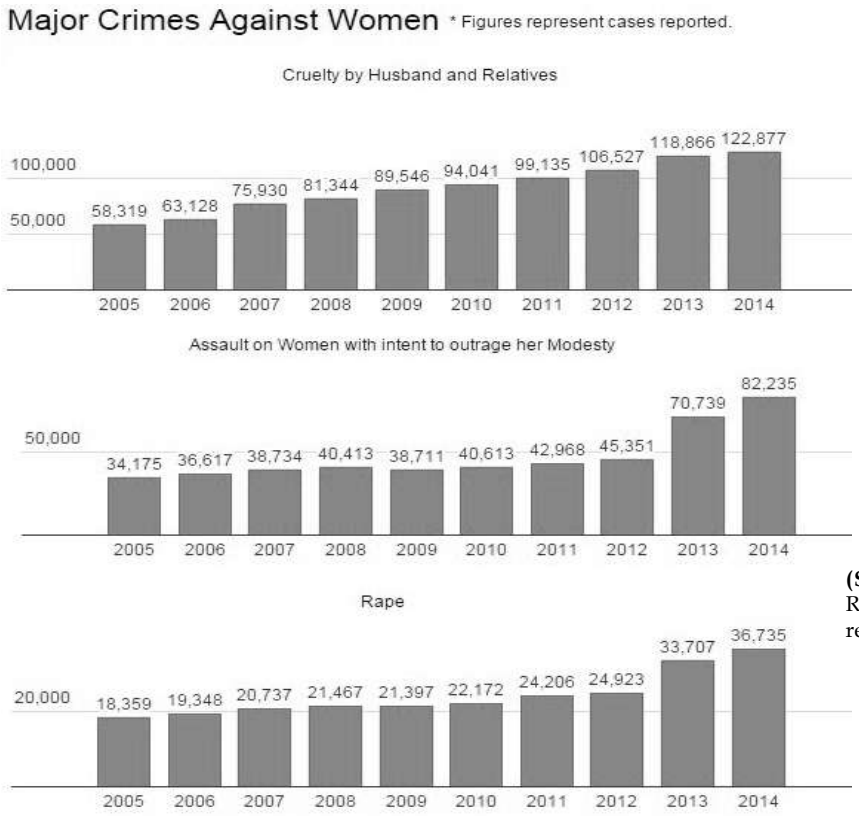
In India, this concept of community radio can be used within a well-defined, limited area to echo the problems, desires, needs, sorrows and celebrations of a society which the mainstream media are unable to cater to. Today a lot of importance has been given to broadcasting in the local or the grassroots levels in most countries. Though this local or community radio movement started in the 1960s and the 1970s in western countries, it reached the developing countries only in the 1980s and the 1990s. The Government of India decided to start local radio stations during the sixth five-year program on an experimental basis.

In a Community Radio each of the stations attends to a small area, reaching right into the heart of the community which uses the microphone to replicate and enrich its life in an artistic expression. The first experimentation in local/community radio was launched on October 30, 1984 in Nagercoil, Tamil Nadu. The key objective of this station was providing education, information and entertainment, and to encourage the people to participate in the national endeavor for the cohesive development of the country. It is a supportable, cost-effective medium and has the advantage of accessing both illiterate and literate audiences.

In the perspective of India, as a local answer to training, employment, and challenging patriarchal structures, community radio has started to gain momentum for women's participation. With them playing key roles as community reporters, volunteers, and program producers, women in India may have found a new medium to voice their opinions. Community radio is the only medium to spotlight and educate the people as it serves people in three ways- It informs, guides, and entertains. Through the help of community radio, we can provide the information related to different areas of concern among the target population, making them aware about the rights, rules and laws initiated by the government for them.

Women's Empowerment and Participatory Communication

"Convinced that the full and complete development of a country, the welfare of the world and the cause of peace require the maximum participation of women on equal terms with men in all fields." —Preamble to Convention on the Elimination of all forms of Discrimination Against Women, 1979.



(Source: National Crime Records Bureau; figures represent cases reported)

"Woman empowerment is a process that enables a powerless woman to develop autonomy, self-control and confidence and with a group of women and men, a sense of collective influence over oppressive social conditions," noted Kumar and Varghese.

Empowering women, in fact, mean supporting them to confront family, caste, community, religion, traditional forces and prejudices working within society. This conflict ensures their full contribution in every phase of national and social development. Empowerment is a progression where women, collectively and individually, become conscious of how power relations drive their lives. With this consciousness, they achieve self-confidence and vigor to challenge gender inequalities at all levels

Mass media are the chief agents of creation, preservation and eradication of different kinds of images and stereotypes of women in the contemporary world. Visual media like TV is more accepted than the magazines and newspaper. The information people obtain through radio, newspapers and television shapes their opinions about the world. Women are portrayed in their traditional role in most of the media and their images are just decorative in the advertising media. Media representation of women is reactionary and unrealistic. Media also illustrate a distorted adaptation of Indian housewife. It is the mass media, which should begin the process of women empowerment in the modern world. The added decision-making positions women embrace in the media, the more they can influence the output. They will be able to break the old stereotypes about women.

Participatory development communication is the use of mass media and traditional, interpersonal means of communication that endows communities to envisage aspirations and determine solutions to their development issues and problems. It also proposes to return to the roots of its meaning, which, similarly to the term community, originate from the Latin word 'communis', i.e. common.

In the perspective of India, a community radio acts as a participatory tool, not just challenging the gender roles premeditated by the society, but facilitating assessment of resources, facilities available, opportunities and redistributing power to the marginalized. What becomes vital in this case is that such stories of success get transformed and transferred into bigger examples, spreading through different cultures and communities. Here with training, local producers can generate programs using local voices. The best benefit in them is that immediate local problems and concerns can be undertaken in the least loss of time whenever the need is felt. The community can also enthusiastically contribute to the management of the station and have a say in the preparation and content of the programs.

Role of Community Radio in Empowering Women

Community radio is both for the community and by the community. The community here is understood to be the owner of the radio station that contributes in all the phases of the station, from the management of the establishment, financing to administration. Community radio is also characterized by the dynamic participation of the community in creating news, entertainment, information, and culturally-relevant material with a stress on local concerns and issues. The best benefit is that the immediate problems and local issues can be undertaken in a minimum loss of time. The community can also keenly contribute not only in the management of the station, but also have a say in the planning and content of the programs.

Studies and practices over the years have shown that community development and women's empowerment go hand in hand thus, making women's access to information critical for development. As the deprived gender, a woman in a community radio breaks the patriarchal shackles, stepping out of the mental walls. Without the constant encouragement and support from social perspective is made available, Community radio as a social emancipation tool remains far from reality. With constant community participation, the women impacts stories from the grassroots, promoting girl child education, better nutrition, government scheme's implementation, environmental care, and prevention of gender based violence will have a larger influence. Some of the popular methods of women empowerment include education, entrepreneurial training programs, formation of Self Help Groups, etc.

Materials and Methods

The study adopted questionnaire based survey research method. The survey is the most appropriate method of gathering and measuring data relating to demographics, attitude, opinion and perception. A total of 100 self-administered structured questionnaire in Hindi were distributed to women in the age group 14 -40yrs.

The study was conducted on the influences of community radio (CR) programs on women's

development with the following specific objectives:

a. To study radio listening pattern of the respondents,
b. To find the willingness or interest among the target audience and their willingness to participate in CR Programs,
c. Gratification drawn from the programs,
d. What are the benefits of CR?
e. How can women get access to various resources and programs initiated by the government, while listening to the CR?
f. How can the CR give women a voice that allows them participation and Redressal in the forums?

To fulfil the set objectives of this study, Radio JIMS Vasant Kunj 90.4 was taken up as a tool for the study. Radio JIMS 90.4 MHz was set up in the year 2005. The reach of the station is 5 kms radius. It broadcasts programs daily for five hours on community empowerment issues related to women, children and the youth. The thematic content of the station area - Women empowerment, health, spirituality, legal issues and career counselling. The Signature Programs of this CR are:

"Aatmchintan" is based on motivation & spirituality; "Mansha" aims at women empowerment; "Legal Mantra" on legal awareness; "Bat Pate Ki" is based on wellness and health and "Jeevan Disha" is for career counseling.

The listeners of this CR are, primarily, school dropouts, adolescents and women; who otherwise have little access to information from the nearby urban clusters in a 5km range. To fulfil the set objectives of this study, a detailed data collection in the coverage area of Radio JIMS Vasant Kunj was made. Slums of Massodpur, Mahipalpur, Dalit camps and Rangpuri Pahari was selected as the area of the study. The convenience sample size of the study was taken as 100 with random samples from the women population of the study area. Quantitative data were collected and analyzed and the results were interpreted through descriptive analysis. The statistical software SPSS (version 16.0) was used for analysis of the data and Microsoft excel have been used to generate graphs, Tables, etc.

