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Gestational Diabetes Mellitus – Prevention by Life Style Modification

Arulmozhi[1], A J Asirvatham[2], Mangalagowri[3], R Vijayaraghavan[4]

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ABSTRACT

Gestational diabetes mellitus (GDM) is defined as a type of diabetes first diagnosed during pregnancy Incidence of GDM varies from 2% to 14% globally and it is increasing. Maternal glucose has been associated with a risk of adverse pregnancy outcomes in a linear manner. High intake of saturated fat, low intake of polyunsaturated fat, and excessive gestational weight gain may increase the risk of GDM. Physical activity is also associated with decreased risk of GDM. Lifestyle modifications have been shown to be a valuable adjunctive therapy of GDM. Prevention of gestational weight gain by dietary and physical activity counseling have found favorable results and structured aerobic exercise training has been shown to decrease birth weight of the newborns.

Keywords: *Pregnant mother, lifestyle modifications, diet, exercise, outcomes of GDM.*

INTRODUCATION[:[1,3,4]]

Gestational diabetes is more commonly found in the third trimester of pregnancy. There is alteration in insulin and CHO metabolism. Increasing level of estrogen, progesterone and prolactin enforces pancreatic beta cells to produce excessive insulin progesterone, human placental lactogen. The cartisol being insulin antagonist reduces its effectiveness, therefore large quantities of glucose add up in maternal blood circulation and are transferred to fetus via placenta. It gives rise to maternal as well as fetal morbidity and mortality. The perinatal mortality rate in diabetic pregnancy has grately improved in recent years and is now below 5% and this is largely due to the improved diabetic management of the pregnant diabetic women. In cases where diabetic control is poor, the perinatal mortality rate is likely to be higher.

India has the second largest number of people with diabetes in the world. Not surprisingly therefore, the prevalence of gestational diabetes mellitus (GDM) in India is also alarmingly high. Indian women are more likely to develop GDM compared to Caucasian women. Estimates on the prevalence for GDM in India vary greatly; from low figures in the northern region of Jammu, to higher figures reported in the southern state of Tamil Nadu.Gestational diabetes mellitus (GDM) is a severe and neglected threat to maternal and child health. IDF estimates that 16.8% of live births are affected by some form of hyperglycaemia in pregnancy in 2013, and 6 million in India alone, of which 90% are due to GDM.

WHO has predicted that between 1995 and 2025 there will be a 35% increase in the world wide prevalence of diabetes. It is variously estimated that 3% to 5% of pregnancies are complicated by diabetics

Pregnancy is a period in which lot of metabolic and hormonal changes takes place. Individual women will vary in their expectations and needs during the child bearing process. Pregnancy and child birth are special events in women's lives and indeed in the lives of their families. This can be a time of great hope and joyful anticipation. Although pregnancy is not a disease, but a normal physiological, it is associated with certain risks to health and survival both for the women and for the fetus. Gestational Diabetes Mellitus is commonly defined as "degree of glucose intolerance with onset or first recognition during pregnancy".

In recent decades, more women of a reproductive age have diabetes, and more pregnancies are complicated by pre-existing diabetes especially in low- and middle-income countries (LMICs). Also of concern is gestational diabetes mellitus (GDM) - the type of diabetes that is first recognized during pregnancy and affects up to 15% of women worldwide.

GDM in India – a country with a heavy diabetes burden India has the second largest number of people with diabetes in the world – currently estimated at 63 million. Not surprisingly therefore, the prevalence of GDM in India is also alarmingly high. Indian women are more likely to develop GDM. Estimates of the prevalence for GDM in India vary greatly; from low figures in the northern region of Jammu, to higher figures reported in the southern state of Tamil Nadu. Classic risks factors for GDM Include obesity, family history previous obstetric history. Thus a mother with any of these risk factors to be identified and treated well**. GDM can be controlled by lifestyle changes which include diet and exercises, usually disappears after pregnancy.**

AIMS OF TREATMENT

1. To maintain blood glucose level near to the normal range.
2. To minise the risk of long term complications of diabetes mellitus

Care during pregnancy:[2,5]

There is a need to visit antenatal clinic more frequently in order to maintain good glycemic control. Collaborative care is essential for pregnant women who have diabetes: medical, obstetric and midwifery input, together with informed self care by the women can help pregnancy to as fulfilling for the women with diabetes as for her non diabetic counterpart. Regular monitoring of the blood glucose at home by the pregnant women has proved successful in achieving good diabetic control.

Each time you check your blood glucose, write down the results in a record book. Take the book with you when you visit your health care team. If your results are often out of range, your health care team will suggest ways you can reach your targets.

Diet: The CHO energy content of the diet should be related to the energy requirement of the individual. In most cases it does not exceed 40%, but it can be higher without adverse effects. Fat intake should be restricted because of the increased risk of arterial disease in diabetics. A high fibre intake is recommended because the slower gastric emptying delays the absorption sugar in to the blood stream. Hypoglycemia may exacerbate the effects of morning sickness; glucose and sugary foods should be avoided, and hypoglycemia avoided by taking milk and a light snack. Glucagon should be available to women diabetics, for use in emergencies. Dietary considerations for such women should avoid sweets such as gul ab jumun halwa and jelabi, and where the woman is also over weight, foods fried in ghee or oil should be reduced.

Physical Activity: Physical activity, such as walking and swimming, can help you reach your blood glucose targets. If you are already active, tell your health care team what you do.

Insulin: Insulin requirements usually increase in pregnancy owing to the rise in energy requirements and the production of diabetogenic hormones from placenta. Better diabetic control is generally achieved if a combination of short and intermediate-acting insulins are administersd twice daily(Gillmer and Hurely,1999)

Three descriptions have been applied to control of blood glucose in pregnancy complicated by diabetes;

Very tight control, tight control and moderate control.

1. Very tight control; aims for blood glucose below 5.6mmol/l

2. Tight control; aims for blood glucose 5.6-6.7mmol/l

3. Moderate control; aims for blood glucose 6.7-8.9mmol/l

In normal pregnancy, blood glucose levels rarely exceed 6.6mmol/l.

The effect of these degrees of control have not been thoroughly researched, but evidence suggests that tight control coupled with a holistic approach

to the woman's care results in reduced incidence of macrosomia, UTI, RDS ,hypertension, and Perinatal mortality.

ORAL HYPOGLYCAEMIC DRUGS

It is not recommended in pregnancy as they cross the placenta and may cause severe hypoglycemia in the baby after birth because of their slow metabolism in the infant's immature liver.

Fetal well-being: It must be monitored closely throughout pregnancy. It may be assessed by 'Kicks Counts' and cardiotocography, and growth is monitored by clinical examination and USG.As a nurse Midwife should demonstrate the foetal kick count to the pregnant mother ,and also instruct if the count is below 10 with in two hours of counting should consult with the physician

Obstetric Care: The frequency of attendance at the antenatal clinic varies but is often every 2weeks until 32 weeks and then weekly. The incidence of pre-eclampsia is increased in women with diabetes; thus particular care is taken to record the BP and examine the urine for protein. Hospitalization before 38weeks is necessary only if complications such as polyhydramnios, IUGR, infection or inadequate diabetic control occur.

Assessment of HbA1c level: It should be measured every 2-4 weeks and helps to assess diabetic control. It is a type of adult haemoglobin where one part of the beta chain has been combined with glucose.HbA1 levels are not indicators of present diabetic status but of blood glucose levels during the preceding 1-3months.Levels of 10% or lower are considered a sign of good control, while levels of more than 10% indicate poor control.

Care during labour:[6]

Labour may be spontaneous or induced, or delivery may be by elective caesarean section if there are obstetric indications.

Dextrose/Insulin varies; Gillmer and Hurely suggest intravenous 10% dextrose 100ml per hour: it is important that this does not change. Changes in response to blood glucose results should be to the insulin infusion (usually Human Actrapid insulin 6 units in 60ml normal saline(1 unit in 10ml given according to a sliding scale). The aim is to keep blood glucose levels between 4-6mmol/l. Blood glucose levels are checked hourly and the insulin infusion rate adjusted if necessary. If oxytocin is necessary, it should be infused in normal saline. Satisfactory pain relief may be achieved by epidural anaesthesia.

Fetal monitoring should be continuous, by external cardiotocography or fetal scalp electrode, and is essential because of the increased risks of fetal distress during labour.

After labour, insulin requirements usually revert to pre pregnancy levels and women who began insulin therapy during pregnancy will not normally now require this.

Postnatal care: [5,7]

Maternal insulin requirements fall sharply after delivery, so frequent blood glucose estimations are made to detect hypoglycaemia. The insulin dosage is reduced and the woman is gradually reestablished..

Breastfeeding should be encouraged, and woman may need additional CHO to facilitate this .De Swiet suggests an additional 50g per day, with less long acting insulin given at night to prevent nocturnal hypoglycaemia, which may occur during night feeding. High standards of hygiene are necessary to combat the increased risk of infection in diabetic women.

Family planning advices:

Diabetic women require careful advice on family spacing. The combined oral contraceptive pill may alter CHO metabolism and some women may need a higher dose of insulin. The IUD method is effective and there is no higher rate of pelvic infection for woman with diabetes. Barrier methods may be used by women for whom further pregnancy would not severely exacerbate diabetic complications.

Acknowledgement: Nil

Conflict of Interest: Nil

Source of Support: Nil

Ethical Clearance: Got ethical clearance from my Guide Hospital also from Saveetha University (010/10/2013/IEC/SU)

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Assessing Pulmonary Tuberculosis Knowledge among Patients: A Study of Select Hospitals in Moradabad

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ABSTRACT

India is the highest TB burden country with World Health Organisation (WHO) statistics for 2011 giving an estimated incidence figure of 2.2 million cases of TB for India out of a global incidence of 8.7 million cases. The estimated TB prevalence figure for 2011 is given as 3.1 million.[1] TB is an infectious disease caused by the bacillus Mycobacterium Tuberculi. It typically affects the lungs (pulmonary TB) but can affect other sites as well (extra pulmonary TB). The disease is spread in the air when people, who are sick with Pulmonary TB expel bacteria, for example by coughing. TB is also more common among men than women, and affects mostly adults in the economically productive age groups. due to this,The present researcher intended that to find out grass root causes of epidemiology concerned with TB.

Objectives : **1.** To assess knowledge regarding pulmonary tuberculosis among patients with tuberculosis.

2. To find out association between knowledge towards pulmonary tuberculosis among patients with selected demographic variables.

Materials & Method: This study based on descriptive survey approach. Purposive sampling technique was used to obtain a sample of 200 persons affected by PTB in selected hospitals. The researchers developed demographic proforma for collecting information from subjects and structured knowledge questionnaire was prepared to collect the data regarding tuberculosis. which contained Part I 'Demographic data', Part II 'Structured knowledge questionnaire of PTB'. The reliability was established by using **Kuder-Richardson** (Kr 20 = 0.59) formula.

Results: The study finding showed that majority i.e. 68% patients had moderate knowledge 23% patients had inadequate knowledge and 9% patients had adequate awareness regarding pulmonary tuberculosis. Overall mean knowledge score and standard deviation of the subject were 12.49 and 3.64 respectively. While remainders possessed moderate level of knowledge.

There was no significant association found between mean knowledge score and age in years, gender, education, occupation, family monthly income, types of family, personal habits, previous exposure to PTB, BCG vaccination etc. There was significant association found between mean knowledge score and source of previous knowledge.

Keywords: *TB - Tuberculosis, PTB - Pulmonary Tuberculosis, WHO - World Health Organization, BCG - Bacillus Calmette–Guérin.*

INTRODUCTION

TB is an infectious disease caused by the bacillus Mycobacterium Tuberculi. It typically affects the lungs (pulmonary TB) but can affect other sites as well (extra pulmonary TB). The disease is spread in the air when people, who are sick with Pulmonary TB expel bacteria, for example by coughing. TB is also more common among men than women, and

affects mostly adults in the economically productive age groups. Without treatment, mortality rates are high. In studies of the natural history of the disease among sputum smear positive and HIV negative cases of Pulmonary TB, around 70% died within 10 years; among culture positive (but smear negative) cases, 20% died within 10 years.[1] The most common method, for diagnosing TB worldwide is sputum smear microscopy (developed more than 100 years ago) in which bacteria are observed in sputum samples examined under a microscope, following recent developments in TB diagnostics, viz; the use of rapid molecular tests for the diagnosis of TB and drug resistant TB. In countries with more developed laboratory capacity, cases of TB are also diagnosed via culture methods (the current reference standard). Treatment for new cases of drug susceptible TB consists of a 6 month regimen of four first line drugs; isoniazid, rifampicin, ethambutol and pyrazinamide. Treatment for multidrug resistant TB (MDR-TB), defined as resistance to isoniazid and rifampicin (the two most powerful anti TB drugs), is longer and requires more expensive and toxic drugs. For most patients with MDR – TB, the current regimens recommended by WHO last 20 months.

India is the highest TB burden country with World Health Organisation (WHO) statistics for 2011 giving an estimated incidence figure of 2.2 million cases of TB for India out of a global incidence of 8.7 million cases. The estimated TB prevalence figure for 2011 is given as 3.1 million.[1]

It is estimated that about 40% of the Indian population is infected with TB bacteria, the vast majority of whom have latent rather than active TB.

The incidence of TB cannot be measured directly). For 96 countries that account for 89% of the world's TB cases, estimates were revised between 2009 and 2012 in regional or country In 2011, there were an estimated 8.7 million incident cases of TB (range, 8.3 million–9.0 million) globally, equivalent to 125 cases per 100 000 population.[6]

The five countries with the largest number of incident cases in 2011 were India (2.0 million–2.5 million), China (0.9 million–1.1 million), South Africa (0.4 million–0.6 million), Indonesia (0.4 million–0.5 million) and Pakistan (0.3 million–0.5 million). India and China alone accounted for 26% and 12% of global cases, respectively.[7]

DISCUSSION

Majority i.e. 75 patients (37.5%) were in the age group of 20-30 years followed by 50 (25 %) were in the age group of above 50 years and 38 (19%) in the age group of 31– 40 years, 37 (18.5%) were in the age group of 41-50 years. This included 139 (69.5 %) males and rest 61 (30.5%) female.

Regarding educational status of patients majority i.e. 95 (47.5%) illiterate, 50 (25%) educated upto high school, 29 (14.5%) studied upto degree, and 26 (13%) studied upto intermediate.

About the occupation of patients, majority i.e. 86 (43%) were unemployed, 64 (32%) were a self employed, 42 (21%) were private and 8 (4%) were Government employees.

About family income per month of patients a majority i.e. 102 (51%) were in the range of below Rs 3000, 67 (33.5%) fell in the range of above Rs 5000 and rest 31 (15.5 %) had an income of Rs 3001-5000.

About type of family of patients a majority i.e. 108 (54 %) belonged to joint family which 92 (46%) belonged to joint family.

Regarding family size of patients a majority i.e. 130 (65 %) had above 5 followed by 50 (25%) 2-5 and 20 (10%) below 2 members in their families.

About personal habits of patients a majority i.e. 114 (57%) were found to be cigarette smokers, 26 (13%) had Tobacco chewing habituals, 10 (5%) Alcoholic and 50 (25%) without any personal habits.

Regarding the source of previous knowledge of pulmonary tuberculosis a majority i.e. 137 patients (68.5%) were from medical persons, 54 (27%) from friends and 9 (4.5%) from mass media.

About the previous exposure of pulmonary tuberculosis a majority i.e. 103 patients (51.5%) were found pulmonary tuberculotic and 97 (48.5%) having no tuberculosis.

Regarding BCG vaccination the majority i.e. 117 patients (58.5%) had BCG vaccination and 83 (41.5%) did not have BCG vaccination.

The study finding showed that majority i.e. 68% patients had moderate knowledge 23% patients had inadequate knowledge and 9% patients had adequate awareness regarding pulmonary tuberculosis. Overall mean knowledge score and standard deviation of the subject were 12.49 and 3.64 respectively. While remainders possessed moderate level of knowledge.

There was no significant association found between mean knowledge score and age in years, gender, education, occupation, family monthly income, types of family, personal habits, previous exposure to PTB, BCG vaccination etc. There was significant association found between mean knowledge score and source of previous knowledge.

As per the concurrent data available so far (WHO), since the year 2010 1.73 million people are getting infected with tubercultic bacilli inducing various types of TB. Out of this approximately 0.5 million have been found to circumspect to death every year.

The present researcher intended that to find out grass root causes of epidemiology concerned with TB.

Ethical Clearance: Got ethical clearance from the ethical committee of Teerthanker Mahaveer university before the study.

Acknowledgement: Firstly, we are grateful to lord almighty for his abundant love, grace, compassion and immense showers of all blessing on us in completing the project successfully.

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Home Hemodialysis – A Dialysis Option for Patients with Chronic Kidney Disease

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ABSTRACT

With continually growing incidence of Diabetes Mellitus in India, the number of people living with End Stage Renal Disease (ESRD) has tremendously increased. The poor outcome with thrice weekly in centre Conventional Hemodialysis (CHD) and inaccessibility to good dialysis centers has rekindled the interest for Home Hemo Dialysis (HHD). Being a more physiological process allowing continuous filtration, the outcome and quality of life of patients on HHD are studied to be significantly better than those on conventional in centre HD[1]. However in a developing country as in India, there are a number of practical issues to be considered in aspects as cost of equipment, patient selection, training and follow up to ensure success of such a program. This article outlines the feasibility of home hemodialysis option for patients with End Stage Renal Disease (ESRD) in India.

Keywords: *End Stage Renal Disease, Conventional Hemodialysis, Home Hemodialysis, Quality of Life.*

INTRODUCTION

The ultimate aim of dialysis is to improve both quality of life (QOL) and survival. Thrice weekly Conventional Hemodialysis(CHD) had been the dominant Renal Replacement Therapy (RRT) in most of the countries for over 30 years. Glomerular filtration in the body is a continuous process in which the nitrogenous wastes, excess fluid and electrolytes are filtered into renal tubules continuously and excreted periodically from urinary bladder. However Conventional Hemodialysis is a non physiological process that allows filtration only thrice or twice a week for a period of four hours. This is associated with challenges as excess fluid accumulation, unregulated bone and mineral metabolism, vascular access infection and anemia secondary to blood loss and haemolysis[2]. In an Indian scenario where patients pay for their treatment, most of the patients cannot afford thrice weekly HD and gets twice weekly HD. Often patients present with weight gain over 4kg and an attempt to remove this excess fluid in 4hrs leaves the patient at risk for hypotension, cramps, headache, convulsions etc. It is more likely that the patients do not reach the target weight at the end of dialysis and the cycle continues. Inconsistent and incomplete removal of fluid also puts the patients at risk of ventricular hypertrophy. The dialysis quality outcome is not desirable with an increase in morbidity and mortality rates.

BENEFITS OF HOME HEMODIALYSIS

Home Hemodialysis (HHD) is performed at home and provides the patient independence of frequency and duration of dialysis thus offering him a flexible schedule. Patients do not have to travel long distances for dialysis and more importantly it allows more continuous and physiological excretion of fluid and metabolic wastes. The patient gains independence and responsibility.

HHD is a more physiological and continuous therapy where patients can connect themselves to the machine daily preferably during night allowing normal activity level during the day. This reduces the risk for fluid accumulation and related complications, providing a better Health Related Quality of Life. Short Daily dialysis performed 6 days per week has been shown to improve BP control, reduce erythropoietin requirement, remove the need for phosphate binders and improve the Quality Of Life (QOL).[3]

Movilli E etal (2007) in his prospective

observational study including uremic patients on regular Hemodialysis found that Nocturnal Home Hemodialysis(NHHD) allowed more gradual ultrafiltration, maintenance of " dry weight" and better survival[4]. Walsh et.al , 2005 studied four patient cohorts assessing the benefits of NHHD following them up for three to four years . There were consistent findings of improved BP control, health related Quality of Life and increased hemoglobin levels (11.3 to 12.5g). The Frequent HD Network trial has recently reported a significantly improved health related QOL scores as measured by RAND- 36 short form survey in patients who were converted from Conventional Hemodialysis (CHD) to Short Daily Hemodialysis (SDHD).[5]

Eric D Weinhandl et.al (2012) has used a cohort design to assess the mortality in patients undergoing daily HHD and thrice weekly in- centre hemodialysis patients from 2005 to 2008. In matching 1873 HHD patients with 9365 in-centre patients selected from the prevalent population in the US Renal Data base, they concluded that HHD is associated with a 13% lower risk for all- cause mortality than in-centre dialysis.[2]

A matched cohort study showed similar survival rates in patients receiving SDHD at home and age matched recipients of deceased donor renal transplants implying that home HD can achieve outcomes similar to those with deceased donor transplantation [6]

Figure 1 – Patient on HD in the comfort of his own home[7]

CHALLENGES IN INITIATING A HOME HD PROGRAM

Establishing a successful home HD program requires time and resources. It's also mandate to have a committed multidisciplinary team which includes a nephrologist, Home HD nurse educator, Equipment technician, dietician and a social worker who will train the patient and the family adequately. It is essential that we carefully select patients who are motivated to learn cannulation, programming of machine and trouble shooting. The patient and the family should be educated and motivated enough to perform hemodialysis at home with confidence following the protocols and procedure.[5]

The initial investment the family has to make towards initiating home HD is substantial which includes the machine, Reverse Osmosis plant for water supply, dialysate solution and cannulation sets and changes in plumbing system (approximately 25 lakhs). This makes the option inaccessible for most patients though the cost per cycle (running cost) is remarkably less. It is required that the patient has a trained family member who stays with him to assist in case of any emergency.

Training patients and care givers for home care is predominantly the responsibility of skilled and committed nurses. The training unit should be carefully planned in such a way that it mimics the home settings. After the initial training the patient and the care giver performs supervised Hemodialysis in the unit before they are sent home to perform independently. Patients usually take three to six weeks to be trained. Training must be standardized for efficiency yet individualized to each patient.

Problems with Home Hemodialysis as perceived by the patients There are machines designed for home use that are easy to operate. Still on discussing the option of home hemodialysis to few young educated patients in the Unit who are free of other co-morbidities they shared the following concerns:

- We don't feel comfortable to cannulate ourselves.
- What if the cannulas get disconnected during sleep?
- Will we able to program the machine correctly?
- Initial cost is very high.
- Water supply is not predictable (large volumes of water is required)
- We feel more confident in the centre when nurses and doctors are around.

CONCLUSION

The benefits of Home Hemodialysis though well studied and proven, is not initiated for patients with ESRD in India. Even with increasing awareness among public on organ donation, the average waiting period for patients before they receive an appropriate donor kidney is over 6 months. Hence Home hemodialysis will soon become a preferred option for young, aspiring patients who would like to go on with their careers and academic achievements without interruptions of hospitalization. The fact that the outcome of NHHD is in par with that of Renal transplantation makes it a viable option for those patients who do not want to risk rejection and adverse effects of immunosuppressant therapy following transplant. It's high time that the dialysis nurses think beyond; shifting their role as care providers to educators and facilitators.

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Ethical Clearance: Not applicable

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A Quasi Experimental Study to Assess the Effect of Hot Application on Phlebitis among Patients on Intravenous Therapy at Selected Hospitals, Jalandhar, Punjab, 2014

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ABSTRACT

Intravenous therapy is a routine nursing task in any hospital. It has become a major component of patient care. However, the placement of an intravenous cannula can have undesirable effects, the most common of which is phlebitis. Nurses should be aware of the appropriate interventions to facilitate comfort for the patients on intravenous therapy and take measures to reduce such complications. In this study, Quasi experimental (Non equivalent pre test post test control group) research design was used and 80 patients with phlebitis were taken by using purposive sampling technique. 40 patients were included in experimental group & 40 in control group. Ethical considerations were followed during the research study. Pre test was done by assessing the grade of phlebitis with Visual infusion phlebitis scale in both groups on 1st day and hot application was provided for 15 minutes twice a day for 3 days in the experimental group. After that post test was done in both groups on 3rd day. The result showed that the mean pre test grade of phlebitis in experimental & control group were 2.02 ±0.61and 1.32 ± 0.47 respectively. The mean post test grade of phlebitis in experimental & control group were 0.95 ± 0.59 and 1.5 ± 0.71 respectively. In experimental group, there was significant (t_{cal}7.9015 at $p<0.05$) difference between mean pre test and mean post test grade of phlebitis as compared to control group. Hence, it is concluded that hot application had significant effect on phlebitis among patients on intravenous therapy.

Objectives:

1. To assess the grades of phlebitis among patients on intravenous therapy in experimental and control group.
2. To provide hot application among patients on intravenous therapy in experimental group.
3. To reassess the grades of phlebitis among patients on intravenous therapy in experimental and control group.
4. To compare the post assessment grades of phlebitis in experimental and control group.
5. To find out association of post assessment phlebitis grades with the socio demographic variables in experimental and control group.

Methodology

Design: Quasi Experimental non equivalent pre test post test control group design.

Setting: Selected Hospitals of Jalandhar, Punjab.

Population: All the patients on intravenous therapy with phlebitis

Sample Size: 80 patients, 40 in experimental group& 40 in control group were taken from selected hospitals of Jalandhar, Punjab.

Sampling Technique: Purposive sampling technique.

Results and conclusion: Findings of the study has shown that the mean pre test grade of phlebitis in experimental & control group were 2.02 ±0.61 and 1.32 ± 0.47 respectively. The mean post test grade

of phlebitis in experimental & control group were 0.95 ± 0.59 and 1.5 ± 0.71 respectively. It indicated that there was significant reduction in grade of phlebitis among patients on intravenous therapy in experimental group as compared to control group. So, the present study concluded that hot application had significant effect on phlebitis among patients on intravenous therapy.