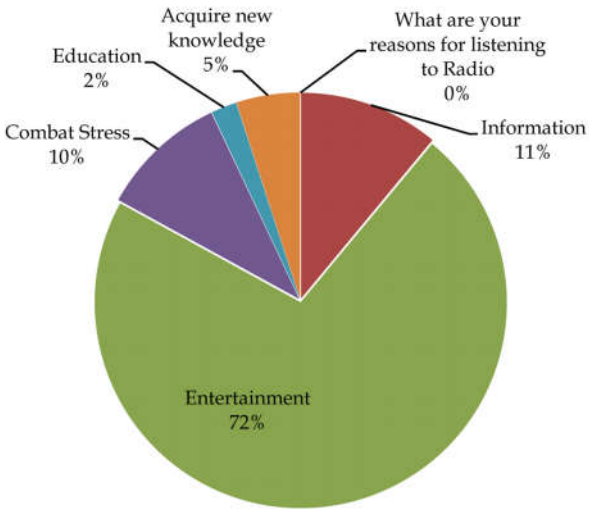
Results

All 100 women / girls' subjects in the age range 14- 40 years enrolled in the survey completed the study. The age groups defined here: 14- 18 years, 19- 29 years and 30- 40 years of age.

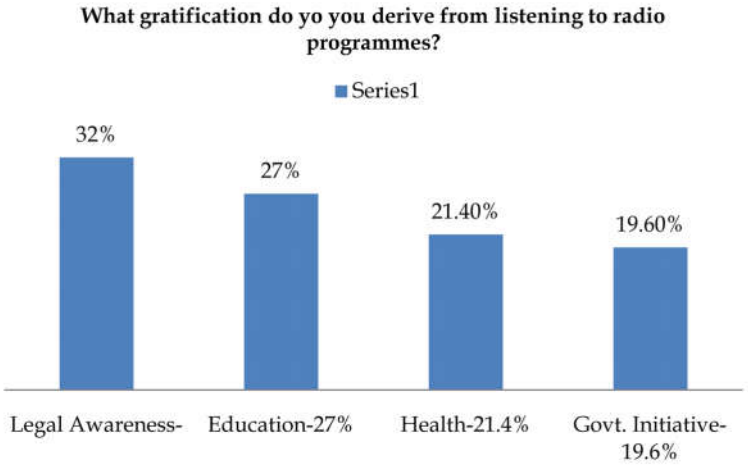
Nearly half of the respondents (41%) belonged to age group of 19 to 29 years and nearly one fourth of the respondents (23% and 22%) belonged to the age groups of 14 to 18years and 30 to 40 years respectively. Nearly one-fourth of the respondents (24% to 26%) have completed high school and secondary level education. 12% of the respondents have completed elementary level education. Nearly one fourth of the respondents were illiterate/ did not receive any formal education. This shows that the higher studies levels of the study area are very low. Regarding the occupational status of the respondents, nearly half (40%) of the respondents were either housemaids or door step beauticians and less than one fourth of the respondents (18%) were students. Nearly 5% of the responders were homemakers.

The study revealed that more than 71% of the women listened to the radio, whereas more than one fifth of the respondents (21%) did not listen to the radio, the development of television may be the cause and reduces the radio listening. Only 20% of the respondents were aware of the community radio. More than half of the (61%) of the respondents usually listened to the radio early in the morning while getting ready for the work, while nearly half of them (45%) listened to the radio in the leisure time in the comfort of their houses and 23% listened at the time of travelling or commuting.

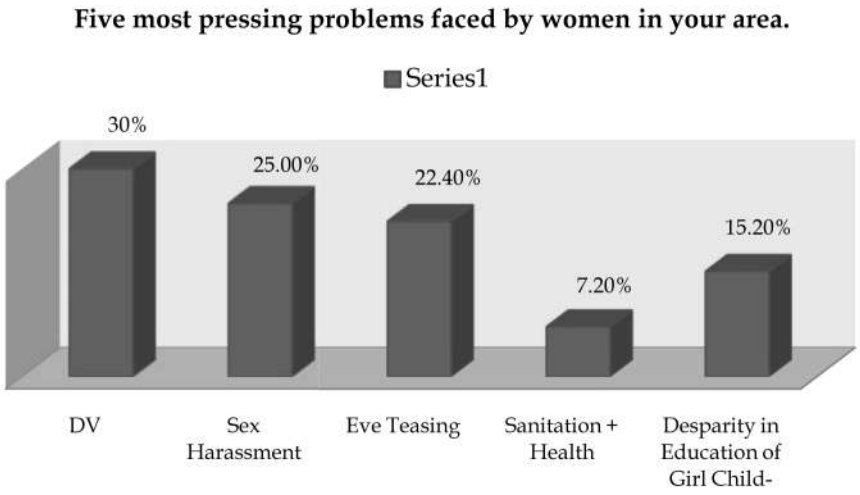
Less than three fourth of the respondents (72%) listened to radio for pure entertainment while more than one tenth listened for information and to combat stress.



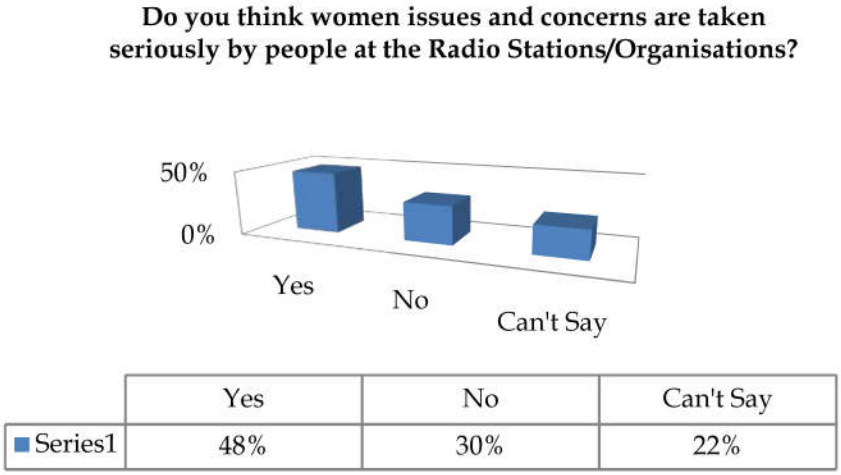
Graph 1: The reasons behind listening to community radio



Graph 2: The answers to the question about the gratification drawn from listening of the radio programs, nearly one third of the respondents (32%) revealed that they acquired, whereas one fifth admitted to health awareness



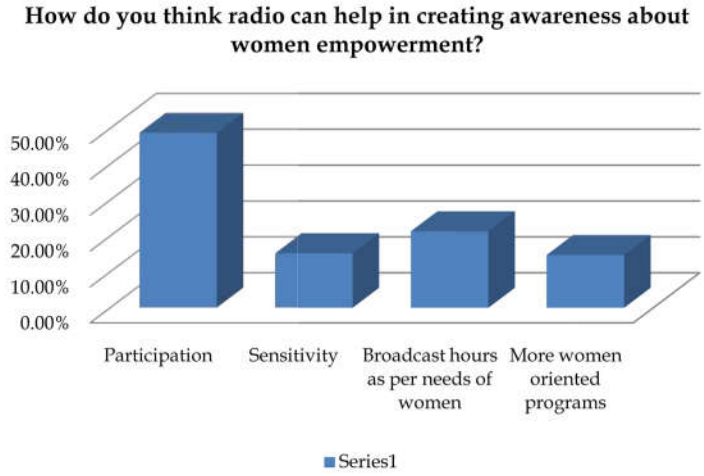
Graph 3: The five most pressing problems faced by the women in their areas 30% responded to domestic violence, whereas 25% to sexual harassment and 22% to eve teasing. 48% of the respondents agree that Radio shows do raise issues and concerns of women seriously.

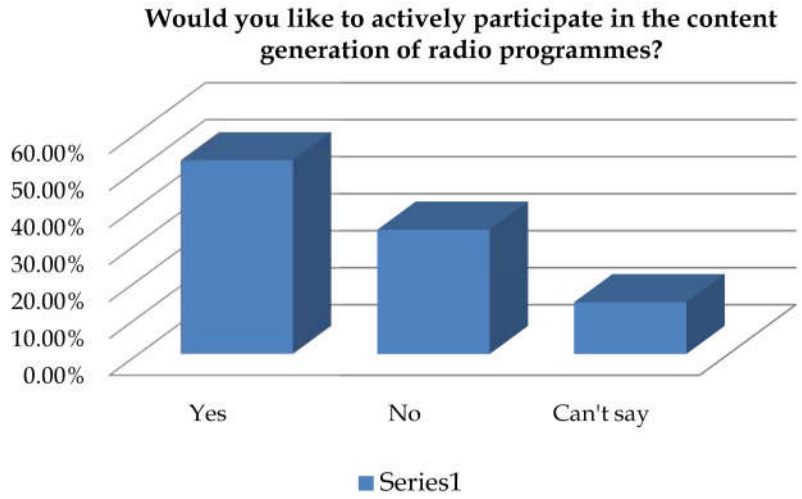


	Yes	No	Can't Say
Series1	48%	30%	22%

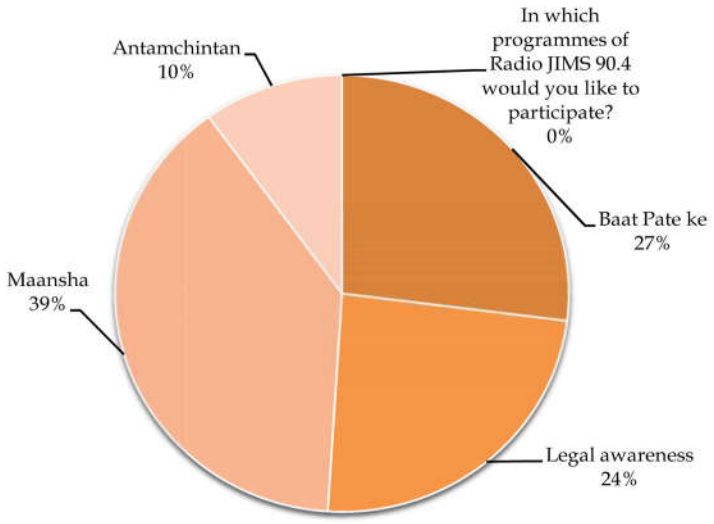
Graph 4: Shows that 30% showed their disconcert about the same More than three fourth (78%) of the respondents, showed their keen interest in listening to the programs on women empowerment.