Keywords: *Effect, Hot application, phlebitis.*

INTRODUCTION

Body fluids and electrolytes play an important role in homeostasis. Maintenance of the composition and volume of body fluids within narrow normal limits is necessary to maintain homeostasis.[1] In adults body fluid constitute between 55% and 60% of total body mass. The fluid circulating the body is composed of water, electrolytes, minerals and cells. There are many factors causing imbalance such as injury, surgery and different kinds of medical illnesses. These imbalances can be corrected by intravenous therapy.[2]

The history of intravenous therapy began with the discovery by Sir. Williams Harvey. The first practical application was by Dr. Thomas Latta, who used infusion of saline to treat the intractable diarrhea. The intravenous infusion is an important aspect of therapy under both medical and surgical conditions.[3] Approximately 90% of patients in acute care setting receive some form of intravenous infusion therapy for many reasons. A significant number of patients admitted into hospital receive some form of intravenous therapy. These include intravenous antibiotic administration, intravenous fluids, intravenous medications and/or total parenteral nutrition (TPN).[4]

With the increased acuity of today's patients, the number of patients receiving intravenous therapy is much higher than 25 million estimated over a decade ago. Performing venipuncture for the purpose of inserting peripheral IV line is painful to the patient and costly to the institution.[3] So, starting an intravenous (IV) infusion is a more challenging skill in nursing. Today in any hospital intravenous therapy is a routine nursing task, though it is not free of potential hazards to patient. So, it has become a major component of patient care.[5] However, the placement of an intravenous cannula can have undesirable effects, the most common of which is phlebitis.[6]

Phlebitis is the inflammation of the interior wall of the vein; the tunica intima that may cause pain, oedema and redness.[7] Factors associated with the development of phlebitis are integrity and state of veins, insertion technique, cannula location, insertion into the bony extremity, size of cannula, infusion of certain drugs, duration of therapy etc.[8] Patient factors that increase risk of developing phlebitis include advanced age, female sex, conditions such as neutropenia, malnutrition, immunosuppression, conditions that impair circulatory function and peripheral neuropathy. It is essential for the nurse to be able to identify patients who are at risk of developing phlebitis.[9]

Managing an intravenous therapy regimen has become a common nursing responsibility which should be done with consideration for the patient's needs and comfort. Nursing interventions include early recognition, prevention and treatment including heat therapy. The nurse should confirm the absence of all signs and symptoms of phlebitis such as pain, tenderness or discomfort, oedema at or above the insertion site.[10] Hot application is the application of heat to the body for promoting comfort and maintains health. Heat increases blood flow and makes connective tissue flexible. The therapeutic effects of heat include decreasing joint stiffness, reducing pain, relieving muscle spasms, reducing inflammation, oedema and aids in the post acute phase of healing and increasing blood flow. The increased blood flow to the affected area provides proteins, nutrients, and oxygen for better healing.[11] Thus, hot application can be used in clinical settings to prevent the complications of phlebitis and promote comfort to the patients on intravenous therapy.[12]

MATERIALS & METHOD

The study was conducted in selected hospitals of Jalandhar i.e. S.G.L Superspeciality Hospital, Civil Hospital, Joshi Hospital and Satyam Hospital to assess the effect of hot application on phlebitis among patients on intravenous therapy. Quasi experimental

(Non equivalent pre test post test control group) research design was used. Total 80 patients were selected by purposive sampling technique. in which 40 patients were taken as experimental group & 40 patients as control group who met the inclusion criteria.

RESULTS

Objective 1 & 3 revealed that in experimental group, 25 (62.5%) respondents had grade of phlebitis 2, 8 (20%) respondents had grade 3, 7(17.55%) respondents had grade 1 during pre test. After intervention, in 26 (65%) respondents grade of phlebitis reduced to 1, followed by 8 (20%) respondents had grade 0 and 5 (12.55%) respondents had grade 2 and 1(2.5%) respondent had grade 3 during post test, Whereas in control group, majority of respondents 27 (67.5%) had grade of phlebitis 1 and 13(32.5%) respondents had grade 2 during pre test. During post test, 22 (55%) respondents had grade 2, followed by 13 (32.5%) respondents had grade 1 and 4 (10%) respondents had shown no sign of phlebitis i.e. grade 0.

According to objective 4, it was revealed that In control group, there was no significant (tcal 1.2885 at $p<0.05$) difference between mean pre test and mean post test grade of phlebitis. In experimental group, there was significant (tcal7.9015 at $p<0.05$) difference between mean pre test and mean post test grade of phlebitis.

Objective 5 revealed that age found to be significantly associated (F value= 8.8399, df = 2,37) with mean post test grade of phlebitis in control group. In experimental group, peripheral intravenous cannula size (F value = 3.7839, df = 3,36) , insertion site of peripheral intravenous cannula (F value = 3.4081, df = 2,37), joint involvement („t " value = 3.16918,df = 38) found to be associated with mean post test grade of phlebitis.

CONCLUSION

From the findings of the study following conclusions were drawn:

- The mean pre test grade of phlebitis in experimental & control group were 2.02 ±0.61 and 1.32 ± 0.47 respectively.
- The mean post test grade of phlebitis in experimental & control group were 0.95 ± 0.59 and 1.5 ± 0.71 respectively. It indicated that there was significant reduction in grade of phlebitis among patients on intravenous therapy in experimental group as compared to control group. So, the present study concluded that hot application had significant effect on phlebitis among patients on intravenous therapy.
- Selected socio-demographic variables i.e peripheral intravenous cannula size , insertion site of peripheral intravenous cannula, joint involvement were found to be associated with mean post test grade of phlebitis among patients on intravenous therapy.

DISCUSSION

In the study, the Quantitative research approach and Quasi experimental research design was selected to assess the effect of hot application on phlebitis among patients on intravenous therapy. Conceptual framework used for study was Imogene King's Goal Attainment theory. The present study was conducted on patients on intravenous therapy with phlebitis in the hospitals of Jalandhar - S.G.L Superspeciality Hospital, Civil Hospital , Joshi Hospital and Satyam Hospital. Total 80 patients were selected for study in which 40 patients were taken as experimental group & 40 patients as control group by purposive sampling technique. Data was analyzed and interpreted by using descriptive i.e. mean, percentage, standard deviation and inferential statistic i.e. 't' test and ANOVA test(F value).

Acknowledgement: It gives me great pleasure to express my sincere thanks to the Medical Superintendent of selected hospitals of Jalandhar, who allowed me to conduct study and the subjects who participated in the study. I would like to express my immense gratitude to my affectionate and adoring Parents for their constant support and encouragement.

Ethical Considerations:

- Written permission was taken from the Principal, S.G.L Nursing College, Semi, Jalandhar.
- Ethical clearance was taken from the research committee of S.G.L Nursing college, Semi, Jalandhar.

- Written permissions were taken from the Administrators of selected hospitals, Jalandhar- S.G.L Charitable Hospital, Joshi Hospital, Satyam Hospital and Civil Hospital, Jalandhar.
- Written Informed consent was taken from each study sample.
- Confidentiality and anonymity of samples was maintained throughout the study.

Source of Funding- Self

Conflict of Interest- Nil

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A Qualitative Study on Lived Experience of Caregivers of Alzheimer's Disease Clients and the Effectiveness of the Booklet on Caregiver's Burden at Selected Alzheimer's Care Centers in Kerala

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ABSTRACT

A qualitative study on lived experience of caregivers of persons with Alzheimer's disease clients and the effectiveness of the booklet on caregiver's burden at selected Alzheimer's care centers in Kerala was conducted to explore and describe the lived experience of caregivers of Alzheimer's disease clients with a view to reduce their care burden through use of booklet on "They are valuable for us".

The study used a triangulation approach. The care burden of the caregivers of Alzheimer's disease clients were assessed using Zarit caregiver's burden scale. And the data obtained were analysed. Among the 40 samples five samples had care burden score above 50%. They were interviewed using the semi structured interview guide and a booklet titled "They are valuable for us" was developed and implemented. After one month the caregiver's burden was reassessed using Zarit caregiver's burden scale.

The qualitative analysis derived 11 essential themes. They are deficient knowledge about Alzheimer's disease, inability to meet the physical needs, inability to manage the behavioural problems, endurance, depression, fear of social isolation, reaching to the truth, the need for assistance, physical distress and dependency. The quantitative analysis of the care burden showed that the mean pretest care burden was 37.2 and that of the post-test care burden was 30.1. The 't' computed between the pretest and posttest care burden score was 5.625, $p < 0.05$. The study concluded that the booklet on "They are valuable for us" was effective in reducing the care burden of caregivers of Alzheimer's disease clients.

Keywords: *Lived experience, Caregiver's burden, Alzheimer's disease clients, booklet.*

BACKGROUND

Every human being goes through the process of aging. Ageing involves the process of gradual and spontaneous continuum of strength and capacities from birth to death and the inevitable decline through the later ages. Alzheimer's disease is the most common form of dementia in the world and is a progressive and irreversible fatal disease. Progression of the disease occurs in phases, until all cognitive function is destroyed.[1]With the rapid increase of the grey population in India, Alzheimer's and other forms of dementia are becoming more prevalent among the elder generation.[2]

The World Health Organization (WHO) and Alzheimer's Disease International (ADI) reported the current status of Alzheimer's disease in the world to be 35 million. The numbers are expected to be more than their double in the next 20 years, reaching 65.7 million by the year 2030. By the year 2050, the number may increase to 115.4 million.3 In Asia the prevalence of Alzheimer's disease is 48% and is expected to grow from 12.65 million in 2006 to 62.85 million in 2050 which will account for 59% of the world's Alzheimer's cases.3

Shaji S et al had conducted a door-to-door survey in the city of Kochi (Cochin) in Kerala, southern India

to investigate the prevalence, psychosocial correlates and risk factors of various dementing disorders in the urban population,especially among residents aged 65 years, using cluster sampling. Of 1934 people screened with a vernacular adaptation prevalence of dementia was found to be 33.6 per 1000 of which Alzheimer's disease was the most common type (54%) followed by vascular dementia (39%), and causes such as infection, tumour and trauma were seven percentages. Family history of dementia was a risk factor in Alzheimer's disease and history of hypertension was a risk factor in vascular dementia.6Alzheimer's disease is often called a family disease, because the chronic stress of watching a loved one slowly decline affects everyone[4]. Alzheimer's disease can be a challenging journey, not only for the person diagnosed but also for their family members and loved ones as well. Each day can bring new demands on the caregiver and they should help the Alzheimer's disease client to cope up with the changing levels of ability and new patterns of behavior. Caring for a loved one with Alzheimer's disease can seem overwhelming at times, but the more information and support the caregiver has, the better he can navigate across the troubled waters of demands.

MATERIALS & METHOD

Research design: The researcher used a triangulation approach to conduct the study. A quantitative approach was used to assess the care burden of caregivers of Alzheimer's disease clients and qualitative approach using the phenomenological method was adopted to qualitatively analyse the care burden. The effectiveness of the booklet was assessed using a one group pre-test post-test design.

Sample and Sample Size: The sample size was calculated by the use of power analysis with 95% confidence level. Based on purposive sampling technique the researcher selected 40 samples for assessing the care burden of caregivers of Alzheimer's disease clients. In qualitative research the guiding principle in sample selection is data saturation. In this study five caregivers of Alzheimer's disease clients with care burden above 50% were interviewed.

Data Collection Instrument and Technique

The data collection instrument consist of three sections: sections A consists of background information of the client and the caregiver, sections B consist of semi-structured interview to explore the lived experience of care givers of Alzheimers disease client and section C consist of Zarit's caregiver's burden scale to assess the burden of the caregiver.

Development of the Booklet titled "They are valuable for us"

The booklet was prepared based on the narrations of five care givers of Alzheimer's disease clients. From the transcibed verbatim the investigator found that most of the care givers were having deficient knowledge about the disease condition and they find it difficult to manage the problems of the Alzheimer's disease clients such as aggressive behaviour, wandering, inability to meet the activities of daily living etc. most of them were stressed and were emotionally disturbed. The booklet was prepared and was submitted to the experts for content validity and language validity and final draft was prepared.

Procedure for data collection

The caregivers were contacted personally by the researcher and consent was obtained from them after explaining the purpose of the study. Assurance of confidentiality of their response was maintained. The care burden of the caregivers of Alzheimer's disease clients were assessed using Zarit's caregiver's burden Scale. And the data obtained were analysed. Among the 40 samples five samples had care burden score above 50%. They were interviewed using the semi structured interview guide and the response of the caregivers of Alzheimer's disease client. The interview lasted for 30-40 minutes and their response was audio taped and transcribed for data analysis and was submitted to five experts for the content validity. The experts were three clinical psychologist and two nursing expert. After the data analysis, based on the research finding a booklet was prepared on care of the patient with Alzheimer's disease. The content in the booklet was taught to the caregivers in the form of a seminar in the two research settings and the booklet titled "They are valuable for us" was supplied to each care giver. After one month the caregiver's burden was reassessed by using the Zarit's caregiver's burden scale.

RESULTS

Table 1: Sample characteristics of the caregiver of Alzheimer's disease client

n=40

SL. No.	Sample characteristics	Freq-uency	(%)
1.	**Age in years**		
	• 20-40	13	32.5
	• 41-60	19	47.5
	• 61-80	8	20
2.	**Sex**		
	• Male	15	37.5
	• Female	25	62.5
3.	**Education**		
	• Primary	3	7.5
	• High school	17	42.5
	• Higher secondary	10	25
	• Collegiate and above	8	20
	• Professional	2	5
4.	**Relationship with the client**		
	• Grandparent	6	15
	• In-law	16	40
	• Spouse	3	7.5
	• Parent	15	37.5
5.	**Marital status**		
	• Married	35	87.5
	• Unmarried	4	10
	• Widow	1	2.5
6.	**Duration of care given (in years)**		
	• 0.5-1	6	15
	• 2-3	21	52.5
	• 4-5	11	27.5
	• Above 5	2	5
7.	**Monthly Income**		
	• Rs. 5000 – 10,000	20	50
	• Rs.10001-15000	4	10
	• Above Rs.15000	16	40

The data presented in table 1 shows that 47.5% of the caregivers belonged to the age group of 41-60 years, 62% of the caregivers were females, 40% were in laws, 87.5% of them were married, 52.5% of them cared for the Alzheimer's disease client for a period of 2-3 years and 50% of them had monthly income of Rs.5000 – 10,000.

Among the 40 samples 87 percent of them had care burden below 50 percent and 12.5 percent of them had care burden above 50 percent. The data collected from them were analysed qualitatively and derived the following themes. (1) Deficient knowledge about Alzheimer's disease, (2) Inability to meet the physical needs such as toileting, bathing and eating, (3) Inability to manage the behavioural problems such as anger and wandering, (4) Vigilance, (5) Endurance, (6) Depression, (7) Fear of social isolation, (8) Reaching to the truth, (9) The need for assistance, (10) Physical distress and (11) Dependency

Effectiveness of booklet on the care burden of caregiver's of Alzheimer's disease client was assessed using mean, mean difference, standard deviation and't' test.

Table 2: Mean, standard deviation and standard error mean of pretest and posttest care burden score of the caregivers of Alzheimer's disease clients.

S. No.	Care burden areas	Pre - test		Post - test	
		Mean± SD	SEM	Mean± SD	SEM
1.	Burden in the relationship	9.85±2.67	.421	7.88±1.98	.3125
2.	Burden in the emotional well being	12.67±3.36	.532	10.33±2.41	.3813
3.	Burden in social and family life	6.23±2.67	.421	5.28±2.36	.374
4.	Loss of control over one's self	6.93±2.04	.323	5.43±1.52	.239
5.	Burden in finance	1.52±.79	.125	1.2±.71	.113
Total		**37.2±8.88**	**1.40**	**30.1±6.18**	**.977**

The data presented in table 2 shows that in the pretest the mean care burden was highest in the area of emotional wellbeing (12.67±3.36) and lowest in the area of finance (1.52±.79). The total mean of the pretest care burden was 37.2 and the posttest care burden was 30.1. Hence it can be inferred that the booklet was effective in reducing the care giver's burden.

To test the relationship between pretest and posttest care burden score of caregivers the paired t test was computed. The t computed between the pretest and post- test care burden score was 5.625, P (0.001<0.05). So there was a significant difference between the pretest and posttest care burden score of caregiver's of Alzheimer's disease clients. Hence the research hypothesis was accepted. It can be inferred that the reduction in care burden was due to the effectiveness of the booklet titled "They are valuable for us".

DISCUSSION

Alzheimer's disease creates a state of flux both for persons living with the disease and those who are caring for them. The disease trajectory and its consequences make it impossible for caregivers to carry on as before. The qualitative analysis derived 11 essential themes which was consistent with the study conducted by Werner P. A descriptive study was conducted to assess family caregivers' level of knowledge about Alzheimer's disease among 220 informal caregivers of Alzheimer's disease clients from four memory clinics. Knowledge of the disease was assessed using a questionnaire including 17 items examining general knowledge, symptoms, treatment and services. The results revealed overall low levels of knowledge especially in items related to the prevalence, causes and symptoms of the disease.[5]

Karl H et al conducted a phenomenological study to describe the experience of caring for a family member with Alzheimer's disease or related disorder (ADRD) living at home among a diverse sample of 103 family caregivers. The study involved secondary analysis of in-depth transcribed interview data using van Kaam's rigorous four phase, 12- step psycho phenomenological method. Eight essential structural elements emerged from an analysis of the preliminary structural elements. The eight elements were then synthesized to form the following synthetic structural definition: Caring for a family member living at home with ADRD was experienced as "being immersed in caregiving; enduring stress and frustration; suffering through the losses; integrating ADRD into our lives and preserving integrity; gathering support; moving with continuous change; and finding meaning and joy". The present study also revealed that the caregivers are stressed due to their difficulty in managing the physical and behavioural problems of

the Alzheimer's disease clients. By experience they are also reaching in to the truth of caring.[6]

The booklet formulated based on the phenomenological study was found to be effective in reducing the care burden. Metal M C conducted a multicentre, prospective, randomised study to evaluate the benefits of a Psychoeducational Intervention Programme (PIP) on caregiver burden in southern Europe. One hundred and fifteen caregivers of patients with clinical diagnosis of AD (DSM-IV-TR criteria, mini-mental score = 10-26) and functional impairment (Lawton and Brody Scale and Katz Index) were recruited. Caregivers were randomised to receive either PIP (n = 60) or standard care (n = 55). The results revealed that the mean change in caregiver burden (Zarit baseline-Zarit final scores) was statistically significant (p = 0.0083) showing an improvement in the intervention group (-8.09 points) and a worsening in the control group (2.08 points). The intervention group showed significant improvements in all the wellbeing perception areas measured by the SF-36 and a significantly lower score in the GHQ-28 (p = 0.0004). The Psychoeducational Intervention Programme improves quality of life and the perceived health of caregivers of Alzheimer's disease clients.[7]

CONCLUSION

Chronic diseases initiate unique burdens and stressors among care givers.The results suggest that the caregivers of Alzheimer's disease clients have less knowledge about the disease condition and they find it difficult to manage the problems of toileting, eating, bathing, anger and wandering. The booklet was effective in reducing their care burden. The mean of the pretest care burden was 37.2 and that of the posttest care burden was 30.1. The study concluded that the booklet was effective in reducing the care burden of caregivers of Alzheimer's disease clients.

Acknowledgement: I acknowledge the care givers of Alzheimer's disease clients for their participation and co-operation.

Conflict of Interest: There is no conflict of interest exist.

Source of Funding: There is no external fund received to complete the study.

Ethical Clearance: The ethical clearence for conducting the study was taken from the ethical committee of Manipal College of nursing. The study received ethical approval from the department of Psychiatry of Carmal Medical Centre Palai and Alzheimer's Related Disorders of India Day Care Centre, Palarivattom, Cochin. An informed consent was taken from each participant before the interview.

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An Experimental Study to Assess the Effectiveness of Training Programme on Cancer Detection in Terms Knowledge among Village Health Nurses of Othakkadi Primary Health Centres at Madurai

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ABSTRACT

The research project is an "Experimental study to assess the effectiveness of training programme on cancer detection in terms of knowledge among village health nurses of Othkadai Primary health centres at Madurai. The objectives of the study was to identify the knowledge regarding cancer detection among village health nurses before and after giving training programme, and to evaluate the effectiveness of training programme on cancer detection among village health nurses in terms of knowledge. The hypothesis will be tested at 0.05 level of significance

Keywords: *ICMR-indian council of medical research,vhn:village health nurse,phc:primary health centre*

INTRODUCTION

Cancer affects all communities worldwide; approximately 10 million people are diagnosed with cancer and more than 6 million die of the disease every year[1].

In India the national cancer registry programme of the ICMR estimated that there are approximately 2-2.5 million cases of cancer in India, with around 7,00,000 new cases being detected each year[2].

The four most frequent cancers in males in India are mouth, oropharynx, oesophagus, stomach and lower respiratory tract (trachea, bronchus, lungs) for women cancer of the cervix, breast, mouth, oropharynx and esopharynx are the most frequent[3]

NEED AND SIGNIFICANT OF THE STUDY

In south east Asia region, cancer accounts for a significant proportion of morbidity and mortality. it is estimated that about half a million people die every year from cancer. Cancer contribute to 3.4% of all deaths reported from india, 6.6% from Indonesia, 2.5% from Myanmar, 0.8% from Nepal, 4.2% from Sri lanka and 5.5% from Thailand[4].

It is estimated that there are approximately 2-2.5 million cases of cancer in India at any given point of time, with around 7, 00,000 cases being detected each year. During 1900-1996 the crude incidence rates of cancer in India varied between 57 and 79 per 100,000 man and 56 and 91 per 100,000 women in urban registry areas. The age standardized rates range from 98 to 122 per 100,000 men and from 92-135 per 100,000 women[5].

It is of great significance that in terms of incidence the most common cancers worldwide are lung cancer (13.3% of all cancers), breast cancer 10.4% and colorectal cancer 9.4% lung cancer accounts for most deaths from cancer in the world (1.1 million) annually[6].

MATERIAL & METHOD

OBJECTIVES

1. To identify the knowledge regarding cancer detection among village health nurses before and after giving training programme

2. To evaluate the effectiveness of training programme on cancer detection among village health nurses in terms of gain in knowledge.

HYPOTHESIS

1. The mean post test knowledge score of village health nurses who receive training programme with be significantly higher than their mean pre test knowledge score

CONCEPTUAL FRAME WORK

J.w.kenney's open system model

The conceptual framework used in the study is based on J.W. Kenney's open system model

Research design method: The research approach selected to accomplish the objectives of the study was an experimental approach .according to polit and hungler," true experimental offer the most convincing evidence concerning the effects of one variable can have one another

Research design: The research design used in this study was experimental design. The research design used in the study was pretest, post test experimental design to determine the effectiveness of intervention strategy

Variables: Independent variables-intervention strategy on cancer detection

Dependent variables-level of knowledge on cancer detection

Study setting: The study was conducted in selected hospitals at Madurai

Population: The target population of this study was village health nurses working in othakkadai primary health centre, madurai

Sample: The sample of this study available village health nurses working in othakkadai PHC's Madurai

Sample size: The sample size consisted of 12 village health nurses.

Sampling technique : The sample for the study was selected through total enumerative sampling technique

Research tool: The tool used for research study was structured questionnaire and rating scale to assess the knowledge regarding cancer detection

FINDINGS

Table 1 : Distribution of subjects according to the level of knowledge regarding cancer detection among village health nurses

(pre-training assessment)

Level of knowledge	Adequate		Moderate adequate		Inadequate	
	N	%	N	%	N	%
Breast cancer	7	58	5	42	0	0
Lung cancer	0	0	4	33.3	8	66.7
Oral cancer	0	0	1	8.3	11	91.6
Stomach cancer	2	16.7	7	58.3	2	16.7
Cervical cancer	0	0	1	8.3	11	91.6

Table 1 show that the subjects have inadequate knowledge in the aspects of cancer other than breast cancer.

Table 2: Distribution of subjects according to the level of knowledge regarding cancer detection among village health nurses

Level of knowledge	Adequate		Moderate adequate		Inadequate	
	N	%	N	%	N	%
Breast cancer	12	100	0	0	0	0
Lung cancer	7	58.3	3	25	2	16.7
Oral cancer	2	33.3	6	50	2	16.6
Stomach cancer	0	0	4	33.3	8	66.7
Cervical cancer	3	25	8	66.6	1	8.3

Table 2 shows that the village health nurses had increased knowledge after cancer detection programme other than the stomach cancer

Table 3: Comparison of knowledge score about cancer

variables	Pre test XI		Post test X2		't' test
	Mean	SD	mean	SD	
Breast cancer	21.16	2.27	25.91	2.25	4.37
Lung cancer	3.41	1.33	6.3	1.45	3.57
Oral cancer	1.16	1.07	2.8	1.07	0.81
Stomach cancer	4.8	1.5	5.75	0.8	2.41
Cervical cancer	7.33	7.2	13.8	12.6	6.4

Table 3 shows that the comparison of means pre test knowledge score and mean post test knowledge score of the experimental group on cancer

HI the mean post test knowledge score of VHNs who receiving training programme will be significantly higher than their pre test knowledge score.

Table 3 shows that in the group the mean post test knowledge score of 25.91,6.3,2.8,5.75,13.8 of the participants in the aspect of various types of cancer is higher than their mean pre test knowledge score of 21.16,3.14,1.16,4.8,7.33 of the participants .the obtained 't' value of 4.37,3.57,0.81,2.41,6.4 which is significant at 0.05 level. This indicates that the difference between the mean is a true difference and has not occurred by chance. So the researcher accepts the research hypothesis and rejects the null hypothesis.

The findings shows that the intervention strategy has a significant effect in increasing the knowledge of the VHNs regarding cancer detection

DISCUSSION

According to the demographic data the major findings.

1. Most of the VHNs (66.6%) were between 40-50 years of age.
2. Most of the VHNs (75%) working in othakkadai PHC
3. None of the VHNs (100%)had underwent training programme regarding cancer detection
4. Most of the VHNs (66.6%) working experience between15-20 years

CONCLUSION

The following conclusions were drawn from the findings

1. The knowledge of village health nurses regarding cancer detection improved significantly after they had undergone the structured teaching programme.
2. The structured teaching programme on cancer detection was found to be very effective in increasing the knowledge of village health nurses
3. The study provided that there is a significant positive relationship between post test knowledge score and pre test knowledge score.
4. There was an association of knowledge on cancer detection with education.

Acknowledgement : I wish to acknowledge my heart full thanks to god almighty for giving the and courage for completing the study successfully.

Ethical Clearance: Institution got ethical clearance.

Conflict of Interest: Nil

Source of Funding: Self

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Assess the Perception and Acceptance of Treatment for Impaired Fertility among Males Attending Infertility Clinic at IOG, Chennai - A Descriptive Study

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ABSTRACT

Background: Fertility has been one of men's desired attributes since the beginning of recorded history and remains a driving need for young couples today. Men are directly responsible for about 30-40% of infertility. One of the most difficult aspects of primary infertility treatment for the couple is to decide when to stop. Because infertility treatment processes often involves repeated therapies and creates further stress and disappointment.

Method: Quantitative descriptive approach design was used. The study was conducted in the infertility clinic at the institute of obstetrics and gynecology, hospital for women and children, chennai-8. 150 men were selected as the study subjects by convenient sampling. The tool used for the study was rating scale and structured questionnaire. This study assessed the perceptions and acceptance of treatment towards the male infertility. There was a positive moderate relationship ($p<0.05$) between perception and acceptance of treatment by infertile men.

Results: The study identifies that the men who are more educated, long period of infertility and more years of treatment are significantly associated with level of perception and the more income, long infertile period and the late marriage are significantly associated with level of acceptance of treatment.

Conclusion: The study concluded that majority of the men perceived moderate level of perception but are irregular in accepting the treatment towards the infertility.

Keywords: *Perception, Acceptance and impaired fertility*

INTRODUCTION

Infertility is a serious medical concern that affects quality of life and is problem for about 10% of the reproductive age population.[7] Male infertility refers to the inability of a male to achieve a pregnancy in a fertile female .Conception depends on the fertility potential of both the male and female partner. Men are directly responsible for about 30-40%[9]. One of the most difficult aspects of primary infertility treatment for the couple is to decide when to stop. Infertility can have profound effects on sexual relationship. There are many reasons, and some are unknown for infertility. Health care provider can help couples with infertility by designing supportive services and offering psychological counselling. Interventions that provide educational information and teach new skills may produce positive changes than interventions focused solely on counselling and expression of feelings. (Bovin, 2003).[13]

The psychological literature has paralleled this pattern of ignoring male- related issues and has focused more on the emotional squeals of

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women's responses to infertility. This is due partly to the fact that women are perceived to experience greater losses (such as gestation, birth and breast feeding) during infertility than men. Furthermore, in stressful treatment processes such as IVF, most of the difficult procedures like egg collection and hormonal injections fall upon the female. In addition, socio-biological theory proposes mothering as more integral to a woman's identity and physiological needs than fathering is to a man's identity. Whether or not a paternal drive or instinct exists remains controversial. Assessing how well a person or couple is coping with infertility is an essential part of the domain of nursing, and helping people to cope with emotional and psychosocial aspects of infertility.[12]

OBJECTIVES

1. Assess the perceptions experienced by infertile men.
2. Assess the acceptance of treatment by infertile men.
3. Find out the association between perceptions and selected demographic variables.
4. Find out the association between acceptance of treatment by infertile men and selected demographic variables.

METHODOLOGY

Non experimental descriptive approach was used to assess the perceptions and acceptance of treatment by infertile men. Descriptive study design was used for this study.[6] The setting for the study is Institute of Obstetrics and Gynecology, Govt Hospital for Women and Children Egmore, Chennai-8. The target population of the present study was infertile men who are attending the infertility clinic at Institute of Obstetrics and Gynecology, Chennai-8. Infertile men who met the inclusion and exclusion criteria were taken as the sample during the study period. That includes 150 males who are already diagnosed as infertile and taken irregular treatment. 150 infertile men were included in the study. A non interventional simple random sampling technique is used to collect data from the infertile men who are diagnosed as infertile.

Table 1: Level of perception (n=150)

Level of perception		frequency	%
	No perception	14	9.3%
	Mild	45	30.0%
	Moderate	82	54.7%
	Severe	9	6.0%

Table no.1 shows the infertile males level of stress. 9.3% of the infertile males having no stress, 30% of them having mild stress, 54.7% of them having moderate stress and 6% of them having severe stress.

Table 2: Level of acceptance (n=150)

Level of acceptance		Frequency	%
	Regular	10	6.7%
	Less irregular	69	46.0%
	Moderate irregular	65	43.3%
	Highly irregular	6	4.0%

Table no.2 shows the infertile males level of acceptance. 6.7% of the infertile males are regular, 46% of them are less irregular, 43.3% of them are moderate irregular and 4% of them are highly irregular

Table: 3 Correlation between perception score and acceptance score

	Mean±SD	Karl pearson correlation coefficient	Inter-pretation
Perception score Acceptance score	47.27±13.66 35.91±10.74	R=0.43 P=0.01**	There is a moderate positive relationship between perception score and acceptance score

* Significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

DISCUSSION

This study was an attempt to identify perceptions and acceptance of treatment by male infertility. As the investigator had evidenced many psychological, physiological and social problems experienced by these men with infertility, it was planned to take up such a study. Some most common perceptions were identified through this study, which have been analyzed and interpreted.

It can hence be discussed in the context of the study variable that infertility is multidimensional in its occurrence. The perception score for physiological perception is 48.3%, psychological perception is 52.8% and sociological perception is 49.3%. The overall perception score is 50.8%. Hence the investigator concludes that infertile men are having maximum stress in psychological perception (52.8%) and minimum stress in physiological perception (48.3%).

CONCLUSION

The study concluded that there is a moderate positive relationship between perception and acceptance of treatment by impaired male fertility. They were significantly associated with certain demographic variables. More educated, period of infertility and more years of treatment are significantly associated with level of perception whereas more income, period of infertility, age at marriage are significantly associated with level of acceptance.

Acknowledgement: We express our gratitude to the study participants, and authorities who gave permission to conduct the study.

Ethical Clearance: Ethical clearance was obtained from institutional ethical committee (Institute of Obstetrics and Gynaecology, Chennai-6)

Conflict of Interest: Nil

Source of Funding: Nil

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An Exploratory Study to Assess the Role of Mother-in-laws in Antenatal Care at Mendhasala, Khurda, Odisha

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ABSTRACT

Introduction: Every women hopes for a normal pregnancy and birth event so that she can cradle and nurture a healthy baby. For that she has to get proper antenatal care along with pamper, care and guidance from her husband, in-laws and parents.

Method: The descriptive approach was undertaken for present study. The data were collected from 30 mother-in-laws selected by non-probability purposive sampling techqniue in Mendhasala, Khurda through interview schedule and check list. Correlation were analyzed by Pearson's coefficient and percentage and frequencies is used for item wise analysis.

Results: The item wise analysis of knowledge of mother- in- law on antenatal care and the highest scored is 100% for intuitional delivery, the lowest scored 43.3% stands for three antenatal follow up.Similarly for the antenatal check-up, need of vitamin supplement, effect of smoking & alcohol on fetus,screening for Hb% level, for H.I.V.& Hepatitis B,checking ofblood sugar level, BP examination,need of I.F.A. tablets, extra calorie &effect of emotional disturbances scores are 56.7%, 80%, 76.7%, 43.3%, 53.3%, 46.7%, 66.7%, 56.7%, 80% & 76.7% respectively. Maximum score is 100% of attitude of mother-in-law towards antenatal care is for maintain of personal hygiene, care full during bath, wearing loose garments, avoid high heels, massage therapy and application of local heat and the lowest scored 64.4% for emotional support. Similarly the score Emotional support reduce thestress level of mother isHighly significance was found between the knowledge of mother-in-law when compared to selected demographic variables ($p<0.05$). The study also found that there is a no co-relation between knowledge and attitude of mother-in-law on antenatal care as the r value is (-0.16).

Conclusion: So the mother-in-laws is playing a vital role during pregnancy of her daughter-in-law as she is having knowledge and experience on antenatal care.

Keywords: *Antenatal care, antenatal mother, mother-in-law, knowledge, attitude.*

INTRODUCTION

Pregnancy is a unique, exciting and often joyous time in every woman's life as highlights the women's amazing creative and nurturing power while providing a bridge to future [2,3,5,6,10.] Pregnancy is that wonderful period in a woman's life when she spends each and every day in pleasant anticipation, waiting to hold her bundle of joy in her arms at the end of the ninth month[4, 5, 7.] Improving maternal health is the fifth of eight Millennium Development Goals aiming to reduce the maternal mortality ratio(MMR) by three quarters between 1990 and 2015 [6]. Maternal morbidity and mortality are largely preventable through the provision of antenatal care, institutional delivery and timely postnatal care[6,8]. An estimated 289 000 women died in 2013 due to complications in pregnancy and childbirth[6, 8.]

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OBJECTIVES

To assess the

- aknowledge of Mother-in-law regarding antenatal care.
- attitude of Mother-in-law towards antenatal care

Assess the co-relation between knowledge and attitude of mother-in-law.

METHODOLOGY

Research Design and Approach: -Descriptive co-relational design along with non-experimental approach has taken for this study.

Setting of the study:- Study was conducted in Mendhasalaof Khurda district.

Population:- All the Mother-in-laws of antenatal mothers residing in Mendhasala of Khurda district.

Sampling:- Non-probability purposive sampling was used to select the sample of 30 mother-in-law in selected areas of Mendhasala for the study.

Tools used for the study:- Close ended questionnaire to assess knowledge

It consist of 3 part --

Section A- Consists of items related to demographic variables of mother-in-law

Section B- Consists of 17 items pertaining to the knowledge of mother-in-law regarding antenatal care.

Section C- Consists of 30 items to assess the attitude of mother-in-law regarding antenatal care.

Data collection procedure:- Interview was conducted to collect the data from mother-in-laws using interview schedule to assess their knowledge and attitude on antenatal care. Prior consent obtained from the subjects.

Results:- Table No.1 shows that item wise analysis of knowledge of mother in- law on antenatal care. For the registration in knowledge on antenatal care it scored 73.3%. Similarly for the antenatal check-up it scored 56.7%. 80% and 76.7% & 70% scored in knowledge on need of vitamin supplement and effect of smoking & alcohol on fetus. Same for the item purpose of three antenatal follow up and need of screening for Hb% level & for H.I.V.& Hepatitis B infection it scored 43.3% and 53.3% & 66.7%. In purpose of checking of blood sugar level & BP examination it scored 46.7% and 66.7%. For the item effect of high BP it scored 53.3% and 53.3% respectively for risk of big babies in case of diabetes. For the item safe of USG it scored 73.3%. In purpose of effect of emotional disturbances and need of I.F.A. tablets & extra calorie it scored 56.7% and 80% & 76.7% respectively. Finally for the item knowledge on delivery in Hospital it scored 100%.

The item wise analysis of mother in- law's attitude towards antenatal care reveals that knowledge on institutional delivery scored 100% on taking more green leafy vegetables, careful during bath, wearing loose garments, avoidance of high heel, massage therapy & local heat application during pregnancy. For the item emotional support in antenatal care it scored 64.4%. Similarly for the reduction of BP & development of self esteem it scored 65.6% & 70% and 66.6% & 73.3% scored in avoiding family conflict & giving emotional support. Same for the item early registration & registration before 3 month it scored 82.2% & 75.6%. In the item of carry on work & doing some moderate exercises it scored 85.6% and 77.4%. For the item effect of alcohol drinking & smoking it scored 94.4% and 91.1%. Respectively for the items antenatal follow up and avoiding travelling & effect of T.T. Immunization it scored 67.8% and 72.2% & 77.8%. In purpose of effect of doing Hb% estimation, USG, Hepatitis B and HIV screening & blood grouping it scored 99.4%, 80%,77.8% & 75.6% respectively. For the item more calcium & protein and extra calorie in diet during pregnancy scored about 92.2%, 66.7% and 66.7%, taking more fibrous food it scored 91.1%. Finally the item elevation of limbs scored about 95.6%. (Table No.2)

The findings of the table no-3 indicate that there is significant negative relationship between the knowledge and attitude of mother in-law towards antenatal care as the value of r is -0.16039. It implies that mother-in-laws having adequate knowledge regarding antenatal care but they are not plasticising.

DISCUSSION

The study reveals that the mother-in-laws having adequate knowledge regarding antenatal

Care and the overall knowledge score for institutional delivery is 100% (Table no.1). It is similar to the findings of Mcdonagh Marilyn (2005) who reported that 91% of mother-in-laws of antenatal mothers preferred hospital delivery.

No significant association was found between knowledge and attitude of mother-in-laws as the r value is -0.16039 (Table no.3) BibhaSimkhada, Maureen A Porter and Edwin R van Teijlingen (2010) conducted a qualitative study on the role of mother-in-laws in antenatal care and there findings suggested that mother-in-laws sometimes have positive influence but more often it is negative[1].

Table No. 1 depict the item wise analysis of knowledge of mother-in-laws regarding antenatal care

SL NO.	ITEMS	MAXIMUM SCORE	OBTAIN SCORE	PERCENTAGE
Q1	Antenatal Registration	30	22	73.3%
Q2	Antenatal check up	30	17	56.7%
Q3	Need of vitamin supplements	30	24	80%
Q4	Harmful of smoking on foetus	30	23	76.7%
Q5	Avoidance of alcohol during pregnancy	30	21	70%
Q6	Need of three Antenatal follow up	30	13	43.3%
Q7	Blood screening for Hb% level	30	16	53.3%
Q8	Blood screening for Hepatitis B & HIV.	30	20	66.7%
Q9	Estimation of Blood sugar level	30	14	46.7%
Q10	Need of Blood pressure examination	30	20	66.7%
Q11	Effect of high BP on foetus	30	16	53.3%
Q12	Risk of having big babies	30	16	53.3%
Q13	Need of Ultrasound scan	30	22	73.3%
Q14	Effect of emotional disturbances	30	17	56.7%
Q15	Need of I.F.A. tablets	30	24	80%
Q16	Extra calorie requirement	30	23	76.7%
Q17	Hospital delivery	30	30	100%

Table No.2 shows that item wise analysis of attitude of mother-in-laws regarding antenatal care

SL NO.	ITEMS	MAXIMUM SCORE	OBTAIN SCORE	PERCENTAGE
Q1	Emotional support reduce the stress level of mother	90	58	64.4%
Q2	Emotional support reduce the BP	90	59	65.6%
Q3	Emotional support boost mother's self esteem	90	63	70%
Q4	Avoid family conflict during pregnancy	90	59	66.6%
Q5	Positive impact of emotional support	90	66	73.3%
Q6	Early antenatal registration	90	74	82.2%
Q7	Antenatal registration before 3 month	90	68	75.6%
Q8	Carry on of daily house hold work	90	77	85.6%
Q9	Moderate exercises	90	67	74.4%
Q10	Effect of alcohol drinking & smoking	90	85	94.4%
Q11	Antenatal follow up	90	82	91.1%
Q12	Avoidance of travelling	90	61	67.8%
Q13	Need of T.T. Immunization	90	65	72.2%
Q14	Need of Hb% estimation	90	70	77.8%
Q15	Need of Ultrasound scan	90	85	94.4%
Q16	Hepatitis B & HIV Screening	90	72	80.7%
Q17	Blood grouping	90	70	77.8%
Q18	Taking of I.F. A tablets	90	68	75.6%
Q19	Taking of more green leafy vegetables	90	90	100%
Q20	Need of taking more calcium & protein	90	83	92.2%
Q21	Requirement of extra calorie	90	60	66.7%
Q22	Care of the breast	90	60	66.7%
Q23	Maintain of personal hygiene	90	90	100%
Q24	Careful during bath	90	90	100%
Q25	Wearing loose garments	90	90	100%
Q26	Avoid high heel shoes	90	90	100%
Q27	Giving massage therapy	90	90	100%
Q28	Eating of more fibrous food	90	82	91.1%
Q29	Elevation of limbs	90	86	95.6%
Q30	Application of local heat	90	90	100%

Table No 3: Shows that co-relation between knowledge & attitude of mother-in-laws regarding antenatal care

SL NO	ITEMS	R VALUE		DF	P VALUE	INFERENCE
1	KNOWLEDGE	-0.16039		29	0.3887	Not statistically significant. (Negatively correlate)
2	ATITUDE					

CONCLUSION

Descriptive co-relational study design with non-experimental approach was used to collect data from 30 mother-in-laws through non-probability purposive sampling to asses the role of mother-in-laws in antenatal care. The collected data were analyzed and the findings showed that there was a negative co-relation between knowledge and attitude of mother-in-laws.

Acknowledgement: I express my gratitude to all the participants who directly or indirectly helped me in the successful completion of the study.

Ethical Clearance: Prior information has given to individual participant regarding study and they had right to walk away from the study without assigning any reason to the investigator. The anonymity of the participants were ensured and the confidentiality of the data was maintained.

Source of Funding: No funds or grants were availed for this study.

Conflict of Interest: Nil

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Effectiveness of Comprehensive Intervention Package on Assertiveness, Stress, Coping, Peer Relationship, Self-esteem and Bio- Physiological Parameters among Adolescents

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ABSTRACT

Adolescence is the most sensitive and important stage of development because it is during these period major changes in physical, cognitive, social and emotional development occurs[3]. As the needs and problems of adolescents are unique and multi dimensional in nature, increased attention, guidance and interventions at the school level is inevitable and essential to step into a healthier adulthood stage of development.

Aim: The aim of the study is to assess the effectiveness of Comprehensive Intervention Package on Assertiveness, Stress, Coping, Peer relationship, self-esteem and Bio- Physiological parameters among Adolescents at perinthalmanna, Kerala.

Methodology: The research approach adopted for the present study was quantitative evaluative research approach. Quasi experimental design was adopted. 10 adolescents studying IXth standard were selected using simple random technique from perinthalmanna, Kerala.

Findings: The mean pre-test assertiveness scores increased from 60.30 to 62.50 in the post test. The mean pre-test stress scores reduced from 27.00 to 16.20 in the post test. The mean pre-test -test coping scores raised from 6.60 to 15.40 in the post test. The mean pre-test peer relationship problems scores decreased from 3.10 to 1.10 in the post test. The mean pre-test self-esteem scores were increased from 16.80 to 20.80 in the post test. The mean pre test and post test heart rate were 78 beats / min. The mean pre test and post test respiratory rate were 24 breaths / min.

Conclusion: The present study findings reveal that training using comprehensive intervention package was effective on promoting the assertiveness, reducing stress, improving coping, promoting peer relationship and enhancing self-esteem of adolescents. But no potential effects were found on the bio-physiological parameters such as heart rate and respiratory rate.

Keywords: *Assertiveness, adolescent, stress, coping, peer relationship, self-esteem.*

INTRODUCTION

It is estimated that 1.2 billion adolescents stand at the crossroads between childhood and the adult world[1]. Around 243 million of them live in India, which accounts for a quarter of the country's population. Adolescents account for 22.8% of the population in India[2]. Adolescence is the crucial stage of development because changes in physical, cognitive, social and emotional development occurs during this stage. Adolescents tend to struggle for establishing a sense of identity, and they become more worried about oneself and one's body. They are increasingly influenced by peer group and continuously try to adjust to the bodily changes and environment. Moreover they struggle with the developmental task of transition from total socio

economic dependence to relative independence and try to become a contributing member of the society[3].

NEED FOR THE STUDY

Laya Siby Thomas and Jincy Ann Paul (2012)[4] studied the effectiveness of assertiveness training on self esteem among adolescent girls. Findings revealed that majority (55.3%) of adolescent girls were belonging to the age group 15-16 years. Among 150 adolescent girls, 39 were with below average self esteem and assertiveness training was given for those girls for 8 consecutive school days. Post test was conducted with the same tool after one week and on the fourth week. It was found that there was a statistically significant difference in the self esteem level while comparing the pre test and post test self esteem scores.

Bahman Akbari et al (2012)[5] studied the effectiveness of assertiveness training on self esteem and general self efficacy among female students of Islamic Azad University, Anzali branch. 40 participants who scored low in self esteem and self efficacy were divided into two groups of 20 each for the training program. Assertiveness was provided in 8 sessions and the collected data was analyzed using MANCOVA. Findings indicated that the assertiveness training on self esteem and their self efficiency was significantly effective. Also indicated that the training caused reduction in confusion and disability, improved ways to solve problems, resolve conflicts and ways of decision and behaviors.

Mona Makhija and Promila Singh (2010)[6] studied the effectiveness of assertiveness training program on self esteem and academic achievement in adolescents. The participants were 80 boys and 80 girls from class X and XI of a school at Chhattisgarh. Pre- post control group design was used. Experimental group was given assertiveness training but the control group was not given the training. Findings showed that the assertiveness training was effective in improving the self esteem among adolescents but no potential effects were found on the academic achievement effect of the adolescents.

Maja Devkovic (1997)[7] examined peer relations in adolescence. The sample consisted of 508 families with adolescents (12 to 18 years old). The data were obtained at the subjects homes. Degrees of peer activity, having a best friend, perceived acceptance by peers were the indicators for peer relation. The results suggest that a positive self concept and warm supportive parenting contribute unique variance to satisfactory peer relations.

Groer MW et al (1992)[8] studied regarding adolescent stress and coping in Tennessee. Researchers investigated the developmental and gender influences in adolescents attending a suburban high school. Girls reported more life events stress associated with interpersonal and family relationships. Both the gender reported use of active distraction to cope with the stress. Over time girls' use of passive distraction increased. Self destructive and aggressive behavior increased for boys.

These evidences clearly indicate the need for effective education and training on adolescents' assertiveness, stress, coping, peer relationship, and self esteem. It also suggests that the training can evoke a drastic change in their behavior and relationships in social situation. Hence the investigator felt the need to study the effectiveness of Comprehensive Intervention Package on Assertiveness, Stress, Coping, Peer relationship, self-esteem and Bio-Physiological parameters among Adolescents

STATEMENT OF THE PROBLEM: A study to assess the effectiveness of Comprehensive Intervention Package on Assertiveness, Stress, Coping, Peer relationship, self-esteem and Bio-Physiological parameters among Adolescents at perinthalmanna, Kerala.

OBJECTIVES OF THE STUDY

- Assess the effectiveness of comprehensive intervention package on assertiveness, stress, coping, peer relationship, and self esteem among adolescents.
- Find out the difference in Bio- physiological parameters before and after the intervention.
- Find out the association between assertiveness, stress, coping, peer relationship, self-esteem with demographic variables.

HYPOTHESES

- There is a significant difference in the

assertiveness, stress, coping, peer relationship, self esteem and bio-physiological parameters before and after administration of comprehensive intervention package.

- There is a significant association between assertiveness, stress, coping, peer relationship, self-esteem with demographic variables.

ASSUMPTION

Comprehensive intervention package will have an impact on Assertiveness, Stress, Coping, Peer relationship, self-esteem and Bio- Physiological parameters among Adolescents.

OPERATIONAL DEFINITION

Effectiveness: Is the desirable response given by the adolescents after administration of comprehensive intervention package.

Comprehensive intervention package: it is a structured intervention aimed at influencing assertiveness, stress, coping, peer relationship, self esteem and bio-physiological parameters among adolescents.

Assertiveness: In this study it is the ability of adolescents' to express oneself and one's own rights. It enhances self confidence, self esteem and satisfying relationship with others.

Stress: In this study it is the adolescents' response to the stimulus that disturbs the physical or mental equilibrium.

Coping: In this study it means the adolescent's efforts to control, reduce or learn to tolerate the stress.

Peer relationship: In this study it refers to adolescents' ability to maintain and sustain relationships with members of group who share similarities such as age, background and social status.

Self esteem: In the present study it means adolescents' overall evaluation of his or her own worth.

Bio-physiological parameters: In this study it refers to the pulse rate and respiratory rate of adolescents.

VARIABLES UNDER STUDY

Comprehensive intervention package is the independent variable. The dependent variables are assertiveness, stress, coping, peer relationship, self esteem and bio- physiological parameters of the adolescents.

METHODOLOGY AND RESEARCH DESIGN

Research approach: Quantitative evaluative approach.

Research design: Quasi experimental design.

Setting of the study: Perinthalmanna, Kerala.

Study population: Target population was IX standard students, perinthalmanna.

Sample: Adolescents who fulfilled the inclusion criteria.

Sample size: Ten IX standard students at perinthalmanna.

CRITERIA FOR THE SELECTION OF SAMPLES

Inclusion criteria:

- Adolescents studying IX standard.
- Adolescents who consented to participate in the study.

Exclusion criteria:

- Adolescents who are currently under any axis I diagnosis.
- Adolescents with physical disabilities.
- Adolescents who are currently on any psychological treatment.

DESCRIPTION OF THE TRAINING PROGRAM:

It consists of total eight sessions. Duration of the session was one hour in a week for eight consecutive weeks. Various teaching strategies, role play, providing real life examples, providing individual and group activities were used during the training session.

DESCRIPTION OF THE TOOL:

Section A: It included demographic variables.

Section B: Scale to assess the assertiveness of the

adolescents.

Section c: Scale to assess the stress of the adolescents.

Section D: Scale to assess the coping level.

Section E: Scale to assess the peer relationship.

Section F: Rosenberg self esteem to measure adolescents global feelings of self worth.

Bio physiological parameters pulse rate and respiratory rate monitoring before and after the intervention.

RELIABILITY AND VALIDITY: in order to establish the reliability and validity of the tool and comprehensive intervention package, suggestions given by 2 psychiatrists, 3 psychologists and 1 statistician were considered and included. It was used after seeking final approval from the guide.

FINDINGS, DISCUSSION

Table 1: Distribution of samples according to their demographic characteristics.

Demographic variables		Frequency n=(10)	Percentage (%)
Age	13-15 years	10	100
Sex	Male	3	30
	Female	7	70
Religion	Hindu	8	80
	Christian	-	-
	Muslim	2	20
Father's education	Illiterate	-	-
	Primary	-	-
	Middle school	-	-
	High school	5	50
	Intermediate/post high diploma	5	50
	Graduate/PG	-	-
	Professional	-	-
Mother's education	Illiterate	-	-
	Primary	-	-
	Middle school	-	-
	High school	3	30
	Intermediate/post high diploma	1	10
	Graduate/PG	6	60
	Professional	-	-
Father's occupation	Unemployed	-	-
	Unskilled worker	-	-
	Semi-skilled worker	4	40
	Skilled worker	5	50
	Clerical/farmer/shop owner	1	10
	Semi professional	-	-
	Professional	-	-
Mother's occupation	Unemployed	6	60
	Unskilled worker	-	-
	Semi-skilled worker	1	10
	Skilled worker	3	30
	Clerical/farmer/shop owner	-	-
	Semi professional	-	-
	Professional	-	-

Table 1: Distribution of samples according to their demographic characteristics. (Cont...)

Family's income	≤1600	-	-
	1601 – 4809	-	-
	4810 – 8009	2	20
	8010 – 12019	5	50
	12020 – 16019	1	10
	16020 – 32049	1	10
	≥32050	1	10
Type of family	Nuclear	3	30
	Joint family	7	70
Family residence	Urban	10	100
	Rural	-	-
	Semi urban	-	-
Birth order	First	5	50
	Second	3	30
	Third and other	2	20

- 100% adolescents were in the age group of 13-15 years. In the sex category, 7(70 %) were females and only 3(30%) were males.

- 80% of adolescents were Hindu and 20% were Muslim.

- The adolescents father's education was high school and intermediate/post high diploma as 5(50%) each. 6(60%) of their mother's were graduates, 3(30%) had high school education and 1(10%) with intermediate/post high diploma.

- 50% of the adolescent's father were skilled worker, 40% belonged to semi skilled work and only 1% in clerical, shop owner and famer category. 6(60%) of mother's were unemployed, 3(30%) were skilled worker and only 1(10%) in semi-skilled worker category.

- 50 % of the adolescents belong to 8010 – 12019 family income, 20% in 4810 – 8009 family income and 10% each in 12020 – 16019, 16020 – 32049 and ≥32050 family income.

- 70% belonged to joint family and 30% in the nuclear family type. 100% of the adolescents' family resides in urban area.

- 50% belonged to first birth order, 30% in the second birth order and 20% in the third birth order.

Table 2: Distribution of samples according to their demographic characteristics.

Demographic variables		Frequency n=(10)	Percentage (%)
Experience as class representative	Yes	8	80
	no	2	20
Participates in games and sports	yes	8	80
	no	2	20
Participates in cultural events	Yes	9	90
	No	1	10
Tuitions after school	Yes	6	60
	No	4	40
Extracurricular classes after school	Yes	5	50
	No	5	50
Future career plans	Yes	7	70
	No	3	30

• Among the 10 adolescents 80% had experience as class representative and participated in games and sports in school, 90% of them participated in cultural events in school, 60% attended tuitions after school, 50% used to attend extracurricular classes after school and 70% had future career plans while 30% did not.

Table 3: Comparison of pre-test and post-test scores of assertiveness, stress, coping, peer relationship and self-esteem.

Variables	Score	n	Mean	SD	df	t value	P value
Assertiveness	Pre-test	10	60.30	5.677	9	-3.404	.008
	Post-test	10	62.50	4.743			
Stress	Pre-test	10	27.00	3.232	9	9.448	.000
	Post-test	10	16.20	4.662			
Coping	Pre-test	10	6.60	2.675	9	-11.403	.000
	Post-test	10	15.40	2.119			
Peer relationship	Pre-test	10	3.10	2.675	9	4.243	.002
	Post-test	10	1.10	2.119			
Self-esteem	Pre-test	10	16.80	2.675	9	-9.487	.000
	Post-test	10	20.80	2.119			

• The mean pre-test and post-test assertiveness scores were 60.30 and 62.50 out of the total score of 90. The obtained t value is -3.404 and p value is .008 and is significant at .001 level.