Graph 5:



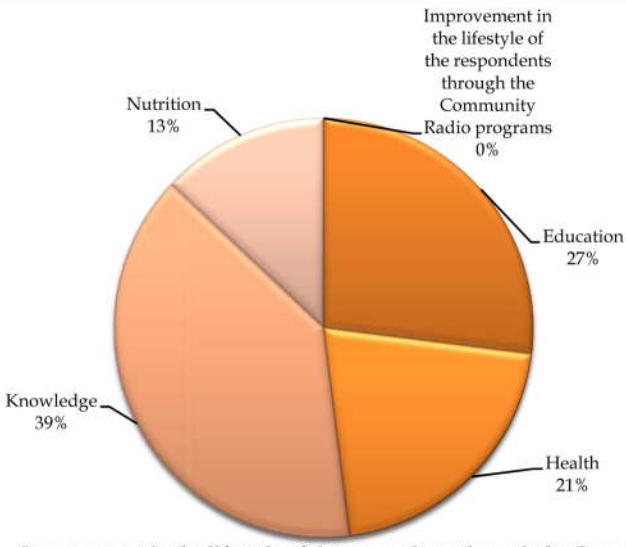


Graph 6: Nearly half of the respondents (52%) reiterated that community radio can play a very effective role in raising their concerns and at the same time they also showed eagerness in generating content for their community radio (Graphs 5 & 6 respectively)



Graph 7: Reveals about the pursuit of the respondents to participate in categories of programs of Radio JIMS Vasant Kunj. 39% of the respondents were willing to participate in women's programs.

Fig. 8:



Improvement in the lifestyle of the respondents through the Community Radio programs

Chart 8 presents the distribution of the respondents by the alteration in their lifestyle through the plans of the community Radio. About 87% of the respondents, nearly felt improvements in teaching. Close to education, they got enhancement in knowledge and health too. Approximately 13% of the respondents developed in their nutrition aspects by the programmes. Hence, more than half of the respondents got improvement in their mindset.

Conclusion

Mahatma Gandhi very aptly stated "if you cultivate a man you educate an individual, merely if you educate a woman you educate an entire household". This education is likewise one of the prime needs of women towards its evolution and authorization in the club.

Radio can change the lives of women, by giving them a voice, supporting them to fight for their rights, by building awareness about numerous concerns from the rights of women, maternity, to health, nutrition and violence. Radio also can enlighten women about their political rights, reservations, empowering them to fight back the domestic violence, biases, encourages them to express their opinion etc. If it used properly community radio can do wonders for the development, upliftment or empowerment of women.

The important conclusions drawn from the methodology point to the fact that to empower women, is to increase their command over the decisions which will touch their lives both inside and outside the home. Women should be instigated to take their knowledge and skills, vision and leadership, views and hopes into the growth schedule. This radio as a medium has a number of qualities that makes it an efficacious tool in supporting women's participation in decision-making processes and organizational structures.

1. A nationwide survey on the radio listening habit of women be carried out as a means of reinforcing the finding of this study and to decide the strength of wireless as a powerful force in calling up women for national course. This is necessary to furnish an equal platform for women and to put an end to the contentious matter of women marginalisation particularly in government.
2. That all offices involved in dissemination of information on health, laws, income generation, self help groups, among others intended for women should utilize the means of community radio in doing so.
3. The stations should go with a social responsibility high degree of women's participation. They can do so by:

- By creating a social climate supportive and vulnerable to diverse women's issues.
- By producing content for the economic independence of women through their participation and listening. This includes the psychological, economic, cultural, political and societal.

Hence, radio can be the source of empowerment of women. Radio can change the lives of women, it gives them voice, it gives them courage to fight for their rights, it creates awareness about various issues from

the beginning the rights of women, to health, maternity, violence, nutrition. Radio also educates women about their political rights, voting, etc. It endows them to fight back the domestic violence, male preference attitudes with men, gives them courage to speak their opinion on all issues, to express their interests. It gives them confidence to live their life. So community radio can do wonders if it applied properly for the development or upliftment or empowerment of women. It can play as a platform or bridge to exit the barrier of essential communication and info; education is fundamental, pre- requisite of all human beings.

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Relationship between Self Concept and Adjustment Level among B.Sc. Nursing Students in SRM College of Nursing, SRM University

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Abstract

Adolescence is a dynamic period of growth and development that bridges childhood to adulthood while being distinctively different from both groups. Adolescence is characterized by many interrelated change of body mind and social relationships. The objectives of study were to assess the self concept and adjustment levels and to co-relate the self concept and adjustment among B.Sc . nursing students. Quantitative approach and descriptive survey design was adopted for the study. A total of 90 samples were selected using non probability purposive sampling technique . The tools used for the study comprised of 3 sections, section A demographic data, Section B includes self concept questionnaire developed by the investigator which includes 21 questions. Section C includes adjustment questionnaire which includes 25 questions. The data was collected and the analysis was done using descriptive and inferential statistics. The study findings reveals that among 90 samples taken for the study it is known that 15 (16.7%) students had moderate level of self concept, 75 (83.3%) had good level of self concept. Considering the adjustment level, 14 (15.6%) reported good level of adjustment; 60 (66.7%) reported average level of adjustment and 16 (17.7%) had unsatisfactory level and the findings also revealed that there was a significant relationship between self concept and adjustment level at p=0.495.

Keywords: Self Concept; Adjustment; Relationship; Adoloscent.

Introduction

Adolescence is the developmental period of transition between childhood and adulthood; it involves biological, cognitive and socio emotional changes. These changes transform the young person's vision of the self into more complex, well-organized and consistent picture. Self-conception of adolescents changes in structure as well as content. Structurally it becomes more differentiated and organized [1].

Marsh & Yeung (1997) found that not only can adolescents' level of academic self-concept affects their later performance in school, their self-concepts are also influenced by their prior academic achievement. Hence, the relationship between self-concept and academic achievement seems to be reciprocal in nature, with each affecting the other. Academic achievement and self concept are strong predictors of each other. Individuals with a low self-concept have shown low commitment to academic performance [2].

Fuentes MC, García JF, Gracia E, (2011) analyzed the relationship between a multidimensional measure of self-concept, Self-concept Form-5 Questionnaire (AF5), and a broad set of adolescents' psychosocial adjustment indicators. From the responses of 1,281 participants (53.7% females) aged 12 to 17 years (M = 14.98 years, SD = 1.74 years), results indicated that higher self-concept scores corresponded to better psychological adjustment, good personal skills and fewer behavioral problems. Although a positive relationship between social self-concept and drug use was found, this significant relationship disappeared once the adolescent's age and sex was controlled for. These results support the idea that the self-concept is a basic theoretical

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construct closely related to the psychosocial adjustment in adolescence. Also this study helps explain some contradictory results reported in the literature (i.e., a positive relationship between social self-concept and drug use), by showing how the statistical control of a third variable effect (i.e., age) avoids reaching conclusions based on spurious relationships [3].

Currently, research on self-concept clarity is novel and is almost entirely based in adulthood. Thus, little is known about this construct and its associations with adjustment in adolescence. During adolescence, where self-representations become more integrated (Harter; 2006, Harter et al., 1998)[4,5] cognitive ability enables youth to report on self related processes.

Aspects of the self and identity have meaningful implications for adjustment and well-being. For instance, high perceived self-worth is negatively related to peer victimization and loneliness (Graham & Juvonen, 1998)[6], and identity-achieved adolescents demonstrate superior cognitive functioning (Boyes & Chandler, 1992)[7]. Thus, understanding the valence (self-esteem) and structure (self-concept clarity) of the self in this age group may prove beneficial for the study of adolescent development.

Giri R Mukhopadhyay A, Mallik S, Sarkar S, Debnath A, Patra P. (2012) stated that Nursing students are exposed to different types of stress, with which they have to make adjustments. Self concept Influences their capability of adjustment. The study was done to find out the levels of self concept in different dimensions and levels of adjustment in different spheres of the auxiliary nursing and midwifery students, to find out the association between their self concept and adjustment with different socio demographic factors and to assess the correlation between self concept and adjustment of these students. The study results found that no significant association was found between self concept and age, education and family income. The associations of marital status and type of family with self concept are statistically significant. No significant association was found between adjustment and sociodemographic characteristics. Positive correlation was found between self concept and adjustment (correlation co-efficient r = 0.6109) [8].

Materials and Methods

Quantitative approach and descriptive survey design was adopted for the study to find relationship between self – concept and adjustment in Nursing students, SRM College of Nursing, SRM University, Kattankulathur, Kancheepuram Dist, Tamilnadu. The students were explained about the conduct and outcome of the study. Students willing to participate were invited. The study was approved by institution. Participation in the study was purely voluntary and confidentially of the information was ensured. Non probability purposive sampling technique was used to select the sample.

A total of 90 samples include Girls studying in I & II year B.Sc (N) in the age group of 17-20 years was selected as study participants. The tools used for the study comprised of 3 sections, section a demographic data, Section B includes self concept questionnaire developed by the investigator which includes 21 questions for assessment of level of self concept scored as poor, good, and excellent. Section C includes adjustment inventory which includes 25 questions to assess the levels of adjustment scored as excellent, good, average, unsatisfactory and very unsatisfactory. The respondents were asked to read each questions carefully and asked to tick the appropriate response applicable to the participants. The data was entered into Microsoft excel software and analysis was done using descriptive and inferential statistics.

Data was analyzed using SPSS, version 16.0 (IBM, Chicago, USA) was used to obtain the P value. P value (=0.001) were considered to indicate significant statistical difference. (Sharma S 2011).

Results and Analysis

Data analysis and the results are tabulated below:

The Demographic Profile of the Participants

Out of 90 students majority 34 (37.7%) belongs to the age group of 17-18 years; considering the gender 85 (93.3%) are females. Considering the type of family 83 (92.2%) students belong to the joint families. Considering the languages known 52 (57.8%) students were English knowing students. Considering the place of stay 66 (73.3%) students are staying in homes; Considering the nativity of the students 67 (74.4%) students belong to India; 4 (4.4%) students are from US 16 (17.8%) are Africans and 3 (3.4%) are from other countries.

Table 1 reveals that Out of 90 students majority 83.3% of them have good self concept, 16,7% of them have moderate self concept and none of them have poor self concept.

Table 1: Assessment of self concept self among Nursing Students N=90

Level of self concept	Frequency	Percentage
Poor	0	0
Moderate	15	16.7%
Good self concept	75	83.3%

Table 2: Assessment of level of adjustment among Nursing students N=90

Level of Adjustment	Frequency	Percentage
Very Unsatisfactory	0	0
Unsatisfactory	16	17.7%
Average	60	66.6%
Good	14	15.5%
Excellent	0	0

Table 3: Co-relation between self concept and adjustment among Nursing students N=90

Variables	Mean	SD	r Value
Self concept	77.01	6.18	r = 0.073
Adjustment	12.62	2.90	P = 0.495

Table 2 reveals that regarding the adjustment level of the students, majority 66.6% of them have average levels of adjustment, 15,5% of them have good levels of adjustment, 17.7% of them have the unsatisfactory level of adjustment and none of them have very unsatisfactory level of self adjustment.

The Tables 3 show that there is no correlation between self concept and adjustment among the nursing college students.

Table 4 reveals that there is significant association between the level of self concept and the demographic variables of type of family and place of stay. There is no association with respect to other variables.

Table 5 reveals that there is significant association between the level of adjustment and the demographic variables of languages known and place of stay. There is no association with respect to other variables.

Table 4: Association between the level of self concept and the demographic variables

Variables	Category	Level of Self Concept		Chi square Value
		Moderate	Good	
Age	17-18	7	27	$X^2 = 3.214$
	19-20	5	28	P = 0.20
	21-22	3	20	NS
Gender	Male	0	5	$X^2 = 1.068$
	Female	15	70	P = 0.303
				NS
Type of family	Nuclear	3	4	$X^2 = 3.748$
	Joint	12	71	P = 0.05
				Significant
Siblings	1 Child	3	21	$X^2 = 0.504$
	2 Children	7	34	P = 0.777
	3 and above	5	20	NS
Languages known	Kannadam	2	17	$X^2 = 0.750$
	English	10	42	P = 0.386
	Others	3	16	NS
Place of stay	Home	7	61	$X^2 = 8.133$
	Hostel	8	14	P = 0.004
				Significant

Table 5: Association between level of adjustment and the demographic variables N=90

Variables	Category	Level of adjustment						Chi square value
		Good		Average		Un satisfactory		
Age	17-18	5	35.7%	23	38.3%	6	(37.5%	X^2=0.340
	19-20	6	42.9%	21	35%	6	(37.5%	P=0.987
	21-22	3	21.4%	16	26.7%	4	25%	NS
Gender	Male	0	0%	3	5%	2	12%	X^2=2.329
	Female	14	100%	57	95%	14	87.5%	P=0.312
								NS
Type of family	Nuclear	3	21.4%	3	5%	1	6.3%	X^2=4.199
	Joint	11	78.5%	57	45	13	83.7%	P=0.122
								NS
Siblings	1 Child	6	42.8%	15	15%	3	18.8%	X^2=8.01
	2 Children	4	28.6%	32	53.3%	5	31.3%	P=0.091
	3 and above	4	28.6%	32	53.3%	5	31.3	NS
Languages known	Kannadam	3	21.4%	12	20%	4	25%	X^2=10.679
	English	11	78.6%	28	48.7%	11	68.8%	P=0.03
	Others	0		20	33.3%	1	6.2^	**Significant**
Place of stay	Home	5	35.7%	44	73.3%	14	87.5%	X^2=10.487
	Hostel	9	64.3%	16	26.7%	2	12.5%	P=0.005
								Significant
Economic supporter	Mother	4	28.6%	17	28.3%	8	50%	X^2=4.007
	Father	9	64.3%	33	55%	7	43.8%	P=0.406
	Brother	1	7.1%	10	16.7%	1	6.2%	NS
Religion	Hindus	6	42.9%	23	38.3%	8	50%	X^2=4.410
	Muslims	0		7	11.7%	3	18.8%	P=0.62
	Christians	6	42.9%	20	33.3%	3	18.8%	NS
	Others	2	14.2%	10	16.7%	2	12.5%	
Income	Rs<6000	5	35.7%	41	68.3%	9	56.3%	X^2=6.275
	>Rs 6000	9	64.3%	19	31.7%	7	43.7%	P=0.072
								NS
Nationality	India	10	71.4%	46	76.7%	11	68.8%	X^2=3.698
	US	0		1	3.3%	2	12.5%	P=0.440
	Africa	4	28.6%	12	20%	3	18.8%	NS

Discussion

The student after passing through tumultuous adolescence period which usually ends at 19 years also coincides with the end of 1st year B.Sc Nursing. This maturing in age contributes to their growing up and maturing as adults progressively from second year onwards. The second probable reason is that since there is transition from school to professional college and once the students acclimatize during 1st year B.Sc Nursing, they get adjusted, assured and more focused subsequently.

The major findings of the present study was that 15 (16.7%) students have moderate level of self concept and 75 (83.3%) have good level of self concept. Considering the adjustment level, majority 60 (66.7%) students had average level of adjustment. This study shows that there is no correlation between self concept and adjustment of the nursing college students (r = 0.073).

Similar study was conducted by *Madhvi Agrawal, Dr. Anil Kumar Teotia (2015) on* Academic Achievement and Self-Concept of Secondary Level Students. The results of the study revealed that temperamental qualities, emotional tendencies and mental health of urban students were better as compared to rural students. The study also revealed significant relationship between the two variables of self-concept and academic achievement. Based on the findings of the study, suggestions for increasing the academic achievement of the students have been developed [9].

The results of the present study was consistent with study done by Ruth Ann Goswick & Warren H. Jones on the relationship between loneliness and self-concept and adjustment. College students completed the UCLA Loneliness Scale, the Tennessee Self-Concept Scale, and an inventory which assessed the degree of other-focused attention. Results indicated that loneliness was related to more negative self-

concepts, possibly less adjustment, and more self-focus [10].

Conclusion

The study findings reveals that among 90 samples taken for the study it is known that 15 (16.7%) students have moderate level of self concept, 75 (83.3%) had good level of self concept. Considering the adjustment level, 14 (15.6%) reported good level of adjustment; 60 (66.7%) reported average level of adjustment and 16 (17.7%) have unsatisfactory level and the findings also revealed that there was a significant relationship between self concept and adjustment level at p=0.495.

The findings of the current study highlight the importance of promoting a positive self concept in every aspect of student's life. At the same time, parents should be advised to provide quality parenting and should act as facilitators instead of providing mental pressure for better academic performance. An organized, orderly and supportive environment in the teaching institutions will go a long way in improving academic self concept of the students.

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Conflict of Interests

The author(s) declare that they have no competing interests.