• The mean pre-test and post-test stress scores were 27.00 and 16.20 out of the total score of 40. The obtained t value is 9.448 and p value is .001 at and is significant at .05 level.

• The mean pre-test and post-test coping scores were 6.60 and 15.40 out of the total score of 48. The obtained t value is -11.403 and p value is .000 and is significant at .05 level.

• The mean pre-test and post-test peer relationship scores were 3.10 and 1.10 out of the total score of 10. The obtained t value is 4.243 and p value is .002 and is significant at .001 level.

• The mean pre-test and post-test self-esteem scores were 16.80 and 20.80 out of the total score of 30. The obtained t value is -9.487 and p value is .000 and is significant at .05 level.

Assessment of the Bio- physiological parameters before and after the administration of comprehensive intervention package.

The mean heart rate at pre test and post test was 78 beats / min. The mean respiratory rate at pre test and post test was 24 breaths / min. There was no significant difference between the heart rate and respiratory rate at the pre and post-test levels.

Association between assertiveness, stress, coping, peer relationship, self- esteem and demographic variables.

Chi square analysis reveals that there is no association between pre-test assertiveness scores and demographic variables. There is no association between pre-test scores and demographic variables. There is a significant association between the adolescents experience as class representative and pre-test coping, but there is no association with other demographic variables. There is a significant association between religion and pre –test peer relationship and the adolescents experience as class representative and pre-test peer relationship scores. There is no association between pre-test self esteem scores and demographic variables.

CONCLUSION

The results of the study show that the mean pre-test assertiveness scores increased from 60.30 to

62.50 in the post test. The mean pre-test stress scores reduced from 27.00 to 16.20 in the post test. The mean pre-test -test coping scores raised from 6.60 to 15.40 in the post test. The mean pre-test peer relationship problems scores decreased from 3.10 to 1.10 in the post test. The mean pre-test self-esteem scores were increased from 16.80 to 20.80 in the post test. The mean pre test and post test heart rate was 78 beats / min. The mean pre test and post test respiratory rate was 24 breaths / min.

Training using comprehensive intervention package was found to be effective on assertiveness, stress, coping, peer relationship and self-esteem of the adolescents. Training programs during adolescence will enable the students to transform their aspirations into achievement and healthy individuals in future.

SUGGESTION AND RECOMMENDATION

- A comparative study can be done between male and female adolescents.
- Similar study can be done on orphanage adolescents/ on physically disabled adolescents.
- A comparative study can be done among the rural and urban adolescents.

Acknowledgement: I thank and praise god for all wisdom, strength and guidance throughout. I wish to express my sincere, heartfelt gratitude and respect to my guide Dr. J SILVIYA EDISON, Saveetha University for her genuine concerns, continued encouragement and guidance which enlightened my path to complete this work systematically. My sincere thanks to Dr. Vijayaraghavan, Director (Research Department), Saveetha University, Chennai, and Dr. Gopi, Asst. Director (Research department), Saveetha University, Chennai, for their expertise support and guidance. I am indebted to my parents, my husband (Mr. Suni.M.S), and my son (Mas. Neranjan)for their constant encouragement and support.

Conflict of Interest: None

Source of Funding: None

Ethical Clearance: Obtained from Institutional Human Ethical Committee.

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Effect of Nutritional Intervention among Children with Protein Energy Malnutrition

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ABSTRACT

Nutritional problems like protein energy malnutrition (PEM), anemia and vitamin A deficiency continue to plague a large proportion of Indian children. Faulty feeding practices and recurrent infections make this age group more vulnerable[1]. A quasi experimental one group pretest post test study was conducted among 109 under five children in Kottayam district to determine the effectiveness of nutritional intervention to the children with protein energy malnutrition. The study population consisted of 109 children in the age group of 2-5 years and their mothers attending selected anganwadies of Kottayam District, during the period of data collection. The subjects were selected by using non probability purposive sampling technique. To identify the effectiveness of nutritional interventional programme of PEM repeated measures ANOVA was used. Mauchly's W test was used to check the homogeneity of variances. Since the P value (0.051) is more than 0.05, the variances are equal. The P value for the factor, sphericity assumed is <0.05 (F=114.403). Hence there is a difference in mean PEM over a period of time. It indicates the nutritional intervention is effective. Keeping in mind the results obtained in this study reveals the need for multi pronged approach like maternal and child health care, nutrition education and growth monitoring to combat the problem of malnutrition.

Keywords : *Protein energy malnutrition, nutritional intervention, children.*

INTRODUCTION

Malnutrition is one of the important causes of mortality and morbidity among under five children. Globally each year malnutrition is implicated in about 40 percent of the 11 million deaths of under five children in developing countries. More than 6000 Indian children below five years die every day due to malnourishment. Overall, India hosts 57 million or more than a third of the world's 146 million undernourished children[1]. Ignoring under nutrition puts the long term health and development of population at risk. Despite global efforts, for improving maternal and child health and specific efforts like Integrated Child Development Services Scheme (ICDS) malnutritionamong children remains a significant problem in India constituting 48%, 43% and 20% of children under 5 years of age stunted, underweight and wasted respectively[6]. In India anganwadies are the instruments for implementing various interventions under ICDS[3]. Introduction of culturally acceptable education in nutrition which incorporates the dietary requirements is likely to help in the prevention of protein energy malnutrition[5]. Keeping this in view, the present study was undertaken to assess the effect of nutritional intervention on Protein Energy Malnutrition among children.

Statement of the problem: Effect of nutritional intervention among children with protein energy malnutrition in selected anganwadies of Kottayam District, Kerala State.

Objectives:

1. To determine the prevalence of protein energy malnutrition among children.

2. To determine the effectiveness of nutritional intervention among children with PEM.

Hypothesis : H_1 : There is a significant difference between the mean post test PEM severity scores of

children receiving nutritional intervention and the mean pretest PEM scores.

OPERATIONAL DEFINITIONS

Effectiveness : It refers to the extent to which the nutritional intervention has achieved the desired goal and is measured in terms of improvement in weight, of the children after the intervention.

Nutritional intervention: It refers to the video assisted teaching session to mothers on culturally appropriate nutrition based on low cost diet, feeding methods, reinforcements of the growth monitoring and immunization.

Children: In this study it refers to children between 2-5 years

MATERIAL & METHOD

In this study the quasi experimental one group pretest posttest design was used. The study was conducted in selected anganwadiesof Kottayam District, Kerala. Village was selected by simple random sampling and anganwadiesby systematic sampling. Population comprise of children between 2-5 years and their mothers. The subject were selected by purposive sampling technique. The sample size was 109 children and their mothers. The weight of the children were measured using standard techniques before and after the intervention and the grades of PEM was recordedin observation record based on Indian Academy of paediatrics classification of PEM . The analysis was made using descriptive and inferential statistics after the post test on third and sixth months after the intervention.

FINDINGS

The analysed data were presented under the following headings based on the objectives.

i. Description of demographic characteristics

ii. Prevalence of protein energy malnutrition

iii. Effectiveness of nutritional intervention on PEM

i) Description of demographic characteristics

Table 1 : Demographic description of sample by frequency and percentage.

N = 109

Variables	Frequency	Percentage
Age in years		
2 - <3	32	29
3- <4	55	51
4-5	22	20
Gender		
Male	58	53
Females	51	47
Monthly income in rupees		
5000 – 9999	15	13.7
2500 – 4999	25	23
1000 – 2499	69	63.3
Number of children in the family		
One	08	7.3
Two	46	42.2
Three	49	45

The data presented in table 1 shows majority of children belonged to the age group of 3 - < 4years. 53% of children were males. Majority (63.3%) of parents had an average monthly income of Rs.1000-2499 range. Out of 109 children, 49 parents have 3 children.

ii) Prevalence of protein emery malnutrition

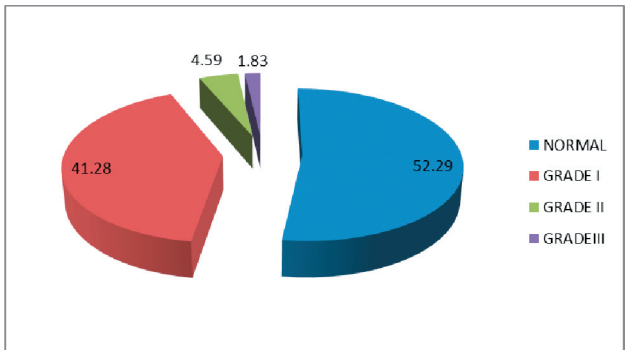

Figure (1) : Pie diagram showing prevalence of protein energy malnutrition

Pie diagram shows the prevalence of protein energy malnutrition. 41.28% of children had grade I PEM, 4.59% identified with grade II PEM 1.83% had grade IIIPEM. Out of 109 children, 57 had normal weight as per age.

iii. Effectiveness of nutritional intervention on PEM

To identify the effectiveness of nutritional interventional programme on PEM, repeated measures ANOVA was used. The results are given in table 2(a), 2(b), 2(c) and 2 (d)

Table 2(a): Mean and standard deviation of pretest and posttest PEM scores of children. N = 109

Observation	Mean	S.D
Pretest	11.38	1.61
Post Test 1	11.51	1.63
Post Test 2	12.07	1.76

Table 2(b): Mauchly's Test of Sphericity N = 109

Mauchly's W	Approx.Chi-square	df	S.D
0.946	5.951	2	0.051

Table 2(c): Tests with in subjects effects N = 109

Type III Sum of squares	Mean square	F	P value
29.08	14.544	114.403	<0.001

Table 2(d): Pair wise comparisons N = 109

Pair	Mean difference	SD	P value	95%CIfor difference upperboundlowerbound	
Pretest & Posttest 1	0.125	0.042	0.012	0.228	0.022
Pretest & Posttest 2	0.686	0.052	<0.001	0.812	0.559
Posttest1&Posttest2	0.561	0.050	<0.001	0.683	0.440

Mauchly's W test was used to check the homogeneity of variances. Since the P value is more than 0.05, the variances are equal(table 2b). ie, sphericity is assumed. The P value for the factor, spehericity assumed is<0.05. Hence there is a difference in mean PEM over a period of time. It indicates the intervention is effective (table 2c). Since for all pairs; pre test Vs post test 1, pre testVspost test2, post test 1Vs post test 2, the P values are <0.05. Hence there is a difference in mean PEM of the subjects from pretest to the posttest, which indicates that the nutritional intervention programme is effective (table 2d).

DISCUSSION

Overall prevalence of protein energy malnutrition in the present study is 41.28% had grade I PEM, 4.59% identified with grade II PEM 1.83% had grade III PEM. Similar findings is reported by Mukhopadhyay (2013) where 35.9% children were underweight and 15.9% severely stunted[2]. Supportive findings are also reported by Saravanan (2013) who conducted an epidemiological study of malnutrition among under five children. In this study the prevalence of malnutrition as per the weight for height index is more in the children of age group of 13-24 months (28.68%) and 49-60 months (24.28%)[3]. Study conducted by Kumaramma (2013) tallies with the present study finding where the 44% of children less than 2 years of age were malnourished 23%, 16%, 4% belonged to grade I, grade II and grade III malnutrition respectively[4].

The present study findings shows a difference in mean PEM over a period of time. It indicated the nutritional intervention is effective. (F=114.403, p<0.001). This is also supported by the findings of a study conducted at Bangladesh that the proportion of normal and mildly malnourished children was greater in the intervention group than in the control group after the end of the observations. (88.9% vs 61.5%, p<0.001)[7]

CONCLUSION

Most common causes of malnutrition include faulty infant feeding practices, impaired utilization of nutrients due to infections and parasites, inadequate food and health security, poor environmental conditions and lack of proper child care practices. High prevalence of malnutrition among young children is also due to lack of awareness and knowledge regarding their food requirements. Keeping in mind the results obtained in this study reveals the need for multi pronged approach like maternal and child health care, nutrition education and growth monitoring etc to combat the problem of malnutrition.

Acknowledgement: I would like to thank all the teachers and helpers of the selected anganwadies for their contribution to the study. I also extend my heartfelt thanks to all the children and their mothers who have participated in the study willingly and for their cooperation and patience. I owe my gratitude to all the experts who validated the tools.

Conflict of Interest: Researcher did not face any difficulties or any kind of issues during the study period.

Source of Funding: Study is not funded by any commercial firm, private foundation or government.

Ethical Clearance

- Ethical clearance obtained from Doctoral Ethical Committee, NITTEUniversity,Mangalore.
- Due permission from ICDS officer , Kottayam District
- Informed consent was obtained from all the participants after explaining the purpose of the study
- Confidentiality was ensured.

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Exploring Perception of Parents about the Impact of Parental Conflict on Children's Social and Emotional Development

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ABSTRACT

Employing descriptive exploratory research design, ten parents; eight mothers and two father, having children between 5-8 years of age were recruited from a community of high income strata in Karachi, which is one of the mega cities of Pakistan that is among the low and middle income countries[1]. Using semi structured interview guide, data was collected through in-depth interviews of the participants. Findings revealed that parental conflicts negatively impact on children's social and emotional development which they demonstrate through being aggressive, losing interest in their education, losing confidence, getting detached from their parents and siblings and at times being abusive. Such emotions, if not treated well, may result them indulging in anti- social behaviors and personality disorders. Hence, it is concluded that positive parental relations are important for children's emotional and overall development. These findings can assist practitioners to promote healthy parental relationships, early identification of conflicts and to intervene as needed.

Keywords: *Early child development, Social and emotional development, Parental conflict, Positive parenting, Family harmony*

INTRODUCTION

Generally, in their early age children are close to their parents and develop an attachment with them. Consequently, parental relationship impacts on the children as a whole including their social and emotional development. Therefore, it is important that healthy relationships to be maintained between the parents. Being exposed to parental conflicts, children develop anxiety, depression, aggressive behaviors, lack of self-control and confidence[2, 3]. Early identification of social and emotional problems in children is very important for an early intervention, prevention of complications and for a successful life at later stage. Additionally, promotion of positive relationships among the parents is vital.

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MATERIAL & METHOD

Purpose of this study was to explore the perception of parents about the impact of parental conflict on children's social and emotional development. As this study was a component of Advanced Diploma in Human Development, Early Child Development (ECD), therefore, scope was limited accordingly also envisioning that described developmental concerns may be noted gradually therefore, within the ECD age group of children, this research enrolled parents having children between the age of 5-8 years. Participants were selected from a specific community in Karachi, Pakistan. From the economic perspective this community is considered as high economic stratum. Prior to initiating, the study was reviewed and approved by the ethics review committee, Aga Khan University and the permission to access the residence was obtained from the community leaders. Individuals' participation was voluntary, obtained through informed consent. Using semi structured

interview guide data was collected through in-depth interviews which were recorded through audio and note taking. Data collection continued till saturation was achieved. A total of ten participants; eight mothers and two fathers were interviewed. They had the option to dialogue in Urdu which is a national language or in English, international language. Audio recorded data was transcribed and translated in English as needed. The data collection and analysis were concurrent; themes were extracted accordingly. Individuals' confidentiality was maintained throughout the process through assigning codes and maintaining privacy during the interview.

FINDINGS

The participants' age ranged between 29- 40 and the mean age was 36 years. Their minimum education was intermediate (12 years of education) and maximum was Masters (18 years of education). Among all (n = 10) six lived in joint and four in nuclear family structure. Participants' demographic profile is tabulated in table 1.

Table 1: Demographic profile of the participants

Code #	Role as parent	Age	Qualification	Income status	Family system	Child between the age of 5 to 8 years
01	Father	40	Graduate (Engineering)	High income	joint	2nd child
02	Mother	40	MBBS	High income	joint	1st and 2nd child
03	Father	39	MBA	High income	joint	2nd child
04	Mother	29	Masters	High income	joint	2nd child
05	Mother	36	Masters	High income	joint	2nd child
06	Mother	36	Intermediate	High income	joint	2nd child
07	Mother	30	Bachelor	High income	nuclear	1st child
08	Mother	40	Masters	High income	Nuclear	2nd child
09	Mother	30	Intermediate	High income	Nuclear	1st child
10	Mother	38	Intermediate	High income	nuclear	3rd child

Thematic analysis: Based on the analysis of interview data themes that emerged are presented succinctly.

Parental relationships: Describing parental relationships participants shared their experiences and related them with their children's social and emotional development. According to one mother her relationship with her husband is not good. Therefore, frequently they both indulge into argument and mistreat each other. She said:

"We always fight with each other. My husband does not like me talking to anyone when I greet someone politely he criticizes me. He always opposes women and disrespects them. He doubts my character. I feel that I am very unromantic and that's why my husband is not satisfied and he is not good with me. We do not have sexual relationships. I have two children but they born after so much time and so much stress." (Code # 09)

Describing her experience one of the respondents said:

"On weekends we go for outing but we cannot go without children because they do not sit without us at home. My husband has a habit of eating supari and chalia (betel nut) *that I do not like. He gets hyper quickly and argues on small issues. My children now are aware of it and now they ask that if papa can eat, why we cannot eat that? If it is dirty then why papa eats that? They often ask such question. Then he becomes hyper that you told them about these all. He has some ego problem. My husband scolds me in front of children and children take advantage*

of it."(Code # 04)

Describing the importance one of time, one the female participants shared:

"*My husband is good but we still have arguments mostly because he is busy all the time in his business and outdoor work. He thinks going together to attend* (children's) *school meeting is worth less so I have to see such type of activities alone. He complains that I am not giving him proper time.*" (Code # 02)

One of the mother who also works as an employee, shared her experience and said:

"*When couple makes ego issue and start taking credit of doing something like I have done this and what you have done. Especially when both the parents are working then it happens. I think small house chores should be done with understanding and sharing then there are chances to be positive parent and when you start dividing and making issues then you will face conflict. This happen in our house.*" (Code # 05)

Describing the rational for occurrence of the conflicts one of the female participants said:

"*Conflict happens in every house especially in joint family and where there are children, in my house it happens always because of children or in-laws. It creates stressful environment*." (Code # 03)

Describing her experience one of the participants said:

"*My mother in-law and father in- law were used to fight as my father in-law was used to have affair with other women and he was used to bring them* (women) *home in front of my mother in-law and children* (participant's husband). *My mother in-law has dark complexion and my father in-law has bit fair complexion and he is handsome. My father in-law was used to beat my mother in-law. Even now he does not respect her. He feels that she* (participant's mother in-law) *is his property*." (Code # 09)

Impact of parental conflict on children's social and emotional development:

Participants' responses revealed that they all are in the view that parental conflicts negatively impact on children's social and emotional development.

As one parent shared her experience and said:

"*I think parents' relation directly affect on children. I remember once when I and my husband were arguing and we were very loud. Almost after one and half year my son recalling that experience told me mama do you remember that you did this and papa scolded you. I told him beta it was just a discussion but he did not agree with me and he was on his point that papa scolded you. So we should not do such discussions in front of children.*" (Code # 07)

According to one parent:

"*My daughter is aggressive and hyper, short tempered and does not have self-control. She always have problem in friend circle, teacher said that she is not cooperative and pinches, pushes and hits the classmates.*" (Code # 04)

One of the parents shared:

"*In presence of my son whenever I speak loudly or get aggressive with my husband. The very next day I receive same attitude from my son.*" (Code # 02)

Study also revealed that children, who are exposed to conflict, frequently get confused and they do not respect family members. One of the parents state that:

"*Children always compare us with other parents. They say they* (other parents) *are not fighting why are you fighting and they* (other parents) *make fun of us. Sometimes, children become double minded and they say that mama first you decide whether, we follow you or papa? Who is right and who is wrong?*"
(Code # 09)

It was reported that parental conflict impacts on children's eating habits as one of the participants said:

"*When my daughter is upsets she overeats. Now she is habitual and is overweight.*" (Code # 04)

Describing her son being scared, one of the participants said:

"*Whenever I start getting ready for going out, my son will say mama please you do not wear lipstick, papa will beat you. Or he* (the son) *will say you just go hurry and leave home before papa comes.*" (Code # 02)

Describing the impact of the parental conflict on their parenting one of the respondents reported that:

"*Due to conflict quality of motherhood and fatherhood gets affected. They do not have time to involve in children's activities; they are always confused, stressed and frustrated and busy in their own problems. So how can they resolve their children's problems?*" (Code # 05)

DISCUSSION

The study revealed that it is important for parents to have cordial relationships among themselves; they should be sensitive and respectful towards each other, give time to each other, maintain harmony in the relationship and maintain mutually satisfying sexual relations within the wedlock. These findings complement the findings reported earlier[4].

Describing parental relationships, study participants talked about cases of husband abusing his wife. Studies have revealed that those who witnessed parental conflict in their childhood developed problems building healthy marital relationships and family harmony[5, 6]. Therefore, it is vital that positive parenting should be targeted under the domain of public health.

Early childhood behavior problems can be high risk for substance abuse and alcohol consumption in adolescence. These behaviors are considered as antisocial behavior and children with such behaviors are at risk and face different problems during their studies; teachers seeing them as less socially and academically capable and thus, give less positive comment. These children get rejected by their friends and become emotionally insecure and can miss helpful learning opportunity. Rejection from friends and teachers results children to dislike school and learning, which leads to lower school attendance, poorer learning and in some cases leads to dropout from school[7]. An increased in children's aggressive behaviors is due to them pleasing aggressiveness or because they copy it from other aggressive people[8]. Adopting such behavior children change their eating habits either to "emotional overeating" or "emotional undereating"[9].

It is also revealed through present study that family system; nuclear or extended and the environment play a vital role in shaping children's behavior. These findings are corresponding to the findings reported in earlier studies which indicated that the children having good family environment and unity in the family were less aggressive[7]. When children confront parental conflict they get disturbed, insecure, feel inferior and face academic problems. Their self-esteem gets affected; they lose confidence, and feel fear of criticism and rejection[3].

It is also revealed that maternal depressive symptoms impact on children's emotional and social development. Later on when these children take parental role they either find it difficult or impossible to develop marital and attachment relationships and also to perform parental role[10]. It is also reported that the care givers may have depression and it may impact on children. Effect of care giver's depression on children may continue in well manner into childhood and early adolescence in term of behavior disorder, anxiety, depression and attention problems[11].

Data from the present study indicates that all the participants are in agreement that parental conflict negatively impacts on children's social and emotional development and in development of their personality. These findings are in line with the researches cited in Sanders[12, 13, 14, 15]. Hence, it is important that the parents should strive to maintain healthy relationships amongst themselves.

CONCLUSION

Study shows that parental conflict impacts on children's social emotional development. Therefore, it is important that healthy relationships to be maintained for children's healthy growth and development and for better quality of life.

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Effect of Structured Teaching Programme on Prevention of Hypoglycemia among Diabetic Patients

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ABSTRACT

With a view to assess the effectiveness of Structured Teaching Programme (STP) on prevention of Hypoglycemia among patients with diabetes, a quasi experimental study with quantitative approach was under taken with one group pre-test and post-test design. Purposive sampling technique was used in selecting 30 patients with diabetes. The results showed that STP was effective in enhancing the knowledge of patients on prevention of hypoglycemia.

Keywords: *Effect, Structured teaching programme, Prevention, Hypoglycemia, Type 2 Diabetic Patients.*

INTRODUCTION

Diabetes is a group of metabolic diseases characterized by increased levels of glucose

(Hyperglycemia) resulting from defects in insulin secretion, insulin action or both

(American Diabetes Association [ADA], 2013).[1]

Diabetes is a chronic disease that requires continuous medical care and patient self-management education to prevent acute complications and reduce the risk of long-term complications.[2] The prevalence of diabetes has reached epidemic proportions in most populations. According to the UN World Health Organization (WHO) more than 220 million people worldwide have diabetes, from which more than 70% live in low- and middle income countries. It is expected that the number of diabetic subjects grows to 366 million by 2030, a figure that is more than twice the number in 2000. Epidemiologic evidences suggest that unless effective preventive measures are implemented the global prevalence will continue to rise[3].

Hypoglycemia is an acute complication of Diabetes. It means low (hypo) sugar in the blood (glycemia) and occurs when the blood glucose falls to less than 70 mg/dL (3.7mmol/L).severe hypoglycemia is when glucose levels less the 40mg/dL (2.5mmol/L).It can be caused by too much insulin intake or oral hypoglycemic agents, too little food or excessive physical activity. Hypoglycemia may occur at any time of day or night. It often occurs before meals, especially if meals are delayed or snacks are omitted.[1] Hypoglycemia is classified as mild hypoglycemia, which is characterized by tremors, tachycardia, diaphoresis, paresthesias, excessive hunger, pallor, shakiness and in moderate hypoglycemia, manifestations listed above plus the headache, mood swings, irritability, inability to concentrate, drowsiness , slurred speech, double vision or blurred vision are present. Severe hypoglycemia characterized by disorientation, seizures and unconciousness.[4]

The biggest danger is a motor vehicle accident caused by hypoglycemia, for example, by passing out at the wheel, swerving into on-coming traffic, hitting a tree, or running stop signs. Sometimes people are seriously injured in other types of accidents related to hypoglycemia, such as falling down stairs. It is equally important to avoid unconsciousness and seizures caused by hypoglycemia, not only because of the increased risk for accidents, but because of the potential for brain damage related to repeated severe hypoglycemia.[5]

Frequency and severity of hypoglycemia negatively impact on quality of life and promote fear of future hypoglycemia[6,7] . This fear is associated with reduced self-care and poor glucose control [8-10].

Older adults with diabetes are more likely than younger people to have bouts of low blood sugar because of altered kidney function, other medical conditions, other medications that interact with their diabetes drugs and a reduced ability to sense the warning signs of hypoglycemia, among others. When glucose circulating in the blood plummets precipitously, people can collapse, lose consciousness, become delirious and die.11

Hypoglycemia is treated by restoring the blood glucose level to normal by the ingestion or administration of dextrose or carbohydrate foods. It is often self-diagnosed and self-medicated orally by the ingestion of balanced meals. In more severe circumstances, it is treated by injection or infusion of glucagon. Recurrent hypoglycemia may be prevented by reversing or removing the underlying cause, by increasing the frequency of meals, with medications like diazoxide, octreotide, or glucocorticoids, or by surgical removal of much of the pancreas.[12]

REVIEW OF LITERATURE

Diabetes is one of the most common disease with which mankind throughout the world is affected today is primarily due to his luxurious life style and unhealthy food habits is of great concern. So as many people are suffering from diabetes and are taking intensive treatment. The major adverse effect of intensive therapy is increase incidence of hypoglycemia. According to WHO reports, India has nearly 44 million diabetic subjects today, which is chiefly contributed by the urban population. The scenario is changing rapidly due to socio-economic transition occurring in the rural areas also. Availability of improved modes of transport, and less strenuous jobs as in the vicinity have resulted in decreased physical activities. Better economic conditions have produced changes in diet habits. The conditions are more favorable for expression of diabetes in the population, which already has a racial and genetic susceptibility for the disease. Recent epidemiological data show that the situations are similar throughout the country. [13]

By PE CRYER et al (2003) in Minnesota Hospital over 6 years of follow-up of patients with type 2 diabetes in the U.K. Prospective Diabetes Study (UKPDS), 2.4% of those using metformin, 3.3% of those using a sulfonylurea, and 11.2% of those using insulin reported major hypoglycemia (that requiring medical attention or admission to hospital) . For comparison, 65% of the intensively treated patients with type 1 diabetes in the Diabetes Control and Complications Trial (DCCT) suffered severe hypoglycemia (that requiring the assistance of another individual) over 6.5 years of follow-up.[14]

Donnelly et al (2005) randomly surveyed individuals (**n** = 267) with type 1 diabetes and insulin-treated type 2 diabetes to prospectively record hypoglycemic events encountered over a 4-week period. Of the 267 subjects, 155 reported 572 incidents of hypoglycemia. The type 1 diabetic subjects reported a rate of 43 events per patient per year, whereas subjects with type 2 diabetes reported a rate of 16 events per patient per year.[15]

S.A. Amiel (2008) The primary cause of hypoglycemia in Type 2 diabetes is diabetes medication—in particular, those which raise insulin levels independently of blood glucose, such as sulphonylureas (SUs) and exogenous insulin. The risk of hypoglycemia is increased in older patients, those with longer diabetes duration, lesser insulin reserve and perhaps in the drive for strict glycemic control. Differing definitions, data collection methods, drug type/regimen and patient populations make comparing rates of hypoglycemia difficult. It is clear that patients taking insulin have the highest rates of self-reported severe hypoglycaemia (25% in patients who have been taking insulin for > 5 years). SUs are associated with significantly lower rates of severe hypoglycaemia. However, large numbers of patients take SUs in the UK, and it is estimated that each year > 5000 patients will experience a severe event caused by their SU therapy which will require emergency intervention. Hypoglycaemia has substantial clinical impact, in terms of mortality, morbidity and quality of life. [16]

Alexander Turchin, et al (2009) Conducted retrospective cohort study and analyzed 4,368 admissions of 2,582 patients with diabetes hospitalized in the general ward of a teaching hospital between January 2003 and August 2004 Hypoglycemia was observed in 7.7% of admissions. In multivariable analysis, each additional day with hypoglycemia was associated with an increase of 85.3% in the odds of

inpatient death (**P** = 0.009) and 65.8% (**P** = 0.0003) in the odds of death within 1 year from discharge. The odds of inpatient death also rose threefold for every 10 mg/dl decrease in the lowest blood glucose during hospitalization (**P** = 0.0058). LOS increased by 2.5 days for each day with hypoglycemia (**P** < 0.0001)[17]

Dr. Wafaaf. Tawfeeq et al (2009) conducted a cross-sectional study of 100 diabetic patients registered in AlHadher Primary Health Care Center (PHCC) and Al-Entifadha Public Clinic in Al-Daura region in Baghdad and the results were the frequency of yes responses regarding the symptoms of hypoglycemia was ranged from 8-61% for different symptoms. Slightly less than the half of cases (49%) had a poor knowledge score. The only variable significantly associated with poor knowledge score was the education level (P=0.001). Lack of knowledge about the correct level of blood sugar to diagnose hypoglycemia found to be 50%.[18]

Younan Zhang et al (2010) found that Hypoglycemia in Oral Anti Diabetes-treated patients was associated with decreased work productivity. Detailed evidence of the medical cost burden of hypoglycemic events was identified in 5 US studies of insulin-treated patients. Individual episodes requiring hospital admission were identified as particularly costly from the perspective of medical payers in both US and international studies.[19]

Thuanjai Poosakaew et al (2014) In a case-control study, the cases were diabetic patients admitted due to hypoglycemia. Controls were diabetic patients admitted for other reasons. The cases and control subjects were recruited from the inpatient department of the middle level hospital in Northeast Thailand. The total sample size was 360 patients who met the criteria and had been hospitalized. The number of case was 90, and the number of controls was 270. The data were analyzed by determining the adjusted odds ratio, and 95% confidence interval of the ORs using multiple logistic regression models. Results: Using a multivariate logistic regression model, five variables were significantly associated with hospitalization due to hypoglycemia among diabetic patients: 1) patients who received insulin injections (AOR = 20.75; 95% CI: 4.7 - 91.41; p = 0.001); 2) patients who did not carry sugar candy or a dessert with them at all times (AOR = 13.89; 95% CI: 1.92 - 100.31; p = 0.01); 3) patients with an occurrence of hypoglycemia at least once a week at home(AOR = 8.83; 95% CI: 2.58 - 30.20; p = 0.001); 4) patients who were adjusted for doses of medication on their own (AOR = 6.62; 95% CI: 1.30 - 33.70; p = 0.02); and 5) patients who lacked knowledge did not understand the causes and symptoms of low blood sugar (AOR = 7.97; 95% CI: 1.97 - 32.22; p = 0.001)[20]

OBJECTIVES OF THE STUDY

- To assess the knowledge regarding prevention of hypoglycemia among Type 2 Diabetic patients before structured teaching programme.
- To administer structured teaching programme on prevention of hypoglycemia among Type 2 Diabetic patients.
- To evaluate the effectiveness of structured teaching programme on prevention of hypoglycemia among Type 2 Diabetic patients by comparing pre-test and post-test knowledge scores.
- To associate between the post test knowledge scores with the selected socio demographic variable.

HYPOTHESIS

H_1: There will be significant difference between pre-test and post test knowledge scores regarding hypoglycemia and its prevention among Type 2 Diabetic patients.

H_2: There will be significant association between post test knowledge scores with selected demographic variables.

METHODS & MATERIALS

An evaluative research approach was adapted to determine the effectiveness of the STP the criteria selected were gain in knowledge about the causes, signs and symptoms and prevention of hypoglycemia. Pre experimental design (one group pretest-post test design) was used. The study was conducted in sample of 40 Type 2 diabetic patients attending out patient department at primary health center, Naravaripalli, Chandragiri Mandal, A.P State, India. Purposive sampling technique was used to select the subject. Pre-test was given on day 1 and structured teaching programme administered on the same day. Post test was conducted on day 7 after the STP.

DATA COLLECTION TOOLS AND TECHNIQUES

It comprises of self-administered questionnaire, which consists of two sections.

Section A: Deals with patients background data that includes age, sex, religion, educational qualification, occupation and income etc.

Section B: Deals with structured questionnaire seeks information regarding knowledge on causes, signs and symptoms of hypoglycemia and its prevention.

FINDINGS

Maximum number of subject 32 (80%) were males and female 08 (20%). Most of the diabetic patients were in the age group of 41-45 years. All are Hindus; maximum number of patients' educational qualification was primary level. In relation to occupation cultivation was more 28(70%), regarding income majority were belonging to below Rs. 5,000/- per month.

The mean pre-test knowledge score was 3.2 and standard deviation 1.38. (Table-1), the mean post test knowledge scores were 10.8 and standard deviation 2.12. The t value of knowledge was 14.204 which was highly significant.

Table-1 mean, standard deviation and t value of pre-test and post-test knowledge scores of diabetic patients (n=40)

Knowledge scores of Diabetic patients	Pre-test		Post-test		t value
	Mean	SD	Mean	SD	
	3.2	1.38	10.8	2.12	14.204

Table-2 frequency and percentage distribution of level of knowledge on prevention of hypoglycemia among diabetic patients in pre-test and post-test

S.no	Pre-test			Post-test		
	Level of knowledge	frequency	percentage	Level of knowledge	frequency	percentage
1	adequate knowledge	31	77.5	adequate knowledge	0	0
2	Moderate knowledge	9	22.5	Moderate knowledge	5	12.5
3	adequate knowledge	0	0	adequate knowledge	35	87.5

In the pre-test majority of the clients had 31 (77.5%) inadequate knowledge, 09 (22.5%) had moderate knowledge and none of them had adequate knowledge. In the post-test 35 (87.5%) had adequate knowledge and 05 (12.5%) had moderate knowledge.

Table 3 : Association of demographic variables with knowledge scores of diabetic patients in pre-test and post test and please delete scores of knowledge associated with variables among diabetic patients

S.No	Pre-test		Post-test	
	Variable	Chi-square(X^2)	Variable	Chi-square(X^2)
1	Age	1.7211(S)	Age	1.8356(S)
2	Gender	0.012 (NS)	Gender	3.12(Ns)
3	Educational status	1.6315 (s)	Educational status	1.1313(s)
4	Occupation	1.4232(NS)	Occupation	7.14(NS)

*significant at 0.05 level; NS= not significant

The chi-square test was used to find out the association between post-test knowledge scores and demographic variables of the diabetic patients. Significant association was found between pre-test and post-test knowledge scores of the diabetic patients when compared to age (X^2=1.7211,1.8356),educational status(X^2=1.6315,1.1313) and no significant association was found between pre-test and post-test knowledge scores when compared to gender(X2=0.012,3.12) and occupation(X^2 =1.4232,7.14).

CONCLUSION

1. There was deficiency of knowledge in diabetic patients regarding prevention of hypoglycemia.

2. The structured teaching programme was found to be effective in increasing the knowledge of diabetic patients

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Ethical Clearance - Taken from appropriate party

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Initiation and Implementation of an E-assessment: An Experience

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ABSTRACT

Online assessment is considered one of the reliable and efficient assessment strategies, especially for a large class. This article reports, a feasibility study that was done to explore the readiness of institution, teachers as well as students to initiate online assessment within a blended learning course (health assessment) of baccalaureate Programme in a private nursing school at Karachi Pakistan. Eighty three undergraduate students and six faculty members participated in this project. Participants were educated about the change in strategy for quizzes through on-going presentations, written guidelines, module and hands on experience. Students and faculty found the online quiz assessment as a user friendly, time and cost effective strategy. The benefits of online assessment (MCQ test) were observed to be automated marking, immediate results, students' review of their performance and item analysis. Students' readiness for online learning may help educators to engage and assess these students easily and prepare them for the upcoming online world of future.

Keywords: *Blended learning, E- assessment, online assessment, online quiz.*

INTRODUCTION

Worldwide, E-learning is bringing a new trend in education. Students are quite familiar with the online environment and like to spend their time on internet browsing, emailing, chatting, texting and networking. Students association with online environment facilitates student learning beyond time and distance, provides opportunities and freedom to control their own learning[1]. Online programmes are now putting a lot of emphasis on effective online formative assessment in order to achieve learning outcomes set by the curriculum. This brings accountability on educators to explore effective online assessment methods. Literature reports an increased use of online assessment within higher education such as: E-portfolio[2], collaborative projects[3], on line presentations[4], online papers[5]and multiple choices Quizzes or Exam.[1,6]

The use of online multiple choice exam or quizzes is well documented. The benefits of online MCQ test include automated marking, immediate results, review to students and item analysis. In addition, it is cost effective compared to face to face assessment. [1, 6, 7, 8] However, initiating an online assessment strategy for the first time may be challenging and requires intense planning and support from end-users for successful implementation.

The aim of this project was to utilize Learning Management System called Moodle to explore and introduce online quiz management in the blended format courses within a course of (Health assessment) post- registered nursing programme.

ASSESSMENT

To assess the feasibility of this project a SWOT analysis was conducted. It is a useful tool to assess the internal and external environment to measure the achievability of the proposed project. In addition,

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the framework suggested by Buchan and Swann [6] was followed. According to this framework eight important pillars are needed, to construct and operationalize an effective online assessment (MCQs) such as: Institution support, IT infrastructure, IT support for end users, Software, Instructional design and research, Communication, Evaluation, Budget, policy and guidelines. During SWOT analysis, all these pillars were assessed carefully for its presence in the current infra-structure and available support for the project. The results of SWOT analysis were encouraging and created lot of awareness about the strengths, weaknesses, opportunities and threats (please refer to table 1). This feasibility assessment helped the team to locate barriers, available support and resources to remove barriers and implement this project.

Table 1 Project SWOT Analysis

Strengths	Weaknesses
• Institution vision and mission was supportive regarding the promotion of E-learning • Presence of IT Infrastructure and end User support system at the university • Availability of Moodle- free of cost open source Learning Management System • Administrative approval for the project • Interdisciplinary Communication o Administration o Instructor design, o IT support for students and teachers o Students and teachers were ready to participate in the project o Computer lab management • 0 budget- project was managed within course budget and human resources. In fact saved paper printing cost.	• No previous experience and feedback was available for the use of Learning Management Systems for online assessment • Lack of training of teachers and students for Moodle
Opportunities	**Threats**
• The institution will remain Trend setter by initiating online assessment in nursing education in the country and region	• Competitors in education in Pakistan and region

PLANNING PHASE

Key Players' Involvement : An effective team work between academicians, educational designers and IT staff is needed to operationalize successful online assessment. [4, 6] Firstly, an approval from the programme director was sought to initiate this project. Secondly, the course faculty (for content expertise), instructor design (for technical assistance), and Learning Resource Center (LRC) manager (for computer lab) were involved in the project. Finally, the students (83) were approached and their written consent was taken to participate in this project.

Online Quiz Development on Moodle

As online MCQs test was under exploration, it was important to restrict its handling. For this project a new course site was created with the name of Quiz testing to ensure security and preserve the rights to handle the online quiz. The health assessment content faculty submitted an e copy of their MCQs two weeks ahead of its schedule to be upload on the quiz website. The content faculty was asked to review quiz on Moodle for clarity, correct key and language. This allowed the reviewers for in-depth scrutiny of the questions for quality check and look for typographical errors. After their final approval, the security checks such as password, time restrictions (open and close time) were applied to the quiz with the help of the

instructor designer. The quiz was rechecked for its final look and its functioning on Moodle.

Faculty and Student Training: Students and the faculty were quite familiar with the handling of Moodle for their day to day classroom activities, however they were not familiar with handling assessment and hence measures were taken to develop both faculty and the students' skills to operate the online assessment.

Therefore, a separate training module for the faculty as well as the students was developed for their future practice and project sustainability. Therefore, an online mock test was prepared and pilot tested.

Pilot testing: There were two purposes for this mock test. First of all, to provide hands on experience to the students before they take an actual online test. Secondly, to identify any operational issues that may hinder the success of this project.

Thus, a fifteen item mock quiz was prepared to test students' general knowledge. Questions related to their courses were deliberately not chosen to keep their focus purely on the process of the assessment and not the content. Students entered the assessment site through a password protected link, clicked questions, hit the radio button for the chosen option, saved option, submitted quiz after completion and logged out from the quiz site. This strategy was found to be successful to decrease students' anxiety and made them familiar with online assessment environment, and practice the technology.

The mock test was also utilized as an opportunity to explore and develop all types of subjective and objective questions offered by this software. In other words, all types of questions which can be used in paper pen test were tried out online to evaluate the software's maximum applicability in a nursing exam.

Moreover, in this pilot testing, students and the course faculty were able to experience item randomization. During this mock, the students were sitting very close to each other, but it was observed that, ten students sitting in the same line were given different questions by the software. This means every student was receiving individual sequence of test questions. In a rare case, it was also observed that two students sitting closed by received a same question but their answers were also randomized. This distinct feature was remarkable to control cheating and restricted students to focus on their individual paper.

For this pilot, most of the students were using their tablets (NOOK Color e-reader) which was provided as a part of the blended learning initiative and connected online via WiFi. It was observed that the WiFi connection kept dropping and students had difficulty logging back to continue their test. It was also noticed that when 83 students were trying to connect to the Moodle website at the same time, the system response was really slow because the Moodle server couldn't accommodate such a large number of simultaneous connections. Therefore, a more conducive venue with desktop computers was a definite requirement for the test.

After this hands on experience, the faculty and students verbalized comfort with online assessment strategy and enjoyed this exercise. Moreover, to reinforce the steps of taking a quiz online, a guideline was developed and shared with the students. In addition, these guidelines were also placed on the quiz site for students' reference.

The operational plan of the exam was discussed and due to the limited seating capacity, it was decided that the quiz will be conducted in two batches. It was agreed by the LRC manager to reserve 45 computers for two hours as per health assessment quiz scheduled to administer the quiz in two batches.

IMPLEMENTATION PHASE

Before the test, the website and the course site were checked for the correct functioning and other technical arrangements for the online test. The assigned LRC computers were put on, and checked for the functioning of the server, Moodle and uninterrupted power supply (UPS). As these three things were airway (server), breathing (Moodle) and circulation (electricity and UPS) for the project success. However, as a backup plan, it was decided to have hard copies of the quiz ready in case of any operational failure.

Students started coming to LRC 15 minutes before the test. The first batch consisted of 41 students. Students were assigned individual computers.

They were instructed to log in to Moodle site and wait for the announcement of the password. All of the students successfully logged to the exam site, attempted the quiz and completed it in time. Students who finished early were not allowed to leave the venue as the other batch was waiting outside. At the designated time, the test automatically went off due to its time restriction. The first batch was asked to leave the LRC in the monitoring of invigilators. Likewise, the second batch (42 students), which was sitting in one of the lecture hall were asked to enter the LRC and take their exam. Taking exam in two batches helped the team to manage this project with limited resources.

There was a sudden shutdown (black out) of one of the computer in the middle of quiz. However, the computer restarted itself and displayed the same page on which student was working. This student has completed half of the paper and she was worried that she had to re-do the paper. However, when she checked the previous question all the previous selected options were saved and she continued her paper with remaining questions. This problem occurred due to the sudden break down of electrical circuit to that individual computer and the problem resolved due to set auto recovery option in the system. This issue helped the team to learn that server and software were efficient to save the data of the student.

EVALUATION PHASE

Students and Faculty Comfort: The project evaluation was conducted through online survey in order to identify the students and faculty comfort with online assessment strategy. The response rate for this feedback survey was 71 % from the students and 100% from the faculty. The students and teachers both expressed 100% comfort with technology. 96% of the students and faculty showed their enthusiasm in incorporating online assessment in their future courses. A comparison was also made with the results of past two years and it was found that the trend of the grades was very similar.

Online Assessment vs. Traditional Assessment: Both of these strategies use similar principles to evaluate the outcome of the course. However, online MCQ assessment is compared with traditional pen paper test, the former seems beneficial because of the following reasons:

First, online test preparation is more flexible and reduce preparation time and cost compared to the traditional test. Teachers may work asynchronously by sharing website quiz folder and prepare quiz according to their convenience. It also decrease the work load of course coordinator by omitting coordination activities like paper printing, counting pages, securing and taping the quiz envelop a day before quiz, keeping the quiz in lock, bringing it to examination hall and distributing the quiz. In addition, online testing saves printing cost by creating a paperless environment. This project saved more than 50% of printing cost for the course.

Second, the online assessment is found very effective to prevent cheating among students compare to traditional test. The randomization in questions and answer order is the best strategy to discourage the cheaters. The additional security features such as: time restriction (quiz open and closure), restricted rights and controlling number of attempts etc. This option may also restrict quiz access even by teachers and other supporting staff.

Third, preparing the quiz on Moodle is found to be more secure, reliable and user friendly assessment strategy especially for a large class. Its feature of quick results to the students is very much liked by the students. Through this feature, students may review and assess their performance just after the test. Because, the minute student submit quiz, results could be ready and notified them through their emails (privacy). However, this option was restricted in this project because of smaller question bank size and thus can be explored in future.

Finally, the item analysis report on Moodle was also found be much comprehensive and quick compared to paper pen test. The online test's item analysis report provided each question, with key highlighted in bold with respective difficulty and discrimination indices. Besides that, the report also summarized the result through a bar graph and so the trend of the result could be interpreted easily.

RECOMMENDATIONS

- For the sustainability of this strategy, a faculty wide training is recommended that should

aim to introduce innovation in assessment strategy and facilitate faculty to practice and strengthen their skills related to the online assessment. In addition, an ongoing training for faculty as well as for freshman students' regarding the use of web based assessments need to be part of the curriculum.

- So far there are no guidelines available for this online assessment strategy thus there is a need to develop institutional policy on the process of online examination.

- Provision of a good bandwidth internet supply will also be very crucial in making the e- exam a norm if it runs synchronously.

- A technology equipped examination venue or provision of e-devices is recommended in order to provide a conducive environment for the online testing. Therefore, for future, a separate budget is recommended to upgrade the learning resource center (LRC) for online assessment.

CONCLUSION

Online universities are increasing in numbers and enrolling increase number of distant learners. Students demand and readiness for online learning may help educators to engage and assess these students easily. These programmes are now putting lot of emphasis on effective online formative assessment in order to achieve learning outcomes set by online courses or curriculum. This brings the accountability on educators to explore effective online assessment methods. An initiative of the online assessment on Moodle was an attempt to keep abreast with the current advancement in education which was implemented successfully and may provide useful and user friendly features for online assessment in future.

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Ethical Clearance- approval from Director Programme was taken to approach academic year and course coordinator and course faculty. Individual consent from students was taken.

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Conflict of Interest – Nil

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Nursing Education in Pakistan: Challenges and Trends in Degree Program

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ABSTRACT

Nursing education in Pakistan has transferring from three years diploma to BSc Nursing, and degree will be minimum qualification for bed side practice till 2020. Numbers of nursing institutes offering undergraduates' degree programs drastically increased to upgrade diploma nurses. This sudden rise in nursing institutes compromised the quality of nursing education in the country as these institutes lack human as well material resources. Most of these institutes are not compatible with minimum criteria set by Pakistan Nursing Council (PNC). In this paper the current trends and challenges in nursing education in Pakistan will be discussed along with recommendations.

Keyword*: BSc Nursing in Pakistan, Pakistan Nursing Council, Phasing out of Diploma, Trends in nursing.*

INTRODUCTION

Nursing education in Pakistan has evolved over the last two decades, and it has shifted from three years traditional diploma program to degree program. The aim of this up gradation was to augment the standard of nursing education in Pakistan, and to produce knowledgeable and competent nurses. This up gradation was started after initiation of Bachelor of Science in Nursing (BScN) program in developed countries. Several institutes have started degree programs in recent years; however, resources in most of these institutes are not attuned with criteria of PNC and Higher Education Commission (HEC).

PNC is regulatory authority for nurses in Pakistan; it was established in 1973[1]. It not only registers new institutes but also provide license to nurses. PNC envisioned that by 2020 minimum qualification for practice will be Bachelor of Science in Nursing (BScN)[2]. Currently, service structure is only for diploma nurses and basic qualification for practice is diploma. Aga Khan University has started two years Post RN BSc Nursing degree in 1988 for diploma nurses and four year BScN program for fresh candidate in 1997[3]. The purpose of degree programs were improvement in quality and development of leadership in nursing education. Meanwhile, some other institutes in public and private sectors opt to initiate degree program for nurses. However, due to lack of human as well material resources these institutes fail in production of quality nurses. Hence, largely the nursing care remains same both in public and private sectors. Currently, thirty five institutes are offering undergraduate degree education for nurses in Pakistan; most of them have initiated degree in last five years [1].

BScN is minimum qualification for practice in many countries of the world. Several countries have started programs to transform diploma nurses to degree nurses [4, 5]. The purpose of this transformation could be more knowledge and skills of degree holder nurses as compared to diploma nurses. Degree holder nurses are more skillful and knowledgeable as compared to diploma counter parts[6], they learn more skills and attributes which help them to become excel their professional career. These nurses have skills to apply theoretical knowledge in clinical, interpret and analyze clinical scenarios, and promote research base practices[7]. These attributes are mandatory for nurses to provide skillful and competent care. In another study conducted in Pakistan on BScN graduates showed that BScN nurses are equipped with critical thinking and leadership attributes[8]. Degree nurses also have in-depth theoretical knowledge, and good communication skills[9].

CASE SCENARIO

During an academic visit, we observed the resources, infrastructure and governance system of two nursing colleges from private and public sector in mega city of Pakistan. Both have different organizational management; however, private institute was more independent in their decision as compared to public institute. Degree programs (BScN, MScN) were initiated in both institute but on quit MSc Nursing (MScN) as it was not recognized with PNC, and other still struggling with HEC to recognize their MScN program. PNC and HEC decline their application due to insufficient human as well material resources. None of these institutes has PhD faculty and the resources is hardly enough for BScN program. One was offering different type of degree program such BScN, Post RN BScN, Fast track BScN, Fast track MScN and MScN and some diploma courses; the other was offering MScN, Post RN BScN and some specialties programs for nurses.

Both institutes have their own building but the private institute building and other facilities was not enough for so many programs. Skill lab, science lab, library and Information Technology (IT) lab in public institute was comparably good than private institute. In addition, there were no facility for students' extracurricular activities, and little opportunities of students' professional and personal development. These institutes were not compatible with PNC criteria of building profile for degree programs[10]. Beside, inadequate facilities of infrastructure they were also deficient in human resources. As mention earlier, there were no PhD faculty, and both were having only one MScN faculty. Three MScN faculties are mandatory to initiate BScN and PhD faculty to initiate MScN[10]. There were inadequate resources of teaching and learning in both institutes. The access to the required resources and materials is essential for the students to maximize the learning[11].

ANALYSIS

Nursing education in Pakistan are facing challenges due to rapid and uncontrolled expansion of nursing institutes. Education offers underpinning for economic growth and development in the country; poor quality education inversely affect economic activities[12]. Higher education in Pakistan need quality to compete with developed world. Higher Education Commission (HEC) has initiated efforts for standardization of higher education in Pakistan. Higher education is essential for economic growth in the country, and HEC is committed to quality assurance and enhancement of education in the country[13]. Quality assurance can be defined an all-embracing term covering all the policies, processes, and actions through which the quality of higher education is maintained and developed[14]. The focus of stake holders and educational institutes are on quantity of nurses, rather producing quality nurses. This trend would not upgrade nursing care in the country. Some nursing educators are on the view that stakeholders should focus on quality; otherwise, we would not get benefit from up-gradation of the nursing education. Iqbal concluded that Pakistan is facing quality issues in all component of university education[15]. The qualification of nursing educators in Pakistan is BScN, and the physical environment of classes was not facilitative to develop critical thinking skills. Mostly, nursing educators are having undergraduate degree qualification, where in develop countries it is MScN[16]. Several institutes have no appropriate system for admission of students and acquisition of faculty. Many nursing colleges enrolled students in different program without sufficient space for library, laboratory, computer lab and classes. Quality in education means quality of faculty, students, library, laboratory and other assets that may be utilized in process of imparting teaching and learning.

Currently, we have 35 institutes offering degree program across the country[1]. Some of these institutes are not having their own building and hospital for clinical placement. Moreover, most of them lack PNC registered MScN faculty which is the basic requirement for registration of institute[10]. According to Word Health Organization total number of MScN graduate in the country is 35, nine have done MScN from foreign institutes and 26 have done MScN from Aga Khan University. Majority of these graduates are working only in one private health care university[17]. These numbers are not consistent with number of institute offering degree program. In 2011 there were total 11 institute offering degree program; however in last two year the number increase considerably to 35 after PNC announce BScN minimum qualification till

2020 for bed side nurses. This sudden rise in nursing colleges offering degree program inversely affect the quality of nursing education. The speculator and non-professional see this good opportunity to furnish their businesses and they have started degree programs without maintaining basic criteria of PNC and HEC.