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Review Article

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Nation Challenges for Solid Waste Management

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Abstract

Solid waste refers to any garbage, refuse, sludge from a waste water treatment plant. It contains organic as well as inorganic matters, which are produced by various activities of the society. Solid waste referred as a non liquid material that no longer has value to the person who is responsible for the generation of the product. In the 21st century, the sustainable management of municipal solid waste (MSW) will get to be distinctly fundamental at all periods of effect from wanting to configuration, to operation, and to decommissioning. Municipal solid waste management is a critical element towards sustainable metropolitan consists of segregation, storage collection, processing, and disposal of solid waste to lower its impact on environment. (Kumar, et al, 2009) [2]. Reutilization of solid waste is not a feasible option in context of solid waste management. (Kasseva & Mbuligwe, 2000) [3]. Rule of SWM should be taken in such a way that ground realities and allow time for suitable processes should be developed. Rag pickers are working for unorganized sectors, thus proper organized sectors for the reuse and recycling of waste needs to be put in place, thus reducing the load on transportation and landfill.

Keywords: Solid Waste; Solid Waste Management; Sustainable; Reutilization.

Introduction

With the increase in population, urbanization and the living standards, results in the increase of solid waste across the nation; About 1.3 billion tones of wastes has been reviewed by the World's Bank in 2011 alone, whereas it has been predicted that the solid waste will be rise up to 2.2 billion tones by the year 2025.

Non- management of solid waste results in significant problems in developing and transitional countries, reasons include for whole this: limited resources and enforcement of relevant regulations especially affecting the quality of waste collection and applications of technologies for safe recycling, treatment and disposal (Chen. etal; 2010) [10].

Anything or material which is of no use and is spread anywhere is called waste and the owner is waste generator (Maria. etal; 2011) [11] World Bank published "What a Waste: Solid Waste Management in Asia in year 1999 (Hoornweg and Thomas 1999) [12] MSW provides a strong social contract between the municipality and community. According to published report its being already predicted that China will produce twice as much solid waste as United States, China will surpass the US as the world's largest waste generator.

According to IPCC (Intergovernmental panel on climate change): MSW may include food waste, garden (yard) and park waste; paper and cardboard; wood; textiles; nappies (disposable diapers); rubber and leather; plastics; metal; glass and other (ash, dirt, dust, soil, electronic waste).

According to PAHO (Pan American Health Organization): Solid or semi-solid waste generated

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in population centers including domestic and commercial wastes, as well as those originated by the small scale industries and institutions (including hospital and clinics); market street sweeping and from public cleansing.

OECD (Organization for economic Co-operation and development): Municipalities collect the waste material and get it treated; waste is covered from households, including bulky waste, waste from commerce and trade, office buildings, institutions and small businesses, yard and garden, street sweepings, content of litter containers and market cleansing.

Waste generation varies from countries as well as regions; Sub Saharan African generates 62 million tons per year of waste, per capita waste generation lies between 0.09 to 3.0 kg per person per day, with an average of 0.65kg/capita/day compared to East Asia and Pacific Region generates 270 million tons of waste per year, it is mainly influenced by waste generation in China, which makes up to 70% of the regional total, per capita waste generation ranges from 0.44 to 4.3 kg per person per day for the region, with an average of 0.95 kg/capita/day (Hoornweg et al 2005) [12].

Similarly in the hilly states of Himachal Pradesh, the same problem of waste management exists. For decades the hilly tourist location has seen an increase in population, developmental activities, and changes in socio-economic scenario and improved standard of living etc. The Increasing industrialization and rising income levels lead to greater use of resources which further leads to the increased MSW generation and more complex composition of MSW than earlier. Thus, waste quantities as well as composition are inextricably linked to the vibrancy of economic activity and resource consumption pattern of the society which generates the waste. Further, the technologies to be adopted for MSW management and processing predominantly depend upon MSW quantity, quality and range of variations.

Urbanization & Solid Waste Generation in India and Entire World

Urbanization

Transformation from traditional rural economies to modern industrial one is known as urbanization and it is in progressive concentration (Davis, 1965) [13]. Annual growth rate of population in India is 3.35%. (Census of India, 2011)

Heap of garbage and waste from all kinds have become common site in urban life which results in threat to public health as well as environment (Supreme Court Committee Report 1999).

Rapid Increase in Volumes and Changing Characteristics of Municipal Solid Waste-A Global Trend

It is being shown that there is correlation between the generations of MSW, Wealth (Gross Domestic Product, GDP per capita) and urbanization. Projections estimate about generation of waste could reach up to 27 billion tons by 2050; Asia will rank third in production of maximum amount of waste. Figure 1 shows the correlation between MSW generation, GDP and Population across the nation and their expected rise in generation of MSW in Asia as estimated by World Bank (ref).

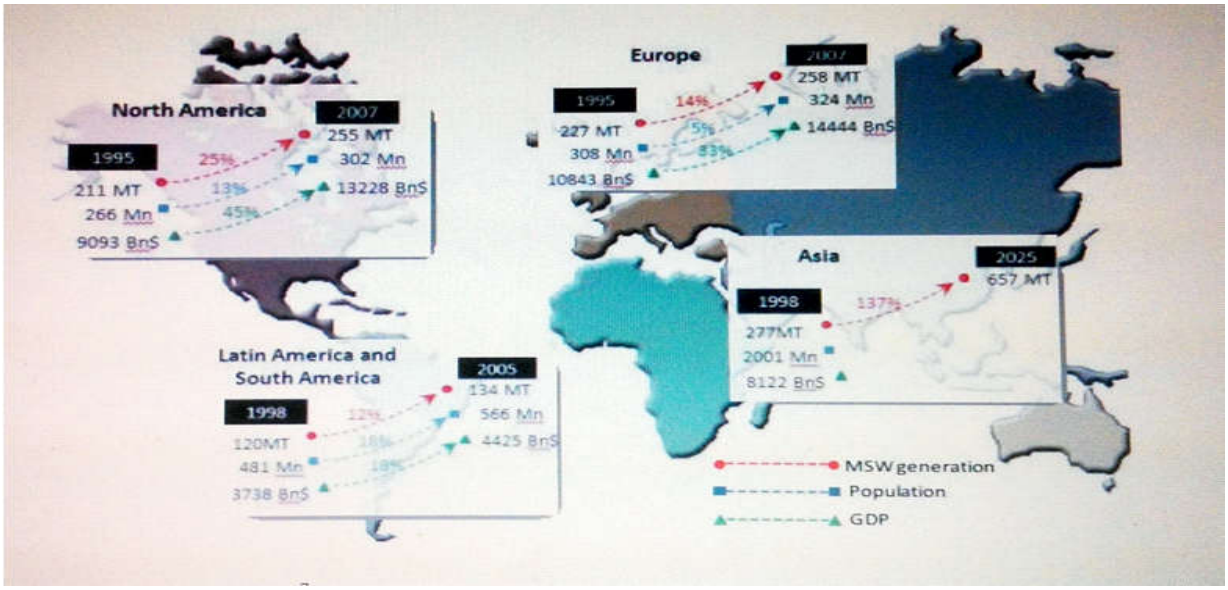


Fig. 1: Correlation between MSW Generation, GDP and Population

Impact of rise in population is more in developing countries compared to developed countries, population of India is 377 million which accounts for 31% of total population (Census of India, 2011a) [14]. An increase in population has been observed from 1961 to 2011, i.e. 18 to 31.2% in urban regions (Census of India, 2011 b) [15].

Solid waste is deliberately linked to urbanization and economic development. With the increase in urbanization , economic wealth also increase, thus result in increasing the living standards and disposable income, more the consumption of goods and services, more will be the amount of waste generation, it had been reported that about 1.3 billion tons of MSW are generated every year or 1.2kg/ capita/ day.

Low amount of waste generation is observed in rural areas, waste is a byproduct of consumer based lifestyles that drive much of the world's economies.

Activities Involve in Solid Waste Management

Solid waste management mainly comprise of generation, storage, segregation, collection, transfer, transport, treatment and disposal of solid waste. Waste may generate by household, commercial and institutional activities which is not at all hazardous. There are major eight classifications of solid waste: residential, industrial, commercial, construction, institutional, municipal services, process and agricultural; residential waste is referred as *Municipal solid waste* (Hoornweg et al, 1999) [16].

Segregation

Sorting of waste is generally accomplished by unorganized sector and is practiced by waste producers. Effectiveness of segregation is very low as unorganized sector segregate only valuable discarded constituents from waste stream which results in higher economic return in the recycling market (Kaushal, Varghese & Chabukdhara, 2012) [17].

Segregation as per Solid Waste (Management and Handling) Rules 2000 is now compulsory. Segregation in simple language means separation of waste into dry and wet, so that it is easier to handle it later.

Whether it is collecting the waste through dumpers or we are collecting the waste from the source (door to door collection), it is in the un-segregated form in Himachal Pradesh. Due to this inherent problem of lack of segregation of waste, waste management has become a difficult task in the hilly state. Segregation of waste ensures that the waste is split into organics, plastics, and others giving more room for safe and effective disposal of waste. The plastics and others can either be recycled or sent to cement factories as fuel, while the organics can be composted or used to extract renewable energy.