CONCLUSION & RECOMMENDATION

PNC has already declared that minimum qualification for bed side nurses will be BScN till 2020. Currently, majority institutes are planning to increase number of BScN nurses; this will inversely affect our health care system. We should focus not only on quantity but also on quality. Quality in education is a continuous process to achieve pre-defines goals and objective. To establish quality in nursing education PNC and other stakeholders should set standard. After 18th amendment in Pakistan, health ministry is dissolved and now provincial governments are responsible to confront with health care issues[18]. For this purpose, we can get benefit from Southeast Asians model for development of nursing profession in three countries. In this they have selected students from three different countries and equipped them with MScN & BScN. These graduate further started BScN in their corresponding countries[19]. These graduates were able to transform nursing education and design policy to increase quality and quantity in nursing education.

In Pakistan Khyber-Pukhtoon-Khaw (KPK) government has already announced scholarship for Master and Bachelor students with aim to upgrade nursing profession[20]; however, after graduation of two batches they have not design any strategy to accommodate these highly qualified nurses. It is inevitable that majority of these graduate will migrate to other countries due to limited opening for career development and highly politicized institutional culture. Higher educations among nurses are associated with outmigration to developed countries. Brain drain of qualified nurses will have serious consequences on development of standard academic institutes, which will ultimately affect health care system of Pakistan. To endorse quality in nursing education PNC need re-structuring according to needs and challenges of 21st century. Political interference in PNC is another menace to nursing profession. Several institutes have been register in last few years through political pressure without minimum human as well material resources for degree programs.

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Effectiveness of Planned Teaching Programme on Working Mothers Regarding Domiciliary Management of Expressed Breastmilk and its Storage in Bengaluru, India

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ABSTRACT

Background: Breastmilk is the liquid gold for the baby. Lancet series of studies has emphasized on advantages of exclusive breastfeeding both for mother and baby. United Nation report reveals that India accounts for 57 million of the world's 146 million malnourished children and the report suggests that malnutrition can be reduced by ensuring that newborn are given colostrums, infants are exclusively breastfed for six months and adequate complementary foods are given three to five times a day.[1] The purpose of this study was to deliver a planned teaching program thereby increasing working mother's knowledge regarding Expression and storage of breastmilk to maintain exclusive breastfeeding for six months.

Method: Pre-experimental one group pretest posttest design approach was used to assess the effectiveness of planned teaching programme on knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage in postnatal ward of St. Philomena's hospital, Bengaluru. In view of the nature of the problem and objectives of the study a structured interview schedule and planned teaching programme was developed focusing on the domiciliary management of expressed breastmilk and its storage. Validity was ensured in consultation with guides and experts in the field of nursing, medicine and statistics. Reliability of the tool was tested by test retest method and found to be highly reliable with a score of 0.89.

The study was carried out in postnatal ward of St. Philomena's hospital, Viveknagar, Bengaluru. 60 working mothers were selected by non probability purposive sampling technique. Structured interview schedule was used to collect needed data followed by that Planned teaching Programme on domiciliary management of expressed breastmilk and its storage was administered on the same day. Posttest was administered after seven days. The data collected were tabulated and analyzed by using descriptive and inferential statistics.

Results: Majority of the working mothers 76.7% (46) were in the age group of 20-30 years and 81.7% (49) of them were getting one month of maternity leave. 83.3% of working mothers were having inadequate knowledge regarding domiciliary management of expressed breastmilk and its storage before PTP and 98.3% (59) were having adequate knowledge after PTP. The mean difference of overall knowledge of working mothers before and after PTP was 16.97 with a mean % 48.5 with a SD of 3.10. The paired t value calculated 42.35 was significant at $p<0.05$. There was a significant association of knowledge of working mothers before PTP with demographic variables such as age and duration of maternity leave.

Conclusion: Based on the above findings of the study it concludes that the Planned teaching programme was effective in improving the knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage.

Keywords: *Planned teaching Programme, knowledge, working mothers, expressed breastmilk and its storage.*

Background of the study: Breast milk the "Cinderella substance of the decade" is nature's most precious gift to the newborn, and equivalent of which is yet to be innovated by our scientific community despite tremendous advances in science and technology.[2] Exclusive breastfeeding for the first six months is identified as the single most effective intervention that could prevent 13-15% children death.[3] Studies demonstrated 24.76% lower rate of exclusive breastfeeding among working mothers than nonworking mothers and 77.6% of working women quoted lack of sufficient maternity leave as the major impediment for exclusive breastfeeding.[4]

In India women employed is 25.6%. In Bengaluru the female work participation is 52.1% for urban and 21% for rural area.[5]

At the end of three months of maternity leave when mothers go back to work; exclusive breast feeding may be handled by a process called expression by both manually or using breast pumps.[6]

Study conducted on refrigerated breastmilk stored at 39 degrees F showed little to no degradation of quality over four-days.[7] The best way to warm breast milk is placing the breast milk in a container of heated (not boiling) water.[8] Studies have indicated that working mother who continues to breastfeed miss less hours of work because of less baby related illness, compared with women who do not breastfeed.[4]

MATERIAL & METHOD

Research approach: An evaluative research approach was considered appropriate to determine the effectiveness of PTP

Research design: Research design adopted for this study was pre-experimental one group pretest posttest design.

Research Setting: This study was conducted in postnatal ward of St. Philomena's Hospital, Viveknagar, Bengaluru.

Population: Accessible population were working mothers admitted in postnatal ward of St. Philomena's Hospital, Bengaluru.

Sample: Sample selected for this study are working mothers admitted in the postnatal ward of St. Philomena's hospital, Viveknagar, Bengaluru who fulfilled the inclusion criteria.

Sample size was 60 working mothers admitted in postnatal ward of St. Philomena's Hospital, Viveknagar at Bengaluru.

Sampling technique: Sample in this study were selected by using non probability purposive sampling technique

SAMPLING CRITERIA

Inclusion criteria:

The study includes working mothers who are

- Admitted in the postnatal ward of St. Philomena's hospital at Bengaluru
- Both primipara and multiparous
- Undergone normal and abnormal delivery
- Physically fit to participate in the study

Exclusion criteria

The study excludes working mothers who are

- Contraindicated for breastfeeding
- Not willing to give consent
- Not able to understand and speak either English or Kannada

DEVELOPMENT AND DESCRIPTION OF THE TOOL

In this study a structured interview schedule was developed to assess the knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage.

Development of tool

The structured interview schedule consisted of 3 sections covering the following areas

Section A: Demographic data of the working mothers such as age, occupation, education, working hours, number of child, duration of maternity leave, caregiver of baby and sources of information regarding domiciliary management of expressed breastmilk and its storage.

Section B: Structured questionnaire is used to assess the knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage in following aspects-

Questionnaire related to general information on breastmilk (7 items)

Questionnaire related to expression of breastmilk (14 items)

Questionnaire related to storage of breastmilk (6 items)

Questionnaire related to reusing stored breastmilk (8 items)

Section C: A planned teaching programme for 40 minutes on domiciliary management of expressed breastmilk and its storage for working mothers.

SCORE INTERPRETATION

The knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage was measured in terms of knowledge scores. All the questions in this section were multiple choice question with three distracters and one correct answer. Each correct answer was given a score of one and incorrect and unanswered answer was given a score of zero. The maximum score was 35. To interpret the level of knowledge scores are distributed as follows.

Inadequate knowledge: <50%

Moderate knowledge: 50-75%

Adequate knowledge: >75%

An answer score key was developed for scoring answer to the structured interview schedule.

Content validity of the tool

Content validity of this tool was established on the basis of suggestions given by five nursing experts, one pediatrician and one statistician.

Procedure for data collection

Researcher gathered 7-8 subjects in a day, gave a brief introduction about self and nature of the study. Then data were collected in following three phases.

Phase I: After obtaining formal permission from hospital authority with prior informed consent from subjects, pretest was conducted to assess the existing knowledge of working mothers regarding domiciliary management of expressed breast milk and its storage.

Phase II: Conducted planned teaching programme on domiciliary management of expressed breast milk and its storage for the working mothers for 40 minutes.

Phase III: Posttest was conducted after seven days to assess the knowledge of working mothers regarding domiciliary management of expressed breast milk and its storage using the same structured interview schedule.

DATA ANALYSIS

The data obtained was planned to be analyzed based on objectives and hypothesis of the study using descriptive and inferential statistics.

Descriptive statistics

- Frequency and percentage distribution was used to study the demographic variables of working mothers such as age, occupation, education, working hours, number of child, duration of maternity leave, caregiver of baby, sources of information.

- Distribution of knowledge score regarding domiciliary management of expressed breast milk and its storage was done by summarizing into three categories as adequate, moderate and inadequate knowledge.

- Percentage, mean, standard deviation, range and Mean score percentage were used to determine the level of knowledge regarding domiciliary management of expressed breast milk and its storage.

INFERENTIAL STATISTICS

- Paired t-test was used to compare pretest and posttest knowledge of working regarding domiciliary management of expressed breast milk and its storage.

- Chi square test was used to associate the knowledge of working mothers regarding domiciliary

management of expressed breastmilk and its storage with selected demographic variables.

- Level of significance was set at 0.05 to interpret the hypothesis and findings.

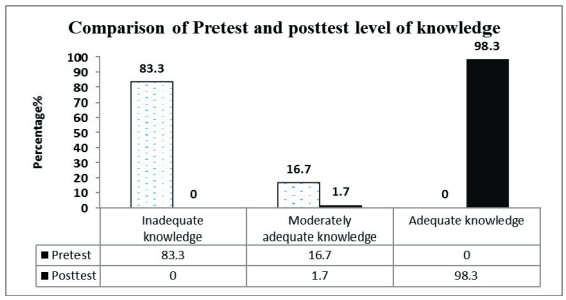
FINDINGS

Table 1: Frequency and percentage distribution of demographic variables

n = 60

S. No	Demographic variables	Number n = 60	Percentage
1	**Age of the mother**		
	20 – 30 years	46	76.7
	31 – 40 years	14	23.3
	Above 40 years	-	-
2	**Occupation**		
	Government employee	8	13.3
	Semi government	28	46.7
	Daily wage layout	8	13.3
	Business	16	26.7
3	**Education**		
	No formal education	-	-
	Primary	6	10
	Higher secondary	16	26.7
	Degree and above	38	63.3
4	**Working hours**		
	6 – 8 hours	23	38.3
	9 – 11 hours	36	60.0
	More than 12 hours	1	1.7
5	**Number of child**		
	One	38	63.3
	Two	19	31.7
	More than two	3	5.0
6	**Duration of maternity leave**		
	One month	49	81.7
	Three months	11	18.3
	Six months	-	-
7	**Caregiver of the baby**		
	Parents	19	31.7
	Servant	14	23.3
	Any other family members	27	45.0
8	**Sources of information**		
	Health personnel	21	35.0
	Family member	34	56.7
	Peer group	5	8.3

With regard to age out of 60 working mothers between the age group of 20-50 years majority 76.7% (46) were in the age group of 20-30 years. Majority 46.7%(28) of them were working in semi government, 26.7% (16) were engage in business and both government employee and daily wage labour have the equal percentage of 13.3%(8) each. 63.3% (38) were of degree and above standard, 26.7% (16) were of higher secondary standard, 10% (6) were of primary standard and none of them were found with no formal education. 60% (36) of them work for 9-11 hours and 38.3% (23) of them work for 6-8 hours. Out of 60 working mothers most of them 81.7% (49) had one month of maternity leave. Any other family members cared for 45% (27) of baby and parents cared for 31.7% (19) of baby. 56.7% (34) received information from family members and 35% (21) of them received from health personnel.



Graph- 1: Frequency and percentage Distribution of level of knowledge of working mothers before and after PTP.

The above graph depicts that 83.3% of working mother had inadequate and 16.7% had moderately adequate knowledge before PTP. 98.3% had adequate and 7% had moderately adequate knowledge after PTP

Table-2: Range, Mean, SD, Mean score percentage of knowledge of working mothers before and after PTP.

n = 60

S. No	Aspects of knowledge	Maximum possible score	Before PTP				After PTP			
			Range	Mean	SD	Mean %	Range	Mean	SD	Mean %
1	General information on breastmilk	7	1-6	3.95	1.08	56.4	4-7	6.05	0.67	86.4
2	Expression of breast milk	14	1-10	4.33	1.80	30.9	9-14	11.52	1.15	82.2
3	Storage of Breast milk	6	0-4	1.60	0.84	26.6	4-6	5.52	0.62	92.0
4	Reusing of stored breast milk	8	1-6	3.40	1.22	42.5	6-8	7.22	0.76	90.2
5	Overall	35	3-23	13.28	3.71	37.9	26-34	30.25	1.64	86.4

The Mean % of knowledge regarding storage of breastmilk was found to be lowest 26.6 with mean of 1.60 having a SD of 0.84 over a range of 0-4 before PTP and found to be increased to highest with mean % of 92.0 with Mean of 7.22 having a SD of 0.62 over a range of 4-6 after PTP. The overall mean score % of knowledge was 37.9 with a mean of 13.28 with SD of 3.71 over a range of 3-23 before PTP and found to be increased Mean score % of 86.4 with a mean of 30.25 with a SD of 1.64 over a range of 26-34 after PTP.

Table -3: Enhancement of knowledge of working mothers before and after PTP and statistical significanc

S.No	Aspects of knowledge	Maximum Score	Enhancement			t-value	p-value
			Mean difference	SD	Mean %		
1	General information on breastmilk	7	2.0	1.02	30	15.94*	p<0.05
2	Expression of breast milk	14	7.18	1.73	51.3	32.12*	p<0.05
3	Storage Breast milk	6	3.92	0.85	65.4	35.71*	p<0.05
4	Reusing stored breast milk	8	3.82	1.20	47.7	24.63*	p<0.05
5	Overall	35	16.97	3.10	48.5	42.35*	p<0.05

Note:*- significant at 5% level for 59 df (i.e. P<0.05)

Mean difference for expression of breastmilk was found to be highest 7.18 with a mean % of 51.37 with a SD of 1.73 and mean difference for general information on breastmilk was found to be lowest as 2.0 with a mean percentage of 30 with a SD of 1.02. Mean difference for overall aspect of knowledge was found to be 16.97 with a mean % of 48.5 with a SD of 3.10. Paired't' was found to be invariably significant at p<0.05. It was also seen for the other aspects on knowledge such as storage of breastmilk, reusing stored breastmilk. Hence, it is inferred that there is a significant increase in the level of knowledge of working mothers after the PTP.

Table-4 Association of knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage with selected demographic variables

S.No	Demographic characteristics	No.	%	Knowledge				$\chi 2$ – value	p-value
				<median		5median			
				No.	%	No.	%		
1	**Age of the mother**								
	20 – 30 years	46	76.7	30	90.9	16	59.3	8.305 , df=1 Sig	P<0.05
	30 – 40 years	14	23.3	3	9.1	11	40.7		
	Over 40 years	-	-	-	-	-	-		
2	**Occupation**								
	Government employee	8	13.3	2	6.1	6	22.2	3.470, df=3 NS	p>0.05
	Semi government	28	46.7	17	51.5	11	40.7		
	Daily wage layout	8	13.3	5	15.2	3	11.1		
	Business	16	26.7	9	27.3	7	25.9		

(Cont...) Table-4 Association of knowledge of working mothers regarding domiciliary management of expressed breastmilk and its storage with selected demographic variables

3	**Education**								
	Illiterate	-	-	-	-	-	-	2.446, df=2,NS	p>0.05
	Primary	6	10	4	12.1	2	7.4		
	Higher secondary	16	26.7	11	33.3	5	18.5		
	Degree and above	38	63.3	18	54.5	20	74.1		
4	**Working hours**								
	6 – 8 hours	23	38.3	10	30.3	13	448.1	3.605, df=2,NS	p>0.05
	9 – 11 hours	36	60.0	23	69.7	13	48.1		
5	**Number of child**								
	One	38	63.3	23	69.7	15	55.6	1.910, df=1, NS	p>0.05
	Two	19	30.7	8	24.2	11	4.7		
	More than two	3	5.0	2	6.1	1	3.7		
6	**Duration of maternity leave**								
	One month	49	81.7	30	90.9	19	70.4	4.814, df=1 Sig	p<0.05
	Three months	11	18.3	3	9.1	8	29.6		
	Six months	-	-	-	-	-	-		
7	**Caregiver of the baby**								
	Parents	19	30.7	9	27.3	10	37.0	0.938, df=1, NS	p>0.05
	Servant	14	23.3	9	27.3	5	18.5		
	Any other family members	27	45.0	15	45.5	12	44.4		
8	**Sources of information**								
	Health personal	21	35.0	10	30.3	11	40.7	0.714, df=2, NS	p>0.05
	Family member	34	56.7	20	60.6	14	51.9		
	Peer group	5	8.3	3	9.1	2	7.4		
	Mass media	-	-	-	-	-	-		

Note : Sig – Significant at 0.05 level , NS – Not significant at 0.05 level.

The table represented that age of working mothers and duration of maternity leave available in her job setting shows a statistically significant association at p<0.05 with knowledge of working mothers before PTP.

CONCLUSION

In this study it was found that maximum of working women belongs to 20-30 years of age group, working under semi-government and had only one month of maternity leave. Pretest Knowledge score regarding domiciliary management of expressed breastmilk and its storage was low which had improved after the PTP significantly. Demographic variables like age of the mother and duration of maternity leave were associated with the mothers pretest knowledge. To maintain both work and exclusive breastfeeding proper teaching regarding domiciliary management of expressed breastmilk and its storage should be imparted to working mothers.

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Ethical Clearance- Informed consent has been obtained before data collection and confidentiality maintained throughout the study.

ABBREVIATIONS

df : Degrees of freedom, Et.al: And others, PTP : Planned teaching Programme, SD : Standard deviation, $\chi 2$: Chi square, %: Percentage, < : Less than, >: Greater than

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Evaluation of Preceptors' Role and Preceptorship Model at Undergraduate Program of Nursing at Karachi, Pakistan

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ABSTRACT

Introduction: Preceptorship model has gained a lot of popularity in nursing education. A preceptor serves as a role model and stress reducer for nursing students in clinical setting that is correlated with quality delivery of care. The current study has evaluated the role of preceptor and preceptorship program at undergraduate program of nursing at Karachi, Pakistan.

Materials and Method: A descriptive study cross-sectional design was employed to achieve the study objectives. The study was conducted in one of the private schools of nursing located in Karachi, Pakistan. Data was collected based on Consecutive sampling from undergraduate students. Mean and standard deviation were estimated for continuous variables. Frequency and proportions were calculated for categorical variables. Approval of the study from Institutional ethical review committee was sought.

Findings: The study sample comprised of 22 participants who were recruited from one of the private school of nursing of Karachi, Pakistan. The overall effectiveness of preceptorship model was considered as good and very good by majority of the participants (82%). Regarding the supervision of preceptor, around 91% rated very satisfied to fairly satisfied and only 2 (9%) were dissatisfied with the supervision of preceptor.

Conclusion: In our study preceptorship model and preceptors role is significantly appreciated by nursing graduates during their journey as students in undergraduate nursing programme.

Keywords: *Preceptor, preceptorship model, senior elective course.*

INTRODUCTION

Clinical education is fundamental for the nursing profession.[1-2] Clinical practice provides an opportunity to beginner nurses to integrate theoretical knowledge in clinical practice. There are different models that are employed in nursing education for clinical practice. The conventional model, where, the academic faculties are accountable for facilitating nursing students to gain clinical experience and remain there in the clinical setting at all times.[3] One major limitation of this approach is that student instructor interaction would be minimum due to high student to instructor ratio 18:1.[4] Therefore, large numbers of nursing students are supervised by one nursing clinical teacher. In contrast to the conventional model, preceptor ship model is widely used in nursing education.[5] In this model, nursing staff and student work on 1:1 ratio for a particular time in the clinical setting. As a result, students get adequate support and time when supervised by nursing staff as compared to nursing faculty.[6] Preceptor, supervisor and mentor are often used synonymously and interchangeably.[7] According to Chickerella & Lutz, (1981), 'Precpetorship is an individual teaching/ learning method in which each student is assigned to a particular preceptor so the

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nursing student can experience day to day practice with a role model and resource person is immediately available within clinical setting'. [8]

Precpetorship model has gained much popularity [5] due to multiple benefits to nursing education. A preceptor serves as a stress reducer for nursing students in clinical setting which is indirectly associated with quality of patient care. [9-10] Previous research has highlighted that preceptors helped nursing student in smooth transition from student nurse to novice nurse.[11] Preceptor role modeling, feedback, continuous guidance of preceptor are key component for effective clinical learning.[12] A preceptor act as role model, supporter and skilled person who provide necessary clinical skills that would facilitate nursing student to take appropriate intervention for the benefit of the patient.[13] Thus, Preceptorship model is not only assist student to achieve precious insight for real life situation[14-15] moreover, is likely to be a 'cost effective approach' to nursing educational programs.[5]

In Pakistan concept of precpetorship in nursing is normally overlooked and is still relatively new. To our best knowledge and literature research, this may be the first study to evaluate the preceptors' role and precpetorship model in senior elective course of undergraduate programme of nursing at Karachi, Pakistan.

SENIOR ELECTIVE COURSE

This course is designed to provide an opportunity to undergraduate nursing students to enhance their nursing knowledge and skills in selected hospital clinical settings. It aims to facilitate students making a transition from the role of being students to novice clinical nurses.

In this research the term preceptor was used and defined as the registered nurse; preferably with BScN preparation and / or expertise (minimum of 2 years), who was willing to take the responsibility to be a preceptor for six week (270 hrs) who support 1:1 in clinical setting.

MATERIALS & METHOD

A descriptive study cross-sectional design was employed. The study was conducted at one of the private schools of nursing located in Karachi, Pakistan. Data was collected based on Consecutive sampling from all the BScN graduates of the year 2008. They had successfully passed the senior electives course. A total of 33 students were enrolled in the BScN programme, all of whom were sent an invitation letter to participate in the study. However, only twenty two participants consented to participate. The tool which was adopted by Suen, and Chowboth (2001)[16] was modified by content expert according to the cultural context. Data was collected by the primary researcher. The participants were provided the English questionnaire to be filled and returned back to the researcher. Statistical Package for Social Sciences (SPSS version 19.0) was used for data entry and analysis. Mean and standard deviation were estimated for continuous variables. Frequency and proportions were calculated for categorical variables. Approval of the study from Uuniversity ethical review committee was sought. The informed consent was signed by the study participants.

FINDINGS

Table 1: Rating of nursing graduate about effectiveness of precpetorship model in Karachi, Pakistan

	Very good	Good	Fair	poor	Very poor
overall, I consider the precpetorship program experience in senior elective course was	**9(40.9%)**	**9 (40.9%)**	4(18.2%)		

Table 2: Rating of nursing graduate about supervision of preceptor in Karachi, Pakistan

	Very satisfactory	**satisfactory**	fairly satisfactory	unsatisfactory	very unsatisfactory
overall, I consider the supervision of my preceptor was	**9 (40.9%)**	**10(45.5%)**	**1(4.5%)**	**1(4.5%)**	**1(4.5%)**

Table 3: Perception of nursing graduate about preceptor role

Preceptor Role	**Student Nurse Response regarding the role of preceptor in Karachi, Pakistan**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
My preceptor had a friendly attitude	11 (50%)	08(36.4%)	02 (9.1%)	01 (4.5%)
My preceptor was a stress reducer for me	09 (40.9%)	07 (31.8%)	5(22.7%)	01 (4.5%)
My preceptor set a role model for me on how to interact with the clients	11 (50%)	6(27.3%)	5 (22.7%)	
My preceptor was able to meet with me on a regular basis	11 (50%)	5 (22.7%)	5 (22.7%)	1(4.5%)
My preceptor was keen to teach	7 (31.8%)	9 (40.9%)	6(27.3%)	
My preceptor guided me to perform future role of registered nurse	12 (54.5%)	7 (31.8%)	3 (13.6%)	
My preceptor helped me put theory into practice	7 (31.8%)	10 (45.5%)	5 (22.7%)	
My preceptor provided me with feedback on my clinical performance and ways of improving my practice	08 (36.4%)	12 (54.5%)	02 (9.1%)	
My preceptor stimulated me to thinking critically	5 (22.7%)	14 (63%)	3 (13.6%)	
My preceptor offered me emotional support	7 (31.8%)	10 (45.5%)	4 (18.2%)	01(4.5%)
My preceptor helped me to examine my career interests	3 (13.6%)	10 (45.5%)	08 (36.4%)	01(4.5%)
There was a mutual understanding between my preceptor and me	5(22.7%)	14(63.6%)	02 (9.1%)	01(4.5%)
My preceptor expressed his/her concerns to my learning need	6(27.3%)	13(59.1%)	02 (9.1%)	01(4.5%)

DEMOGRAPHIC CHARACTERISTICS

The study sample comprised of 22 participants who were recruited from one of the private school of nursing of Karachi, Pakistan. The mean (± SD) age (years) of the respondents was 23.68 ± 1.49. In a total of 22 nursing graduates, 03 (13.6%) were males while 19 (86.4%) were females. The majority 19 (86.4%) had intermediate and 03 (13.6%) had graduate level of education. There were only four (18.2%) participants who had prior heath care experience while eighteen (81.8%) participants had no prior experience in health care.

Effectiveness of Precpetorship Model & Supervision of Preceptor

In terms of the overall effectiveness of

precpetorship model, 18 (82%) considered it as good and very good. Regarding the supervision of preceptor, 9 (40.9%) of the participants were very satisfied, whereas, 11(51%) reported as satisfactory to fairly satisfactory and only 2 (9%) were dissatisfied with the supervision of preceptor (Refer to table 1 & 2)

PERCEPTIONS ABOUT CLINICAL PRECEPTOR ROLE

Perception of preceptee regarding Preceptor as a stress reducer 09 (40.9%) of the participants strongly perceived that their preceptor was a stress reducer for them, 07 (31.8%) only agreed on this, 5 (22.7%) disagreed and only 01 (4.5%) strongly disagreed. Regarding the role of Preceptor as role model 11 (50%) of the participants strongly agreed, 6 (27.3%) agreed, and 5 (22.7%) disagreed. Regarding the perception of Preceptor for integrating the theory into practice, 07 (31.8%) strongly agreed, 10 (45.5%) only agreed, and 5 (22.7%) disagreed that their preceptor helped them to put theory into practice. Moreover, 12 (54.5%) of students strongly agree and 7 (31.8%) students agreed that their preceptor guides them to perform future role of registered nurse whereas only 3 (13.6%) students disagree. In terms of stimulating critical thinking of preceptee, only 05 (22.70%) of the participants strongly agreed, 14 (63%) agreed; whereas, 3 (13.6%) disagreed. Furthermore, preceptor interest in examine preceptee career interests 13(59.1%) strongly agreed and agree, whereas, 9(40.9) disagree and strongly . (Refer to table 3)

DISCUSSION

The research findings revealed that most of the study participants acknowledged and rated the effectiveness of precpetorship model as good and very good and overall appraised the role of preceptor in Senior Elective course in the undergraduate nursing programme. The study showed that majority of participants was satisfied with the supervision of preceptor in clinical setting. Earlier studies of [17-18] have shown similar results regarding the support and appreciation of preceptor role during clinical. Happel (2009) states that "the success of the precpetorship is determined by the strength of the relationship between the student (preceptee) and the professional (preceptor)" (p. 373).[19] In line with this literature, our study results also exhibited that majority of the participants perceived their preceptors as role model, friendly and a great emotional supporter. However, few of them reported that they had difficulty in building friendly and supportive relationship with their preceptors.

Besides that, majority of students strongly agreed and agreed that their preceptors provided them complete guidance for smooth transition from student to registered nurse and assist them to pursue their career interest. A previous study, also acknowledged that a preceptor empowers preceptee for successful transition from student phase to a professional nurse.[18] On the other hand, 40.9 % disagreed and strongly disagree about preceptor interest for their future interest.

Moreover, regarding perception of nursing graduate about preceptor role for bridging theory and practice gap, it was somewhat surprising that different participants had different point of view. Approximately three quarters participants strongly agreed and agreed that their preceptors have helped to integrate theoretical knowledge into clinical practice. This study finding is consistent with previous findings reported by Freiburger 2002; Duteau 2012; Levett-jones and Lathlean 2008.[14, 20-21] On the contrary, one quarter of them disagreed that their preceptors were able to make connection between theory and practice. Thus, the impact of preceptor on 'student formation' and clinical competence has been acknowledge in many researchs.[6, 10, 22]

While exploring the role of preceptor in reducing stress, maximum number of participants 72.7% regarded their preceptor as stress reducers but few (27.2%) of them had not observed this quality among their preceptors during their senior electives.

However, there is a dire need to explore for the alternative explanations that why some of the preceptors were unable to provide career support, integration of theory into practice and failed to serve as a stress reducer for their preceptee. Some of plausible explanations cited by past literature, [23-25] could be dual role of clinical preceptors such as clinical commitments and supervision responsibilities for preceptee. This double burden of responsibilities may become a source of frustration resulting in

poor performance by preceptor.[25] Other hindering factors to provide adequate supervision could be un preparedness for preceptor role[26] lack of academic training[24] and support from nursing faculty and management.[22]

Furthermore, 25% of participant have also highlighted that there was a minimal contact with their clinical preceptor and 27% participant claimed that their preceptor was not keen to teach. Researches have also highlighted that the process of mentorship is less effective and realistic when there is a minimal contact between the student and mentor [7, 26] so lack of time provided by preceptor is one of the significant barriers for preceptee learning. Thus, Negative precpetorship experience can impact on student clinical learning experience as Mamchur and Myrick (2003) highlighted that "a poor clinical experience can result in student disillusionment about nursing and an inability to integrate and learn" [27](p. 189)

Our study had a response rate of around 67% and it was based on self-reported perceived information; therefore it may likely have underestimated or overestimated the rating about preceptor role ad precpetorship model by participants. Moreover, the descriptive cross sectional design, use of non probably sampling and sample size confined to only one setting limit the generalizability of findings.

CONCLUSION

Nurse students are the hopes of future nursing profession. Whatever a student nurse of today will learn, it will have implications for their professional life as nurse in future. In our study, precpetorship model and preceptor support has been hugely acknowledged by nursing graduates during their journey as students in undergraduate nursing programme. It has been widely recognized as crucial approach to bridge theory and clinical practice, meet expectations as nurse professionals by role modeling & continuous support.

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Public and Private Partnership - Health and Nutritional Care and Support Services to HIV Infected Children in Khammam and Chittoor Districts

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ABSTRACT

Introduction: HIV epidemic in India is heterogeneous in nature, both in terms of routes of transmission as well as geographic spread. Every minute that passes a child under 15 years dies of an AIDS related illness and four young people aged 15-24 years become infected with HIV. Moreover, one third of HIV positive children die before the age of 1.5 years while half of them die by two years of age.

Objective: This study was conducted to assess the services providing to HIV infected children and the levels of public and private partnership services in health and nutritional aspects.

Method: The study areas were public and private hospitals in Khammam and Chittoor Districts. A total of 240 samples comprised of 120 care takers of children infected with AIDS and 120 service providers. Sample was selected by random and purposive sampling techniques. Data collection by using structured interview schedule consists of the services providing to HIV infected children. Matrix used for assessment of levels of public and private partnership.

Results: The caretakers identified the services of CIAs was differed as the odds ratio is 1.375. The comparison of care and support services of CIAs as identified by the service providers showed that did not differed as the odds ratio is less than one. The levels of partnership in four areas need identification, planning, implementation and evaluation showed the partnership is present at active level only in area of implementation of services to HIV infected children.

Conclusion: Children infected with AIDS caretakers and service provider's majority identified the existing care and support services are important**.** If we ensures the partnership at active level in all the four areas which contribute to quality of service delivery and also improves the level of commitment.

Keywords: *AIDS/Children/ Caretakers/Service Providers/Public and Private Partnership*

INTRODUCTION

HIV is a virus that leads to immuno deficiency. In children, the immune system is immature to begin with. The initial HIV burden that is acquired prenatally is quite high. Biologically weaker immune system is more prone to faster disease progression and in children most of them become symptomatic within 1-2 years of acquisition of HIV infection and majority if untreated die by 76-90 months of age[1].

Paediatric HIV infection is assuming alarming proportions in the developing countries, especially in urban area. Malnutrition is a common condition in HIV infected children and is major contributor to mortality. Conversely, HIV has been associated with nutritional disorders, and immune status and level of viral replication may be important in predicting growth outcomes. Growth is a sensitive indicator of optimal nutrition and of HIV disease progression[2]. The percent distribution of HIV infection by age is

estimated at 4.4% among children below the age of 15 years, 82.4% among adults aged 15 to 49 years and the remaining 13.2% among people over 50 years of age[3].

Approximately 172,000 people died of AIDS related causes in 2009 in India. The four high prevalence states of South India account for 57% of all HIV infections in the country. Whilst Andhra Pradesh accounts for 500,000 cases; Maharashtra accounts for 420,000 cases, Karnataka accounts for 250,000 cases and Tamil Nadu accounts for 150,000 cases. Over 100,000 PLHIVs are estimated in West Bengal, Gujarat, Bihar and Uttar Pradesh and together these states account for 22% of HIV infections in India. The number of PLHIVs in Punjab, Orissa, Rajasthan and Madhya Pradesh range from 50,000 to 100,000 and these states collectively account for 12% of HIV infections. These states may have low HIV prevalence; however, a large number of PLHIVs are reported due to the states' overall population size[3].

Though the national HIV prevalence is 0.8%, there are certain areas such as Anshra Pradesh, Tamil Nadu, Karnataka, Maharastra, Manipur and Nagaland that account for over 80% of all reported AIDS cases in the country[4].

Three millennium goals relate directly to health: To reduce child mortality by twothirds (MDG4), to reduce maternal deaths by three quarters and achieve universal access to reproductive health (MDG5) and to halt and reverse the spread of HIV/AIDS, achieve universal access to treatment for treatment of HIV/AIDS by 2010, and halt and reverse the incidence of Malaria and other diseases (MDG6). Inclusion of these health related goals in the development goals underscores the inextricable connection between development and health[5].

Meeting the challenge demands strengthened partnerships among a multiplicity of actors. The 2001 declaration of commitment on HIV/AIDS included a long list of those with a critical role in the fight against HIV/AIDS: Governments, UN system ; intergovernmental organisations; people living with HIV/AIDS and vulnerable groups; medical, scientific and educational institutions; NGOs; The business sectors, including generic and research based pharmaceutical companies; Trade unions; the media; parliamentarian; Foundations; Community organizations; Faith based organizations; Traditional leaders[6].

A number of international and local organizations have been working on issues of prevention, care and support of children living with AIDS. However, the current programming by these organizations had limited geographical coverage and there has been no long term planning as funding has been time bound and uncertain. There are also knowledge gaps due to lack of clear understanding of the magnitude of the problem.

RESULTS

Table-1: Care and Support Services for Children Infected with HIV/AIDS assessed by Caretakers

S. No	Type of Service	Percentage of Services (%)									
		Less Important		Somewhat Important		Important		Very Important		Very Very Important	
		KMT	CTR	KMT	CTR	KMT	CTR	KMT	CTR	KMT	CTR
1	Health	0.00	0.00	1.68	8.34	33.33	39.99	50.01	43.32	15.00	8.34
2	Nutrition	1.68	1.68	6.66	24.34	36.66	46.68	48.33	28.32	6.66	0.00

(KMT - Khammam CTR – Chittoor)

Table-1 shows that majority of caretakers of HIV infected children identified the existing care and support services are very important in health (50.01%) and nutritional (48.33%) aspects. The care and support services were rated as important in health (33.33%) and nutritional (36.66%) aspects. Very small number of sample rated the services to HIV infected children were less important.

Table-2: Care and Support Services for Children Infected with HIV/AIDS assessed by Service Providers

S. No	Type of Service	Percentage of Services (%)									
		Less Important		Somewhat Important		Important		Very Important		Very Very Important	
		KMT	CTR	KMT	CTR	KMT	CTR	KMT	CTR	KMT	CTR
1	**Health**	3.00	0.00	6.66	16.68	35.01	11.67	35.01	43.32	21.66	28.32
2	**Nutrition**	5.01	5.01	26.60	9.99	30.00	21.66	23.34	43.32	15.00	20.01

(KMT - Khammam CTR – Chittoor)

Table-2 shows that majority of service providers rated existing health and nutritional services were important and very important to HIV infected children were less important. A notable percentage of sample rated health and nutritional services as very very important. Young people are particularly vulnerable to HIV infection because of risky sexual behaviour and substance use, because they lack access to accurate and personalised HIV information and prevention services and for a host of other social and economic reasons[7].

Table-3: Logistic Regression-Comparison of care and support services of CIAs assessed by caretakers. (KMT-CTR)

S.No	Type of Service	Caretakers	Odds Ratio	95% Confidence Interval	p-value
1	**Health**	KMT-CTR	1.375	(0.818, 2.310)	0.23
2	**Nutrition**	KMT-CTR	1.472	(0.854, 2.536)	0.16

(KMT - Khammam CTR – Chittoor)

Table-3 shows that with regard to the health care and support services, the sample in Khammam and Chittoor differed as the odds ratio is 1.375 (OR>1) and p-value is 0.23 (P>0.05). That is the sample in Khammam rated health and nutritional care and support services as less important when compared to the sample in Chittoor. That is these two groups differed significantly as the odds ratio is 1.472 (OR>1) and p-value is 0.16 (p>0.05).

Table-4: Logistic Regression-Compaison of care and support services of CIAs assessed by service providers (KMT-CTR)

S.No	Type of Service	Service providers	Odds Ratio	95% Confidence Interval	p-value
1	**Health**	KMT-CTR	0.380	(0.380, 1.516)	0.44
2	**Nutrition**	KMT-CTR	0.174	(0.174, 0.716)	0.01

(KMT - Khammam CTR – Chittoor)

Table-4 shows that the service providers assessment of care and support services of CIAs in Khammam and Chittoor did not differ in the health care and services as the odds ratio is 0.380 (OR<1) and p-value is 0.44 (p>0.05). Assessment of nutritional care and support services of CIAs showed that the sample in Khammam and Chittoor (OR=0.174) did not differ as the odds ratio is less than 1.

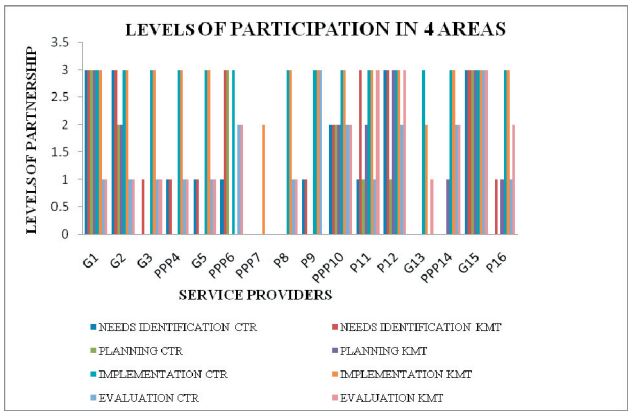

Figure-I: Levels of Public and Private Partnership in care of HIV infected children

(KMT - Khammam CTR – Chittoor)

Figure-1 shows that the levels of partnership in the four areas; need identification, planning, implementation and evaluation were assessed. It was found that the partnership is present at active level only in the area of implementation. In need identification and planning areas the levels of partnership is found to be low. In the area of evaluation the partnership is moderate to active this is due to preparation of some kind of report for documentation at the institutional level.

DISCUSSION

This study describes the health and nutritional care and support services for HIV infected children and the levels of public and private partnership in need, identification, planning, implementation and evaluation by the service providers. First objective the assessment of services for HIV infected children by care takers and service provider's majority identified as important. Thus the priority is given to health and nutritional care and support services. In Khammam and Chittoor the care takers identified the services differed as the odds ratio is 1:375. The care takers in Khammam rated and nutritional care and support services as less important when compared to the sample in Chittoor. In these two areas assessment of nutritional care and support services identified by service providers did not differ as the odds ratio is less than 1.

As of December 2012, nearly 17.36 lakhs PLHIV have been registered at 380 ART centres of whom 6,04,987 clinically eligible patients (including 34,367 children) are receiving free ART in Government health facilities. 239 Community Care Centers providing psycho-social support, ensuring drug adherence, treatment of opportunistic infections and tracking lost to follow-up cases[11]. Nalini studied on HIV/AIDS and nutritional problems in children. The goals of nutritional interventions are to prevent nutrient deficiencies known to compromise immune function to treat or minimize HIV. There was positive correlation between nutritional status and child growth and development, intellectual and scholastic performance[8].

The levels of partnership in the area of need identification by the service providers indicate that among the government departments DMHS, DMHO, DEO were involved at higher level. The field level institutions such as area hospitals, PHCs and schools showed nominal interest. Among the PPP programs, ICDs had highest level of partnership. The PDS, 104, 108, Arogyasree programs did not participate in need identification.

Levels of participation in planning of care and support shows the government services had highest level of participation. The area hospitals, PHC, government school personnel did not participate in planning. Among the private agencies only the missionary hospitals participated. This shows that the level of partnership in planning by PPP were zero. The levels of participation in implementation are high for all the service providers. The levels of participation in evaluation by the service providers showed nominal participation of all the sectors.

Early Infant Diagnosis of HIV for infants and children below 18 months has been rolled out from 1 March, 2010. The programme is operational through 1,157 ICTCs and 217 ART Centres across 31 States. There are seven referral laboratories performing the DNA-PCR test for Early Infant Diagnosis. During 2012-13, 12,169 HIV exposed infants and children less than 18 months of age have been tested under this programme till December 2012[11]. Avina Sarna and Jaleel Ahmad assessed on exploring the barriers to accessing care and treatment for HIV infected children in India. The three most commonly cited problems were the child refusing to take medications, breaking tablets to get correct dose, and children spitting out medications due to bad taste. Barriers to accessing acre included distance from health facilities

and financial difficulties[9].

The care and support services package under NACP-IV (2011-2017) are pediatric ART for children, early Infant Diagnosis for HIV exposed infants, and children below 18 months, nutritional and psycho-social support through Community Care Centers CCC), HIV-TB coordination, treatment of opportunistic infections, drop-in centers for PLHIV networks[11]. Pagakrong and Azar Kariminia studied on survival of HIV infected children. This study describes survival outcomes in a multi center regional cohort in Asia. The high mortality during the first three months of ART and in those with low CD4 counts supports the implementation of early diagnosis and ART initiations[10].

Conflict of Interest- There is no conflict of interest of the authors, attached with this manuscript.

Acknowledgement- Nil

Source of Funding- Self

Ethical Clearance- Informed consent was taken from the participants and the parents of children below 18 years. Confidentiality of the data was maintained. This study is an opinion based study, therefore ethical clearance was not required for it.

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A Correlative Study to Assess the Internet Addiction and Health Status among the Students of SOA University Bhubaneswa

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ABSTRACT

Introduction: With the advancement in media and technologies internet has emerged as an effective tool in eliminating human geographical barriers. However, excessive use of the

Internet has resulted in negative consequences especially among the regular users labeling it as an addiction. The objectives of the study were to assess the prevalence of internet addiction and find a correlation between internet addiction and physical health status among university students.

Method: A descriptive survey approach with cross sectional design was adopted for the study. 264 students were selected by convenient sampling technique from the different colleges of various streams like medicine, dental, nursing, pharmacology and agriculture, who are undergoing graduation and fulfilling the sampling criteria. The data collection instruments used were Internet addiction test (IAT) and Duke Health profile tool to assess the data.

Methodology: Internet addiction test (IAT) is a 20 item questionnaire with 4 options having 1-5 scores consecutively. Maximum score is 100 and minimum score is 20. Researcher has taken the value less than 50 as normal and above 50 as abnormal use of internet. Duke health profile is a 17 item questionnaire with 3 options. Maximum score is 100 and minimum score is 0 and it assesses for physical health, mental health, social health, general health, self-esteem and perceived health.

Results: This study reveals that according to IAT score 85.5% were normal & 14.5% were abnormal in 1st year, 95% were normal & 5% were abnormal in 2nd year, 68.9% were normal & 31.1% were abnormal in 3rd year,10.7% were normal & 89.2% were abnormal 56.2% normal in 4th year.

Study also shows IAT score among various disciplines, 69.2% were normal and 30.8% were abnormal in medical college, 68% were normal and 32% were abnormal in nursing college, 50.5% were normal and 49.5% were abnormal in pharmacology college, 57.5% were normal and 42.5% were abnormal in dental college, 65.6% were normal and 34.4% were abnormal in agriculture college.

Further it was observed through the analysis that there is a statistically significant negative correlation between IAT score and physical health status which shows that as the internet addiction increases individual's health status is decreased.

Conclusion: Study revealed the importance of our concern to the use and misuse of internet among the youth. Most of the matters which go unnoticed could lead to grave dangers to physical and mental health. A comprehensive and detailed study into the concepts for reduction or modification of internet use among youth is vital.

Keywords: *Internet addiction, physical health, College students.*

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INTRODUCTION

With the availability and mobility of new media, Internet addiction has emerged as a potential problem in young people. Based on a growing

research base[9],the American Psychiatric Association visioned to include Internet Use Disorder in the appendix of the fifth edition of the Diagnostic and Statistical Manual for Mental Disorders (2012) for the first time, acknowledging the problems arising from this type of addictive disorder. Adolescents appear to be a population at risk for developing Internet addiction[6] due to variability in developing their cognitive control[1] and boundary setting skills[7]. Internet is being integrated as part of every day's life because the usage of internet has been growing explosively worldwide. It has dramatically changed the current communication scenario and there has been a considerable increase in the number of internet users worldwide in the last decade. Reports reveals that there were about 137 million internet users in India in 2013 and further suggest India as world's second largest in internet use after China in the near future. With the advancement in media and technologies internet has emerged as an effective tool in eliminating human geographical barriers. However, excessive use of the internet has resulted in negative consequences especially among the regular users labeling it as an addiction[3].

There has been an explosive growth in the use of internet not only in India but also worldwide in the last decade. There were about 42 million active internet users in urban India in 2008 as compared to 5 million in 2000[4]. There have been growing concerns worldwide for what has been labeled as "internet addiction the term "internet addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive internet use. Griffith considered it a subset of behavior addiction and any behavior that meets the 6 "core components" of addiction, i.e., salience, mood modification, tolerance, withdrawal, conflict, and relapse. While Davis avoided the term internet addiction, referring it as a dependency "pathological internet use" (PIU). Young linked excessive on psychoactive substances, he instead preferred the term internet use most closely to pathological gambling, a disorder of impulse control in DSM IV and adapted the DSM IV criteria to relate to internet use in the internet Addiction Test developed by her. According to her, various types of internet addiction are cyber sexual addiction, cyber relationship addiction, net compulsions, information overload, and computer addiction.[9]

Objectives of the study were to:

1. identify the prevalence of internet addiction among university students.

2. study the correlation between internet addiction and health status among university students.

MATERIALS & METHOD

The study has used the **descriptive survey approach** with **non-experimental cross sectional design**

Participants: Graduate students of Medical College, Nursing College, Pharmacy College, Computer and business school and Agriculture College of SOA University, Bhubaneswar, Orissa were selected according to the sampling criteria. Permission was taken from each college's head of institution and individual permission was obtained ensuring the confidentiality of the data.

Measures: Tools utilized were the Duke Health profile and internet addiction test, which are both standardized. Questionnaires were filled by the participants itself. The Duke Health profile consists of 17 items covering for physical health, mental health, social health, general health, self-esteem, and perceived health 100 indicates the best health status, and 0 indicates the worst health status.

Internet addiction test tool consisting of 20 items to understand the level of internet addiction in an individual. The tool was developed by Dr. Kimberly Young, the IAT, with the minimum score being 20 and maximum 100. The researcher had considered scores below 50 to be normal and otherwise abnormal internet addiction.

Sample: 264 undergraduate students from various disciplines like medical, nursing, dental, pharmacy and agriculture, who are studying within SOA University, Bhubaneswar were selected by **Purposive sampling technique**

Method: After receiving permission from administration, at the period of data collection researcher had approached the participants directly and explained the purpose and method of using the questionnaires, also ensured the confidentiality of

the data. Once the questionnaires were completed it was scored and interpreted according to the tool. For ethical consideration researcher had taken permissions from the deans of respective colleges and also provided information about the purpose of the data to the participants. Confidentiality of the data has been maintained.

RESULTS

Prevalence of addiction within 1st to 4th years:

Figure 1 shows the IAT score percentages according to year, wherein score less than 50 is considered normal and more than 50 is considered abnormal internet addiction. 85.5% is normal & 16.5% is abnormal in 1st year, 95% normal & 5% abnormal in 2nd year, 68.9% normal & 31.03% abnormal in 3rd year, 10.7% normal & 89.2% abnormal in 4th year, 56.2% normal & 43.7% abnormal in other in SOA university.

Prevalence of addiction within various disciplines:

Table 1 shows IAT score among various disciplines are as 69.2% normal and 30.8% abnormal in medical college, 68% normal and 32% abnormal in nursing college, 50.5% normal and 49.5% abnormal in pharmacology college, 57.5% normal and 42.5% abnormal in dental college, 65.6% normal and 34.4% abnormal in agriculture college.

Correlation between the internet addiction and health status

In order to test the relationship between the university student's internet addiction and health status, Pearson's correlation coefficient was used. Following null hypothesis was stated to test the significance of relationship between internet addiction and health status and was tested at 0.05 level of significance. The data in presented in the table 2 shows that Pearson 'r' computed between internet addiction and health status that there is significant negative relationship (r= -0.21995, P=<0.001). thus it is interpreted that internet addiction affects the health status of the students.

DISCUSSION

This study reveals that according to IAT score 85.5% is normal & 14.5% is abnormal in 1st year, 95% normal & 5% abnormal in 2nd year, 68.9% normal & 31.1% abnormal in 3rd year, 10.7% normal & 89.2% abnormal in 4th year, 56.2% normal & 43.7% abnormal in other in SOA university. These results could be compared with a study done by Deepak Goel, Alka Subramanyam, and Ravindra Kamath in 2009 among students in Mumbai and found to have about 74.5% were moderate (average) users. 0.7% of students were found to be addicts.[2]

IAT score among various disciplines are as 69.2% normal and 30.8% abnormal in medical college, 68% normal and 32% abnormal in nursing college, 50.5% normal and 49.5% abnormal in pharmacology college, 57.5% normal and 42.5% abnormal in dental college, 65.6% normal and 34.4% abnormal in agriculture college. Similar study carried out by researchers at universities where they conducted a study on internet addicts suffer withdrawal symptoms like drug users. Sixty volunteers with an average age of 25 were tested to determine their internet use. Result shows that around half of young people spend so much time on the net that it has negative consequences for the rest of their lives.[8]

Study reveals a statistically significant negative correlation between internet addiction and health status among the university students. Similar results are observed in a study conducted by researchers, wherein several factors are predictive of problematic Internet use, including personality traits, parenting and familial factors, alcohol use, and social anxiety. They concluded that Although Internet-addicted individuals have difficulty suppressing their excessive online behaviors in real life, little is known about the patho-physiological and cognitive mechanisms responsible for Internet addiction. Due to the lack of methodologically adequate research, it is currently impossible to recommend any evidence-based treatment of Internet addiction.[5]

IMPLICATION

Nursing Practice: - These findings will help the nursing professional to identify the causes of physical problems in adolescents

- These results could help to diagnose the problematic internet use among students.

Nursing Education

- This study finding can be utilized to prepare a curriculum or health education to improve the mental health status of the students.

- Nurse educator should educate the adolescent regarding the effect of internet on physical & mental health which is useful to control the excessive internet use among adolescent.

Nursing research

-The findings can be utilized for conducting research to assess the problematic internet use & its psychopathological effect among students.

RECOMMENDATIONS

On the basis of findings of the study, it is recommended that-

- Similar study can be under taken with larger sample so that the result can be generalized.

- A study can be done to evaluate the positive and negative effect of internet use among students.

- A study can be conducted to find out the problematic internet use of younger student groups in other schools and other stream of study.

- A survey study could be initiated to check the hospitalized adolescent's internet use

- An interventional study to improve the physical status of adolescents with problems due to internet use could be done

Strengths: the study emphasis on the need of concern towards unattended and uncontrolled internet use. Easy and cost effective method to assess the internet over use and physical status arising from it among the students studying professional courses.

Limitations: the study has been limited to one university and has utilized less samples within small time frame, which hinders the generalizability of the study

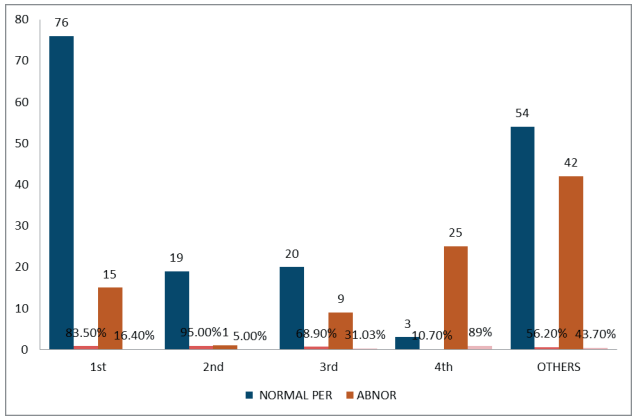

Fig 1: Prevalence of addiction within 1st to 4th years n=264

Table 1: Prevalence of addiction within various disciplines n=264

Disclipines	Normal	Abnormal
Medical College (48)	69.2%	30.7%
Nursing College (80)	68%	32%
Pharmacy College (43)	50.5%	49.5%
Dental College (41)	57.5%	42.5%
Agricuture College (52)	65.6%	34.4%

Table 2: Correlation between the internet addiction and health status n=264

Variables	R value	P value	Remarks
Internet addiction physical health status	-0.21995	P= <0.001	Significant negative correlation

CONCLUSION

There is negative correlation found between IAT scoring & physical health status, that is, from the study it could be understood that increased addiction towards internet could lead to decrease in physical status of the university students. So it could be concluded that more internet addiction causes physical problems.

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Conflict of Interest: Nil

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A Study to Assess the Knowledge of Higher Secondary School Teachers Regarding Substance Abuse in Selected Schools of Moradabad, Uttar Pradesh

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ABSTRACT

Background of the study: Drug abuse is costly to our society as a whole but is especially to our youth. One of the best ways to combat the drug use among teenagers is to begin prevention efforts before young teen start using drugs.. The most common substances of abuse were and still are legal and easily available to citizen of all ages. Medical doctors privately treated cases of addiction.