Without segregation, waste becomes completely useless and void. It is therefore highly recommended that Himachal Pradesh starts to mobilize their municipalities and local authorities to initiate segregation at source drives. Fixing the problem at its root will not only ensure that the waste is segregated; it also throws up a myriad of opportunities for usefulness of waste.

Sundernagar District of Himachal has been the pioneer in implementing door-to-door waste collection and segregation of waste. Having implemented segregation of waste at source, the Sundernagar Municipality stands in good state to supply organics for setting up a biogas plant for extraction of renewable energy.

- *Why Waste Segregation is Important?*

a. If the waste is not separated properly, it all gets mixed up in landfills. The dangers of this is that landfills leak after a period of time, resulting in leachate or toxic soup at the bottom, which can contaminate ground water and release combustible methane gas.

b. Methane is a greenhouse gas, which ultimately leads to climate change, extreme climates and droughts. We can see the impact already in the world.

c. Segregation protects health. When rag pickers put their hands into the waste to clean it up, it results in cuts that further lead to infections, resulting in deterioration of a rag picker's health. Hence, it becomes our responsibility to help these rag pickers by carefully segregating the waste that is generated at our homes.

d. When the waste is not separated properly it leads to less recycling because it is not easy to remove materials for recycling. This means many resources are wasted.

Collection

Waste which is being produced by households is finally transferred into bins which are fabricated from metal mode or from concrete or combination of both. Whereas waste produced by commercial or institutional units are being collected by the

municipal authorities. (Kumar et al, 2009) [18].

In the state of Himachal Pradesh no standard system of waste collection is followed. Although the door-to-door collection has been initiated, the absence of segregation of waste puts all waste management practices in difficulty.

We can see standard metal dustbins placed across towns, with no incentive for the citizens to throw their garbage in the bins. The ULBs have placed the big dustbins. Metal bins are placed at different locations without assessing the need, or doing any survey to identify the quantum of waste generation in different waste generating sources.

The citizens are not mobilized or informed of the need to segregate waste separately and to discard it scientifically. The ULB vehicles collect the waste from these large bins on an erratic basis, and most of the waste.

Some people use the dust bins to dispose of their waste but in other cases where waste bins/dumpers are away from their location, they dispose of the waste at un-notified locations 14 keeping in view their convenience. In fact the location of these dust bins have been found to be the dirtiest and stinking places in the town.

Since the people have not been told about the use of these bins and there is no notice/sign board on or near the dust bins indicating the norms for the use of dust bins, they dispose of both biodegradable as well as the non-biodegradable waste in the same bins.

• *Waste Collection System in India*

A. Door to Door Collection: This system is used in narrow streets where a collection truck cannot reach individual houses. The house places the filled containers outside their doors when the waste collectors arrive. Some cities such as Chennai (Madras) and Chandigarh have implemented this in posh localities where influential people reside.

On similar lines, Bangalore City Corporation (BCC) recently introduced door to door collection in some wards and management seems to be satisfactory. Himachal Pradesh should follow suit, and ensure that the pilot project of door-to-door collection initiated at Sundernagar is continued and the awareness spread across the entire state.

B. Curb Side Collection: This method is used in wider streets, where the collection trucks can pass through conveniently. The house owners leave the waste containers at the edge of the pavement. The waste collectors collect the waste from the curb side or empty the containers into the vehicle as it passes through the street at a set time and day and return the containers as practiced in Kanpur (UNCHS, 1994) [19].

C. Block Collection: The collection vehicles arrive at a particular place or a set day and time to collect waste from the households. Households bring their waste containers and empty directly into the vehicle (UNCHS, 1994) [20].

D. Community Bins: Community storage bins are placed at convenient locations, where the community members carry their waste and throw it. (These bins are also called Delhi bins, since it was introduced first time in Delhi).

The phenomenon of recycling by means of repair, reprocessing, and reuse of waste materials is a common practice in India. At the household level recycling is very common. Waste is accessible to waste pickers; they segregate it into saleable materials such as paper, plastics, glasses, metal pieces, textile, etc.

Rag pickers/Kabadis segregate the waste directly from the dumps and bins with no precautions and they are exposed directly to harmful waste. The separated waste is sold to a small waste dealer, from where the waste is transferred to a medium sized dealer or wholesaler. All these activities are not regulated or monitored by any governmental organization. Due to this informal segregation, volume reduction is achieved, while it ignores social, economic, environmental, and health aspects.

Reuse/Recycle

Collection of all waste and finding out which waste can be reused or recycled for making new products, as segregated wastes is dumped at community bins and its optimal recycling is not feasible. Rag pickers often try to sort out and sell recyclable materials like glass, plastics etc. In Pondicherry almost all recyclable waste is being sorted out by rag pickers (Pattnaik & Reddy, 2010) [21].

Transportation

MSW is generally collected via mode of transportation such as bullock carts, hand rickshaws, compactors, trucks, trailers and dumpers. 5-9 tons capacity is used in smaller towns with adequate cover system.

Disposal

Every city, town or village of India adopt

unscientific disposal of MSW.

• *Open Dumping*

MSW generated is often disposed on low lying area in routine way which results in violation of sanitary land filling. Unscientific dumping results in flooding and also responsible for surface water contamination due to percolation of leachate (Lo, 1996; Mor, Ravindra, Dahiya & Chandra, 2006) [22].

• *Land Filling*

Land filling might keep to be extensively acknowledged act for India, if metropolitan focuses. In Delhi, Mumbai, Kolkata Also Chennai brings set accessibility about area for waste transfer also designated. Landfill locales need aid running past their limit (Sharholy, Ahmad, Mahmood, & Trivedi, 2008) [23].

Those advancement of new sterile landfills/ expansion for existing landfill are accounted in the. States for example, such that andesine, Delhi, Goa, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Furthermore West Bengal (CPCB, 2013) [24].

A study by United Nation Environment Program shows Green house gases emission from land fill can be reduced by the following ways (UNEP, 2008, 2010) [25]:

1. Waste minimization.
2. If we promote recycling and reuse of waste materials.
3. Reduction in fossil fuels by substituting energy recovered from waste combustion.
4. Energy derived from CH_4 from land fill site that can be used for in situ energy requirement.

Ministry of New and Renewable Energy (MNRE) and Government of India has installed 3 Mega watt capacity plant in order to convert waste to energy project, similarly different plants at different locations with different mega watts have been installed at Hyderabad, Pune, Delhi etc as there is non-availability of requisite quality of MSW along with presence of low calorific matter in MSW has given more chances to support waste to energy projects (MNRE Annual Report, 2014-2015) [26].

Developed countries is adding leachate /liquid/ supplement water in land fill sites to enhance biodegradation and gas recovery (Barlaz, Ham & Schoefer, 1990; Reinhart, McCreanor & Townsend, 2002) [27]. But this technique is not feasible in India, thus energy recovery from land fill remain untapped.

• *Biological Treatment of Organic Waste*

Waste generated by India contains 50% of organic content compared to developed countries which generates 30% of organic waste. Given below are the composting methods:

1. *Aerobic Composting:* Process in which there is biological conversion of organic matter existing in MSW in presence of air under humid and warm environment, results in high nutrient value compost. This process is either labor intensive or mechanical, in small towns labor intensive is carried out compared to big towns or cities where power driven composting is given prime importance and is installed (Bhide & Shekdar, 1998) [28].
2. *Vermi –Composting:* Introducing earthworms on semi decomposed waste is done by vermin composting, as we are aware that earthworms consume five times of organic matter per day as compared to their body weight. Biodegradable organic matter is decomposed through microbial enzymatic activity. Largest vermin composting plant is located in Bangalore while smaller plants are there in Hyderabad, Bangalore, Mumbai and Faridabad.
3. *Anaerobic Digestion:* It is also known as Biomethanation process, which is one of the important and sustainable techniques for treating biodegradable part of MSW in subtropical climates. Stabilization occurs by the process which results in the liberation of biogas thus there is conversion of organic matter which can be used as energy. This process contains 50-60% methane and can be used as fuel for power generation. *(Ambulkar & Shekdar, 2004) [29].*
4. *Thermal Treatment:* It can be accomplished by incineration, pyrolysis and plasma arc gasification. Incineration is not possible if the organic constituents of the MSW is high along with moisture content or inert content ranging from 30 to 60% each and calorific value in the range of 800-1100 kcal/kg in MSW (Jalan & Srivastava, 1995; Jaardar, 2000; Kansal, 2002; Sudhir et al,1996) [30].

If waste has low calorific value incineration is not feasible without the help of extra fuel. Whenever there is a burning of hospital waste small incinerators are recommended in India (Sharholy, Ahmad, Mahmood & Trivedi, 2005) [31]. Gasification is also one of the thermal techniques which are used for MSW treatment and results in decrease pollution and increase heat recovery. To burn agro biomass limited gasifiers were

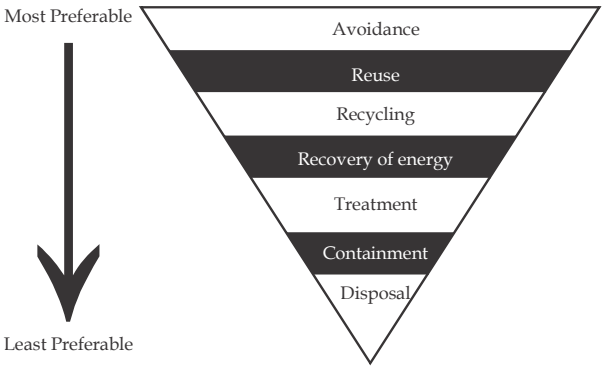
installed in India. NERIFIER gasification unit has been installed at Nahar, Rajasthan by NERI for burning of agro wastes, sawmill dust and forest wastes while TERI (Tata Energy Research Institute) gasifiers is installed at New Delhi (Ahsan, 1999; Sharholy et al, 2007) [32].

Comparison of Solid Waste Management Practices by Income Level (Adapted from a what a Waste, 1999)

Activity	Low Income	Middle Income	High Income
Source Reduction	No organized programs, but reuse and low per capita waste generation rates are common.	Some discussion of source reduction, but rarely incorporated into an organized program.	Organized education programs emphasize the three 'R's' – reduce, reuse, and recycle. More producer responsibility & focus on product design.
Collection	Sporadic and inefficient. Service is limited to high visibility areas, the wealthy, and businesses willing to pay. High fraction of inerts and compostable impact collection— overall collection below 50%.	Improved service and increased collection from residential areas. Larger vehicle fleet and more mechanization. Collection rate varies between 50 to 80%. Transfer stations are slowly incorporated into the SWM system	Collection rate greater than 90%. Compactor trucks and highly mechanized vehicles and transfer stations are common. Waste volume a key consideration. Aging collection workers often a consideration in system design
Recycling	Although most recycling is through the informal sector and waste picking, recycling rates tend to be high both for local markets and for international markets and imports of materials for recycling, including hazardous goods such as e-waste and ship-breaking. Recycling markets are unregulated and include a number of 'middlemen'. Large price fluctuations.	Informal sector still involved; some high technology sorting and processing facilities. Recycling rates are still relatively high. Materials are often imported for recycling. Recycling markets are somewhat more regulated. Material prices fluctuate considerably	Recyclable material collection services and high technology sorting and processing facilities are common and regulated. Increasing attention towards long-term markets. Overall recycling rates higher than low and middle income. Informal recycling still exists (e.g. aluminum can collection.) Extended product responsibility common.
Composting	Rarely undertaken formally even though the waste stream has a high percentage of organic material. Markets for, and awareness of, compost lacking.	Large composting plants are often unsuccessful due to contamination and operating costs (little waste separation); some small-scale composting projects at the community/neighborhood level are more sustainable. Composting eligible for CDM projects but is not widespread. Increasing use of anaerobic digestion.	Becoming more popular at both backyard and large-scale facilities. Waste stream has a smaller portion of compostable than low- and middle-income countries. More source segregation makes composting easier. Anaerobic digestion increasing in popularity. Odor control critical.
Incineration	Not common, and generally not successful because of high capital, technical, and operation costs, high moisture content in the waste, and high percentage of inerts.	Some incinerators are used, but experiencing financial and operational difficulties. Air pollution control equipment is not advanced and often by-passed. Little or no stack emissions monitoring. Governments include incineration as a possible waste disposal option but costs prohibitive. Facilities often driven by subsidies from OECD countries on behalf of equipment suppliers.	Prevalent in areas with high land costs and low availability of land (e.g., islands). Most incinerators have some form of environmental controls and some type of energy recovery system. Governments regulate and monitor emissions. About three (or more) times the cost of land filling per tons.
Costs	Collection costs represent 80 to 90% of the municipal solid waste management budget. Waste fees are regulated by some local governments, but the fee collection system is inefficient. Only a small proportion of budget is allocated toward disposal.	Collection costs represent 50% to 80% of the municipal solid waste management budget. Waste fees are regulated by some local and national governments, more innovation in fee collection, e.g. included in electricity or water bills. Expenditures on more mechanized collection fleets and disposal are higher than in low-income countries.	Collection costs can represent less than 10% of the budget. Large budget allocations to intermediate waste treatment facilities. Up front community participation reduces costs and increases options available to waste planners (e.g., recycling and composting).

Municipal solid waste hierarchy ranks in different ways in which we can treat and dispose off MSW in order to attain sustainability or relative environmental benefits. In context of economics waste hierarchy is useful if we convert the waste into energy recovery, recycling, reusing and reducing waste at the minimum. The main goal of waste hierarchy is to reduce the pre land filling and minimization of waste by using simple and low cost technology, moreover by this strategy there is also minimization of odor

being produced by solid waste in the area where the waste is present either it's a open dumping or throwing garbage in landfills without covering it. The general hierarchy waste disposal is depicted here under:



Implementation of Municipal Solid Waste Rule 2000

Total 56 ULBs (Urban local bodies) responsible in the state for implementation of MSW rules. There are one Municipal Corporation, 25 Municipal Councils, 23 Nagar Panchayat and 7 Cantonment Boards. Total 16 ULBs have applied for authorization and authorization granted to all 16 ULBs. Only 40 ULBs have reported during the year. Total MSW generation estimated as 276 TPD in 40 ULBs, collected 207 TPD, treated 125 TPD and 150 TPD land filled.

For implementation of Schedule-I, scientifically developed landfill site is not available in the state. There are 56 dumpsites in 56 ULBs. Landfill site identified/approved for 38 ULBs but yet to be developed by 36 ULBs. However, landfill under construction at 02 ULBs (Nalagarh & Baddi). Waste processing facilities have been constructed by 09 ULBs and using by 11 ULBs viz. Shimla (compost) shared by Solan. Nahan (Pit), Una (pit), Santokharh (pit), Hamirpur (compost), Dharamshala (stac), Kangra (pit), Palampur (pit) and Kullu (pit) shared by Bhuntar. Waste processing plant under construction/plan at 07 ULBs (Theog, Talai, Mehatpur, Nadaun, Sujanpur, Mandi & Dalhousie).

Improvement of existing landfill sites are undertaken by 2 ULBs (Naina Devi & Kullu)'. Landfill is under construction in 02 ULBs (Nalagarh & Baddi). Out 40 ULBs, none has complied with the MSW Rules. Presently, 11 ULBs are processing MSW 14 through pit composting, vessel composting & Stack technology. Monitoring not carried out as no ground water sources at the sites. For implementation of Schedule – II, All ULBs are collecting waste wolly/partially; out of which 05 ULBs (Shimla, Rohroo and Cantt. Board of Jatoh, Bakloh & Subathu) covered whole area for collection. House-to-house collection started in few pockets of 03 ULBs (Shimla, Una & Hamirpur).

Segregation is done partially by 39 ULBs and Shimla is segregating 100%. Storage facility is provided partially in all ULBs. Transport facilities comply partially. Presently, out of 56 ULBs, 10 ULBs are processing MSW -Shimla (vessel technology), Solan (Aerobic composting), Una (pit composting), Chamba (pit composting), Kullu (Bio-conversion), Manali-Bhuntar (pit), Kangra/Nagrota (pit), Dharamshala (Aerobic composting), Nahan (pit) & Hairpur (pit). For execution of schedule –III, 40 ULBs have identified/approved landfill sites; out of which 15 ULBs have fenced the landfill site and few of them have installed weigh bridge(3), lighting facilities (8), etc. Waste processing plants installed at Shimla (100 TPD vessel composting), Solan (20 TPD Composting), Nahan (9 TPD not working), Naina Devi (4 battery cell), Una (6 TPD pit), Hamirpur (6-pit Battery Compost), Dharamshala (6 TPD Pit- not working), Kangra (9 TPD Pit), Kullu shared by Bhuntar (240 Bioconversion) & Manali/Bhuntar (240 Pits). There is no waste-to- Energy plant in Himachal Pradesh.

The Way Forward

Smart cities are developing concept in India. Civic bodies have to redraw long term vision in solid waste management and rework their strategies as per changing lifestyles. Garbage management in cities need to be prioritized so that we can process waste and not landfill it (with adequate provisioning in processing and recycling).To do this, households and institutions must segregate their waste at source so that it could be managed as a resource. We need to identify the spare land for dumping garbage, the existing ones are in a critical state. Rag pickers are the persons who start segregating the rags at source sites, later on to recycle it. Compost pits and community participation are the important tools for efficient waste management. E-waste disposal is the prime area of concern which need to adequately contained.

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Indian Journal of Biology	2	5000	4500	357	300
Indian Journal of Cancer Education and Research	2	8500	8000	607	550
Indian Journal of Communicable Diseases	2	8000	7500	571	500
Indian Journal of Dental Education	4	5000	4500	357	300
Indian Journal of Emergency Medicine	2	12000	11500	857	800
Indian Journal of Forensic Medicine and Pathology	4	15500	15000	1107	1050
Indian Journal of Forensic Odontology	2	5000	4500	357	300
Indian Journal of Genetics and Molecular Research	2	6500	6000	464	400
Indian Journal of Hospital Administration	2	6500	6000	464	429
Indian Journal of Hospital Infection	2	12000	9000	857	800
Indian Journal of Law and Human Behavior	2	5500	5000	393	350
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Indian Journal of Maternal-Fetal & Neonatal Medicine	2	9000	8500	643	600
Indian Journal of Medical & Health Sciences	2	6500	6000	464	410
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Indian Journal of Trauma & Emergency Pediatrics	4	9000	8500	643	600
Indian Journal of Waste Management	2	9000	8000	643	579
International Journal of Food, Nutrition & Dietetics	3	5000	4500	357	300
International Journal of Neurology and Neurosurgery	2	10000	9500	714	660
International Journal of Pediatric Nursing	3	5000	4500	357	300
International Journal of Political Science	2	5500	5000	550	500
International Journal of Practical Nursing	3	5000	4500	357	300
International Physiology	2	7000	6500	500	450
Journal of Animal Feed Science and Technology	2	78000	70000	5571	5000
Journal of Cardiovascular Medicine and Surgery	2	9500	9000	679	630
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New Indian Journal of Surgery	4	7500	7000	536	480
New Journal of Psychiatric Nursing	3	5000	4500	357	300
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Review Article

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Challenges for Improving Quality in Education at Primary and Secondary Schools in India and Sri Lanka

A.M. Jazeel*, A.R. Saravanakumar**

Abstract

In recent times, the world is experiencing enormous improvements in all walks of life due to the rapid development in education. It has achieved a state of "knowledge explosion" in the present world order and education has created a novel global society of intelligence. However, these developments are, in general, found in the almost developed western nations. The third world countries, though marked some substantial improvements in education, are faced with several still unsolved issues, particularly in relation to primary and secondary education. This paper attempts to compare and contrast the contemporary challenges involved in enhancing the quality of education at primary and secondary levels in two South Asian countries, Sri Lanka and India and to make suggestions to solve this issue. The first section of this paper deals with the challenges and hurdles in primary and secondary education in India and Sri Lanka and the second section gives potential suggestions to solve these issues in these two countries.

Keywords: Knowledge explosion; Substantial improvements; Contemporary challenges.

Introduction

The world is experiencing enormous changes in all walks of life due to the rapid development in education. It has achieved a state of "knowledge explosion" and that the world economy too got shifted to "knowledge economy", swapping the conventional systems of economy prevalent. The rapid development in global education led to the expansion of knowledge and inventions and created a novel global society of intelligence.

However, these developments are, in general found in the almost developed western nations. The third world countries, though marked some substantial improvements in education, are faced with several still unsolved issues, particularly in relation to primary and secondary education. The South Asian countries, Sri Lanka, India, Pakistan, Maldives, Bhutan, Nepal, and Afghanistan, and Bangladesh which are all the third world countries are faced with similar contemporary issues in education amid the series of educational reforms in the past in these countries.

These contemporary issues in education in relation to primary and secondary education are, in broader sense, namely democratization of education, marginalization and exclusion of education, gender issues in education, quality in education, globalization in education, national harmony and environmental issues. Apart from them, there are a number of various other issues which affect the education in these countries. The issues in education also differ from country to country and from grade to grade in schools. The issues in primary and secondary are different from tertiary level of education.

This paper attempts to compare and contrast the challenges encountered in primary and secondary education in two South Asian countries, Sri Lanka and India and to make constructive suggestions to mitigate the hurdles in improving the quality of education in primary and secondary schools in both countries. The first section of the article deals with the challenges and hurdles in improving primary and

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secondary education in India and Sri Lanka and the second section offers potential suggestions to mitigate these challenges in these countries.

Challenges and Hurdles in Improving Quality in Education

The poor quality in education is yet another contemporary issue which Both Indian and Sri Lankan primary and secondary education is faced with. There are differences in quality of education given to the students. As far as Sri Lankan primary and secondary educations are concerned, there are high rate of failure observed even in the recent years. Most of the students fail in Grade five scholarship examination and GCE (O/L) examination. Most of the students fail in science, mathematics, and English in their secondary education and that they deprive of the opportunity to continue their higher studies or any tertiary education. The lower quality education the students get is not useful to them. They are in short is a waste of time and money of the government.The reasons for this state of affair are given below:

• *Poor Educational Planning*

The education is planned in Sri Lanka, in the top down method, without considering the various factors of the distant schools. The text books and syllabi are designed from Colombo which is not easily understable to the village level students. There is a big culture gap between the urban students and rural students. In rural schools, the whole syllabus is not completed in time. The planning in school level is important which is in most of theSri Lankan and Indian schools ignored and go awry.

• *Lack of Teachers*

Teachers are appointed, but they are academically sometimes not sound. In Sri Lanka, unlike in other countries, there is still a large number of teachers remain untrained. Political based recruitment of teachers to the schools without viable permanent policy, caused injury to the quality of education in schools. For instance, the Janasavia, Samurdi, Home Guard, Cadet, Contract Basis, Police, Voluntary, Political Victimised, teaching appointments are some of the worse appointment of teachers made by UNP and UPFA governments. Similarly, the poor quality of teacher education in colleges of education and teachers college too affect the students' education to a great extent. In teachers colleges, the trainee teachers have the custom of copying the exam by giving bribe to the Zonal Director of Education and the officials of Department of Examinations.

Further, the acute shortage of teacher for the subjects like English, mathematics, Science, etc, too affect the quality of education.

• *Poor School Management*

The poor school management is also one of the factors for the poor quality of education. There is no system available in both Indian and Sri Lankan schools for quality assurance. In Sri Lanka several systems used for strengthening the school management like School Based Management. Still, the efficacy of the system did not ensure the quality of students.

In India, in response to the demand for quality basic and secondary education all over the country, an effort at effectively involving the Panchayati Raj Institutions, School Management Committee, Village and Urban Slum level Education Committees, Parents' Teachers' Associations, etc prevail in the management of schools. They consolidate the effective system of management of schools in India. However, the lack of efficiency in school management depends on activeness, the ability, academic and professional experience of the principals. In most of the schools, the appointment of principals are made with the influence of politics, and in such situation, it is too difficult expect an effective management in schools which have counter effective in the quality of education the school provides.

• *The Economic Difficulties*

The economic difficulties also affect the quality of education in schools, particularly the primary and secondary educations. The schools are given several facilities to have their own resource for earning money which could be used for the improvement of education in schools. There are provisions for getting enough money by renting out the resources of school, and by other means to solve the economic difficulties in schools. Then only, the schools can conduct various workshops important for students and get necessary equipment (Anderson,1991).

The insufficiency of equipment affects the teaching and learning process in the schools. For example, lack of science laboratory and computer laboratory restrict the time and opportunity for the students to learn. This situation is prevailing mostly in the rural and remote schools of India and Sri Lanka.

Suggestions to Improve the Quality of Education

Quality education is an important aspect in education field. But the qualities of education provided in the South Asian countries, particularly in India and Sri Lanka still remain poor in the primary and secondary education.

• *Need of National Policy in Education*

Lack of national policy is a major factor for the poor quality in education in the South Asian countries. The recruitment of teachers, their promotions, curriculum development, monitoring and evaluation, and the like should be followed in terms of national level policy to reduce the frequent political interferences, and malpractices in education.

This will ensure the teachers' quality and the proper result based monitoring (Jazeel and Saravanakumar, 2016). Furthermore, the planning in school level should be important and the principals and the board of management should be given in-service training on planning in schools.

• *Promoting School Based Management and Implementation*

The failure in school management is another setback to the quality in management. The management system which is rarely followed in schools should be strengthened with the participation of community. In Sri Lanka, School Based Management system is instructed to follow, but not followed properly. Therefore, the implementation of this SBM and monitoring is important and that the schools will get proper management and better output.

• *Provisions of Resources*

The resources which are lacking in schools should be given additional resources to the schools. The computer and science laboratories and the like where needed should be provided by the government.

The resources are often not equally distributed and this situation must be changed. A system must be formed where in the case of equal distribution of resources for education must be followed and those who hinder this system must be prosecuted (Bergmann,1996).

• *Corruption Free Education*

The education system itself is deeply corrupted and those with inferior quality run the system in the South Asian countries. From principal to secretary of minister of education gets bribe. For example, the newly appointed secretary of minister of education to North Eastern province was recently red handed while seeking bribes for voluntary teachers' appointment. These type corrupt officials in education spoil the quality of education and are only interested in filling their own pockets. A system needed to maintain education free from the hand of these corrupt education officials, who do anything at the expense of the quality of education, like leaking out and selling question papers.

Conclusion

There are enormous changes taking place in the world in all walks of life due to the rapid development in education. These changes reached a state of "knowledge explosion". However, these developments are, in general, found in the almost developed western nations. The third world countries, though marked some substantial improvements in education, are faced with several still unsolved issues, particularly in relation to primary and secondary education.

The analysis of primary and secondary education in Sri Lanka and India provides a wealth of experience to the development of both primary and secondary education in both countries. Most of the issues are common and the reciprocal exchange of experience between two countries will help develop quality in education in both countries.

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

Discussion

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

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

Standard journal article

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

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

Article in supplement or special issue

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

Corporate (collective) author

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

Unpublished article

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

Personal author(s)

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

Chapter in book

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

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

No author given

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

Reference from electronic media

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

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