Materials and Method: Non experimental descriptive research design was adopted for the present study. A structured questionnaire was prepared and used to collect the data. The sampling technique adopted for the study was convenient sampling. Pilot study and final study was conducted in Delhi public school and Spring field public school. The data collected was analyzed by means of inferential and descriptive statistics.

Results: The findings of the study revealed that, majority of school teachers 49(81.6%) had moderate knowledge, 6(10%) of school teachers had good knowledge and 5(8.3%) of school teachers had mild knowledge. The obtained chi-square value showed that there was significant relationship between the knowledge of higher secondary school teachers regarding substance abuse and its identification with selected demographic variables such as age.

Conclusions: The present study concludes that there is a need to asses the knowledge of school teachers regarding substance abuse and to develop a planned teaching programme to enhance awareness regarding this issue among the school authorities and students.

Keywords: *Knowledge, adolescents, and substance abuse.*

INTRODUCTION

The epidemic of substance abuse in young generation has assumed alarming dimensions in India. Changing cultural values, increasing economic stress and dwindling supportive bonds are leading to initiation into substance use. The problem in India is there are no sensitization programmes about drug abuse in schools or for children out of school. There are very few to no health centers that deal with child substance abuse problems, especially in the rural areas. In India 20 million children a year and nearly 55,000 children a day are drawn into a tobacco addition. According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million[1].

Teen drug abuse is a common and serious unsolved problem. A drug of abuse is any substance, taken through routes of administration, that alters the mood, the level of perception, or brain functioning. Such drugs include substance range from prescribed medications to alcohol to solvents. Almost all these substances are capable of producing changes in mood and altered stages of learning. "The diagnostic criteria for abuse require evidence of repeated occurrences within a twelve month period of any social, legal,

or interpersonal problems related to the substances" (Masline). Drug abuse can range from smoking marijuana to taking ecstasy to huffing solvents. All of these drugs loss of brain cells. Americans have consistently identified drug use as being among to top problems confronting the nation. Yet many do not recognize the degree to which own children, own schools, and communities are at risk[2].

Parry et al., 2004The strongest and most consistent predictor of substance use among children and adolescents is their peers' substance use[3].

Adolescence is a period in which cognition and brain undergo dramatic parallel development. Whereas chronic use of alcohol and marijuana is known to cause cognitive impairments in adults, far less is known about the effect of these substances of abuse on adolescent cognition, including possible interactions with developmental processes[4].

Substance abuse disorder is among the leading public health problems in modern day world as they cause enormous human suffering in terms of morbidity, mortality and economic loss; and threatens the very social fabric of almost all communities around the world and as such is a great threat to the global health, economy and peace. Like most social behaviors the etiology of substance abuse is complex, varying through time, geographical regions and by demographic characteristics. Among young people, students are the most vulnerable group as the initiation into substance abuse first starts during this period[5].

MATERIAL & METHOD

Based on the geographical proximity, feasibility of conducting the study and availability of the samples, the study was conducted in schools of Uttar Pradesh, India. Sample consisted of Higher secondary school teachers. Sample size was 60.The sampling technique adopted for the study was convenient sampling. Based on the review of literature, discussion with experts and with investigator's personal and professional experience a structured knowledge questionnaire consisting of 28 questions was developed. Content validity of the tool was established on the basis of opinion from six psychiatric nursing experts and one from Biostatistician. The tools were sent to them with a request to go through the tool and to suggest necessary modification. The suggestions and minor correction recommended by the experts were incorporated and instrument was finalized.

The final tool was tested for reliability. The reliability of the tool was established from data of 6 samples by using KR-20. A score of 0.81 was obtained as r-value, which was highly positive. Hence, the tool was found to be statistically highly reliable.

Pilot study and final study was conducted after taking the administrative approval from the Delhi public school and Spring field public school

After obtaining the official permission from the concerned authorities and informed consent from the samples, the researcher collected data. Structured knowledge questionnaire was administered for the collection of data and was carried out with the given period of four weeks.

Before administering the structured questionnaire purpose of the study was explained with self introduction and the subjects were assured that the details given by the subjects will be kept confidential then the questionnaire were distributed and the samples took an average time of 30-40 minutes to fill the questionnaire.

RESULTS & DISCUSSION

Section-A:- Description of demographic Variables of higher secondary school teachers in selected schools.

Table-1: Frequency and percentage distribution demographic variables of higher secondary school teachers in selected schools according to sex, age, education, family, religion, and years of experience. n=60

Sl. No	Demographic variables	Number	Percentage
1.	**Age (in Years)**		
	a) 20-30 years	10	16.66
	b) 31-40 years	30	50
	c) 41-50 years	14	23.33
	d) 51-60 years	6	10
2.	**Sex**		
	a. Male	34	56.66
	b. Female	26	43.33
3.	**Education**		
	a. UG	6	10
	b. PG	54	90
	Family		
	a. Nuclear	23	38.33
	b. Joint	37	61.66
5.	**Religion**		
	a. Hindu	43	71.66
	b. Muslim	1	1.66
	c. Sikh	-	-
	d. Christian	16	26.66
	e. Others	-	-
6.	**Years of experience**		
	a. 1-5 years	17	28.33
	b. 6-10 years	18	30
	c. 11-15 years	10	16.66
	d. 16 years above	15	25

Majority of school teachers 30(50%) belong to the age group of 31-40 years. Maximum school teachers 34(56.66%) were male. Majority of school teachers 55(91.66 %) were PG. Majority of school teachers 37(61.66%) belong to joint family Maximum school teachers 43(71.66%) were Hindus. Majority of them 18(30%) had 6-10 years of experiences.

Section-B: Assessment of the knowledge of school teachers in selected schools.

Table – 2: Frequency and percentage distribution of the knowledge of school teachers in selected schools.

Level of knowledge	No	%
Good (0-8%)	6	10
Moderate (9-16%)	49	81.6
Poor (17-24%)	5	8.3

Assessment on knowledge revealed that, majority of school teachers 49(81.6%) had moderate knowledge, 6(10%) of school teachers had good knowledge and 5(8.3%) of school teachers had mild knowledge.

Section C- : Determination of the relationship between the knowledge of higher secondary school teachers regarding substance abuse and its identification with selected demographic variables.

Table-3: Determination of the relationship between the knowledge of higher secondary school teachers regarding substance abuse and its identification with selected demographic variables such as sex, age, education, family, religion, years of experiences.

Sl. No	Demographic variables	Sample		Level of knowledge				Chi square
				5 median		>Median		χ^2
		No	%	No	%	No	%	
1.	**Age (in years)**							9.10 df=6 *S
	a. 20-30 years	10	16.66	3	5	7	11.66	
	b. 31-40 years	30	50	13	21.66	17	28.33	
	c. 41-50 years	14	23.33	6	10	8	13.33	
	d. 51-60 years	6	10	4	6.66	2	3.33	

The obtained chi-square value showed that there was significant relationship between the knowledge of higher secondary school teachers regarding substance abuse and its identification with selected demographic variables such as age.

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Ethical Clearance: Approval for the study was gained from college dissertation committee on March 2014.

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Conflict of Interest: None

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Perceived Family Support and Quality of Life of Elderly Population

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ABSTRACT

Ageing is an unavoidable and irreversible change as a result of demographic transition in all societies. Family support for the elderly has become a very important issue in examining their overall well-being. Perceived Family Support is playing a key role in determining the Quality of Life of aged people. **Purpose:** The main aim of the research is to study the Perceived Family Support and Quality of Life of elderly people. **Method:** A co relational descriptive design with quantitative and qualitative approach was followed to obtain error free results. Two hundred thirteen elderly people were consecutively recruited from the randomly selected setting. **Result:** The average age of the study subjects was 68 years with 64.8% of them being females and 52.6% of them were living on their own. Most (61.5%) of them have no formal education, 78.9% were financially dependent on their family members for their basic needs and 81.7% live in joint family setting. Nearly two third (68.5%) of subjects were diagnosed with chronic illnesses for which they were taking treatment, The majority (82.6%) of perform their daily activities independently, 70% of get support from their family members and 45.1% felt only health as their major problem. The total obtained mean score for Perceived Family Support was 2.81 and for Quality of Life were 2.71. The Quality of Life of elderly people were positively (r = 0.58) correlated with their Perceived Family Support. The presence of Perceived Family Support 0.4 times increases the Quality of Life of elderly people. **Conclusion:** This study found that the higher the family support the better the Quality of Life. High levels of family support may represent a protective factor in increasing the Quality of Life of elderly people. To promote Quality of Life of the elderly, Governmental and nongovernmental organizations should establish activities that enhance elderly people self-esteem and promote good family relationship.

Keywords: *Elderly People, Quality of Life, Perceived Family Support.*

INTRODUCTION

Ageing is a normal biological phenomenon.[1] The need for support and the amount of support received by older people has been a major concern for social gerontologists. In the past, the family has always played an important role in determining the status and security of older people. In some societies these senior people were accorded high respect, authority and given more economic and social security within the extended family system.[2]

At any age, the family provides to their family member individual emotional, social, and economic support[3]. Quality of Life is essential for all individuals.[4] Mudey A, et al defined that "Quality of Life is a holistic approach that not only emphasizes on individuals' physical, psychological, and spiritual functioning but also their connections with their family environments".[5] The majority of the elderly people evaluate their Quality of Life positively on the

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basis of social contacts, dependency, health, material circumstances and social comparisons.

Indian society had traditional informal support systems such as joint family, kin and community. Due to modernization, urbanization and globalization, the capacity of the traditional informal support system is slowly weakening and is not in a position to fulfill the basic needs of the elderly. The traditional joint family system in India is on the decline and more families are becoming nuclear. Due to this, it is important to explore the current nature of support for the elderly in families.[6]

In India the older population will increase dramatically over the next four decades. India's population aged 60 and older is projected to climb from 8% in 2010 to 19% in 2050, according to the United Nations Population Division (UN 2011).[7]

The ability of the seniors to cope with the changes in health, income and social activities as they age depends to a great extent on the support the person gets from his/ her family members. This support, it may be said, is more culturally based rather than modern values.6

Many of the researchers have shared their experiences and given their views regarding seniors wellness in different family system. This Researcher believes that the Quality of Life of an individual directly depends upon the support which he receives from his family. Home is the place where the individual growth from childhood to old age, and family members are the ones who help, guide and support him in all phases of his life. The family provides physical, emotional, psychological and financial support to elderly people and thus contributes in improving their overall Quality of Life. But in the absence of family support the elderly people feel isolated and abanded, have difficulty in dealing with problems, get agitated quickly, and thus it affects their overall Quality of Life.

The investigator hypothesized that there will be a strong relationship between Perceived Family Support and Quality of Life of elderly people. The main objectives of the study are to explore the Perceived Family Support of elderly people, to determine the Quality of Life of elderly people and to find relationship between Perceived Family Support and Quality of Life.

METHOD

A co relational descriptive design with Quantitative and Qualitative approach was used to study relationship between Perceived Family Support and Quality of Life of elderly people. 213 elderly people were consecutively recruited from the randomly selected wards in a selected semi urban area of the state of Uttarakhand, India. Elderly with known mental disorder and clinically diagnosed chronic Illness were excluded from the study. Perceived Family Support – Likert scale was used to measure the Perceived Family Support of the elderly people. The Quality Of Life of elderly's was studied through a standardized WHOQOL-BREF. Informed consent was obtained from all the study participants and Ethical committee permission was taken from Himalayan Institute Hospital Trust.

RESULT

Table 1. Frequency and percentage wise distribution of elderly people according to socio-demographic characteristics.

Socio demographic variables	Frequency (f)	Percentage (%)
Gender		
• Male	75	35.2
• Female	138	64.8
Marital Status		
• Married	101	47.4
• Widow	110	51.6
• Divorced/ Separated	02	0.9

Table 1. Frequency and percentage wise distribution of elderly people according to socio-demographic characteristics. (Cont...)

Educational Status:		
• No formal education	132	62.0
• Primary education	37	17.4
• High school education	26	12.2
• Intermediate	13	6.1
• Graduation or above	5	2.3
Financial Dependency		
• Yes	168	78.9
• No	45	21.1
Living with:		
• Spouse	20	9.4
• Spouse and Unmarried Children	19	8.9
• Daughter Family	11	5.2
• Son Family	101	47.2
• Relative Family	2	0.9
• Spouse and Married Son Family	60	28.2
Presence of Medically Diagnosed illness:-		
• Yes	146	68.5
• No	67	31.5
Activity of daily living		
• Independent	176	82.6
• Need some assistance	37	17.4
Source of support		
• Spouse	53	24.9
• Married son	74	34.7
• Other family members	9	4.2
• All family members	66	31.0
• No support	11	5.2
Problem felt by elderly		
• Health	42	19.7
• Economic	13	6.1
• Social adjustment	2	0.9
• Health and Economics	59	27.7
• Health and Social adjustment	2	0.9
• Economic and Social adjustment	4	1.9
• Health, Economic and Social adjustment	37	17.4
• No problem	54	25.4

Table No.1 illustrates that the average age of elderly people was 68 years, 64.8% of elderly people were females and 52.6% elderly people were single. Most (61.5%) of the elderly people have no formal education where as 78.9% elderly people were financially dependent on their family members. Most (81.7%) of the elderly people live in joint families, 68.5% elderly people have medically diagnosed illnesses for which were taking treatment, 82.6% elderly people live independently. A large proportion (70%) of elderly people get support from a family member and 45.1% of elderly people felt as their major problem was only health.

Table 2. Mean and SD and interpretation of perceived family support.

			N = 213
S.No		**Mean ± SD**	**Interpretation**
1	Physical domain	2.98 ± 0.13	Some time get support
2	Psychological domain	2.78 ± 0.78	Some time get support
3	Social domain	2.80 ± 0.20	Some time get support
4	Environmental domain	2.68 ± 0.75	Some time get support
5	**Total score**	2.81 ± 0.16	Some time get support

The overall obtained mean Perceived Family Support score was 2.81 with the dispersion of 0.16. This means that elderly people perceive that they get often support from their family members. All the four domains mean score also reflects that elderly people perceive they are often get support from their family members.

Table no. 3. Mean and SD and interpretation of Quality of life.

			N = 213
S.No		**Mean ± SD**	**Interpretation**
1	Physical domain	2.58 ± 0.21	Neither poor nor good
2	Psychological domain	2.73 ± 0.24	Neither poor nor good
3	Social domain	2.90 ± 0.00	Neither poor nor good
4	Environmental domain	2.76 ± 0.07	Neither poor nor good
5	**Total score**	2.71 ± 0.19	Neither poor nor good

The total Quality of Life obtained mean score was 2.71 with dispersion of 0.19. This means that elderly people are rated neither poor nor good Quality of Life. All the four domains of Quality of Life mean score also reflects that elderly people are rated neither poor nor good in their Quality of Life.

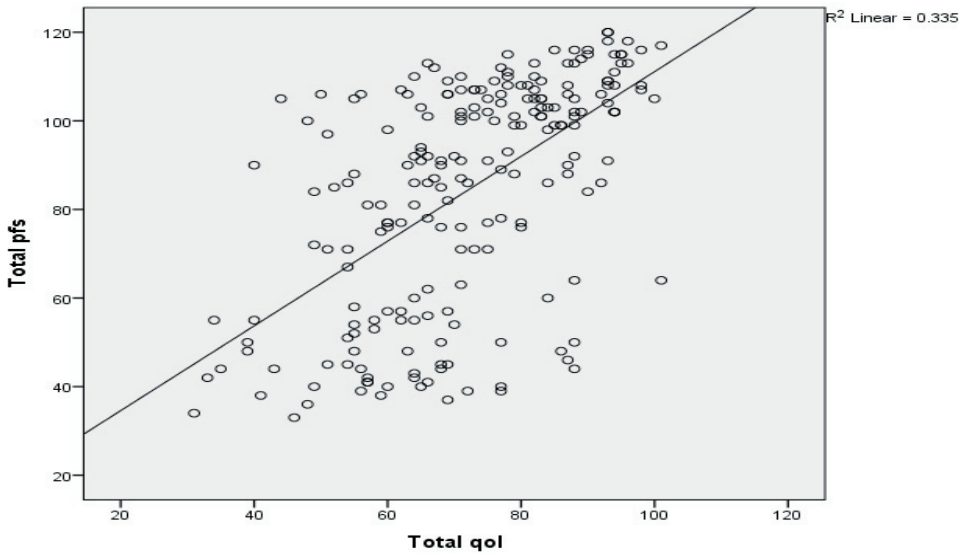

Figure No. 1 Relationship between Perceived Family Support and Quality of Life of elderly people

Figure 1 depicts that there was a moderate (0.58) positive statistical correlation between Perceived Family Support and Quality of Life. Hence it can be interpreted that as the Perceived Family Support significantly increases among elderly people their Quality of Life also increases moderately.

Table 4. Regression between Perceived Family Support and Quality of Life

N = 213						
S. No		**R**	**R square**	**Constant (QOL)**	**Regression Coefficient PFS(β)**	**Significance**
1	Physical domain	.338	.114	13.401	0.343	<0.01
2	Psychological domain	.560	.313	10.014	0.216	<0.01
3	Social domain	.616	.379	4.259	0.148	<0.01
4	Environmental domain	.586	.343	14.547	0.999	<0.01
5	Total PSF score	.579	.335	42.532	0.350	<0.01

Table No 4. Highlighted that, whenever one unit of PSF increases, 0.35 times QOL will be increased at the level of p = 0.05. Also in the absence of Perceived family Support, the elderly people reported they were attained approximately half of the Quality of life.

DISCUSSION

In this study elderly people reported that they often got support from their family members. It might be happen because most of the elderly people live in joint family and their family members give more importance to children's and ignoring the elderly people. These findings were supported by Malathum P study results that the elderly people were perceived higher family support from their family members.[1] also Minhat HS, Amin RM (2012) study results show that majority (85.4%) elderly people perceived they were receiving higher social support from family members compared to only 49.6% were receiving higher social support from friends.[2] It is contradictory to Gopal K I, Nath A (2008) findings that 75% of elderly people were economically dependent on their children and grandchildren, also Over 81% of the elderly confessed to having increasing stress and psychological problems, while 77.6% complained about mother-in-law/daughter-in-law increased conflicts regarding dependency.[3]

Elderly people were experiencing neither poor nor good quality of life and also it reflects in all the domains of quality of life like physical, psychological, social and environmental. It might be associated with the fact that elderly people often got support from their family members and most of the elderly people perform their daily living activity independently. These findings were supported by Kumar SG, Majumdar A (2014) that the Quality of Life elderly people were average.[4] and by Naing MM, Nanthamongkolchai S, Munsawaeng C (2010) majority (80.9%) of the elderly people had moderate level of quality of life. 4 also consistent with Sirivanarungsan P et al (2008)who found that most elderly people had a moderate level of quality of life.[10]

Co relational statistics expressed a significant positive correlation between perceived family support and quality of life, which means as the family support of elderly people increases the quality of life of elderly people also increases and vice versa. Quality of life of elderly people was increased 0.4 times, when ever there was an increase in PFS. It might be associated with fact that those family members who gave love and respect to their elderly people, leads to good quality of life. It was supported by Thompson MG, Heller K. (1990) Elderly women with low perceived family support had poorer psychological well-being regardless of perceived support from friends or network embeddedness.[5]

Reichstadt (2010) noted that many older adults who reported "feeling that somebody cares" played an important role in this sense of well being. Also social involvement contributes to a positive self attitude and self acceptance. Antonucci, Birditt, and Webster, (2010) state that social interaction and support with spouses, family and friends can provide one with an acceptance of self and lend to a decrease in mortality.[6] Netuveli G et al found that the elderly people quality of life was improved by having trusting relationships with family and friends, frequent contacts with friends, and living in good neighborhoods. In addition, Nanthamongkolchai S et al found that family relationships had an influence the happiness amongst elderly females.[10] Malathum P study results that the elderly people were perceived higher family support from their family members. Perceived family support and perceived friend support were positively correlated with life satisfaction.[8]

The study is limited due to the presence of family members during data collection making elderly people uncomfortable to express the real experience/ situation.

CONCLUSION

Elderly people expressed the poor support from their family members to fulfill their physical, psychological, social and environmental needs. Family support is one of the important predictors in to measuring the Quality of Life of elderly people. Quality of Life of elderly people improves when they get good support, care and concern from family members. The family members, counselors governmental and non governmental agencies must focus and plan an interventional program for better Quality of Life of elderly people. This well planned interventional programme will help to reduce the number of admissions in geriatric home.

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Effectiveness of a Multi- Component Educational Intervention on Knowledge and Compliance with Hand Hygiene among Nurses in Neonatal Intensive Care Units

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ABSTRACT

Background: Hospital acquired infections are a major cause of morbidity and mortality in neonatal intensive care units. Appropriate hand hygiene is singled out as the most important measure in preventing these infections. **Objective:** The present study aimed to assess the effectiveness of a multi-component educational intervention on the knowledge and compliance with hand hygiene guidelines among nurses working in Neonatal Intensive Care Units. **Method:** The data was collected from 60 nurses working in 3 level III Neonatal Intensive Care Units of selected private hospitals in Kerala. A pre experimental pre-test post-test design was adopted for the study. The data collection tool consisted of a knowledge questionnaire and an observation checklist to assess the hand hygiene compliance, developed based on WHO hand hygiene guidelines. **Results**: Before the implementation of educational intervention, majority, (56.66%) had only moderate knowledge on hand hygiene and none of them had good level of knowledge. With regard to compliance with hand hygiene guidelines, majority, (65%) demonstrated poor compliance while none of them showed good compliance. There was a statistically significant improvement in the nurse's level of knowledge and compliance with hand hygiene guidelines after the completion of the multi-component educational intervention ($P<0.001$). **Conclusion:** Implementation of multi-component educational program with continues monitoring and performance feedback leading to a sustained high level of appropriate hand hygiene practices among nursing personnel.

Key words: *hand hygiene, educational intervention, knowledge, compliance, nurses, NICU*

INTRODUCTION

Health care-associated infection (HAI) is a serious global public health problem, causing the suffering of 1.4 million people across the world at any given time.[13] According to World Health Organization (WHO), out of 5 million global neonatal deaths, 98% occur in developing countries. Out of these 1.6 million deaths occur due to neonatal infections. A major proportion of this is health care associated infections. HAI is a common occurrence in neonatal intensive care units in India.[4] Healthcare associated infections in the Neonatal Intensive Care Unit (NICU) are the most significant cause of morbidity and mortality among critically ill neonates.[5-6]

Several studies on hand hygiene indicates that HAIs are associated with the transmission of pathogens from the hands of health care professionals (HCPs) to hospitalized individuals.[7-8]

Bacterial colonization of the finger nails, rings and hands of health care workers have been linked to the transmission of common nosocomial pathogens among neonates.[9] Hand Hygiene (HH) is an important aspect of the care provided to infants hospitalized in the NICU. It refers to hand-washing with soap and water, or hand antisepsis using an antiseptic soap or alcohol-based hand- rub.[10] The hands of NICU personnel are important and efficient vectors of pathogen transmission from colonized or infected infants to susceptible infants.[6] Successful implementation of strategies for the prevention of

HAIs in the NICU begin with hand hygiene.[11]

Although evidence based guidelines promoting hand hygiene among health professionals are published and supported by several organizations, there is considerable evidence that compliance with these measures is suboptimal. World Health Organization (WHO) demonstrates that the compliance of the healthcare professionals on hand hygiene is estimated to be between 5% and 81%, with an average below 40% [10].

An extensive review of 42 articles suggests that elements of nursing care are associated with the prevalence of health care associated infections. HAI rates may be reduced by approximately one-third when health care professionals follow HH guidelines. For the neonate, it is reported that an increase in HH by NICU nurses can significantly decrease HAIs and their detrimental sequelae. However, compliance with HH recommendations by NICU nurses is persistently low, ranging from approximately 40-50%.[12- 13] NICU nurses who work closely with the neonates should be well aware that critically ill and premature neonates have a reduced immunological capacity to combat infections.[14] Indeed most NICU nurses agree that infections are a particular problem in the NICU, and that hand washing and infection control practices should be an important part of nursing care.[15] Despite this reported understanding, HH rates among nurses remains low.

It is a challenge for most hospitals to improve the staff's compliance with HH. It is widely acceptable that the compliance improvement can be achieved only through multi-component and interdisciplinary strategy. An observational study to assess the impact of a hand hygiene promotion program on rates of compliance with hand hygiene showed an improvement in the rate of compliance from 89% to 100% at one month after the intervention.[6] An educational intervention program by Nteli et al on compliance with hand hygiene in a PICU revealed that the degree of the staff's compliance with hand hygiene after the educational program increased from 30.4% to 71.5%.[16] .

Since nurses spend more time with patients than any other health care workers, their compliance with hand washing guidelines seems to be more vital in preventing the disease transmission among patients. The findings of the previous studies support that multi-component educational programmes on hand hygiene can contribute to increasing the degree of knowledge and compliance with the international recommendations of hand hygiene and can reduce the incidence of hospital acquired infection in NICUs.

MATERIALS & METHOD

Research approach: Quantitative research approach

Research design: Pre experimental one group pre-test post-test design

Setting: This study was conducted in 3 level III NICUs of selected private hospitals in Kerala

Sample and sampling technique: Total sample comprises of 60 nurses working in NICUs selected through purposive sampling technique from selected hospitals.

Tools: demographic data sheet, structured knowledge questionnaire and observation checklist developed based on WHO hand hygiene guidelines for health care settings (2009).

Data collection process: The study was conducted between March and May 2013 in 3 level III NICUs of selected private hospitals in Kerala. After obtaining ethical clearance and written permission for data collection from the hospital authorities, compliance to hand hygiene guidelines was assessed through direct observation. Each subject was observed for five hand hygiene opportunities based on WHO's 5 moments of HH. During assessment of each opportunity, compliance to WHO recommended guidelines such as preliminary preparation like hands are free from sleeves and jewellery, correct steps, duration of hand hygiene technique and correct application of HH agent were monitored and adherence to each guideline was given a score of 1. Based on the total score, level of compliance was categorized in to poor, moderately good and good compliance. The observations were made by the investigator. Nurses were aware of the presence of investigator in the unit for general observation of NICU nursing practice but in order to avoid the possibility of hawthorn effect, they were not aware when of exact timing and procedure on which

observation being carried out. After the observation of hand hygiene practice, knowledge questionnaire on hand hygiene guidelines was administered to each participant. Based on the total obtained score, level of knowledge was categorized as poor, average and good.

After baseline assessment, a multi-component educational intervention was implemented which included distribution of written guidelines and educational materials to nurses, explaining the various aspects of WHO hand hygiene guidelines, theoretical discussions and practical demonstration of hand hygiene technique, display of hand hygiene posters regarding the hand hygiene indications, application methods and duration, display of promotional posters like "clean hands save lives", "infection prevention: It's In Your Hands" as reminders throughout the NICU. The content of the educational materials and posters was based on WHO guidelines on hand hygiene in healthcare settings.[2]

After the completion of the baseline assessment, along with educational program, the nurses were given performance feedback on their level of knowledge on hand hygiene practice and over all poor compliance with hand hygiene guidelines, to enhance the responsibility awareness and sustained behavioural change. A post test was carried out one month after baseline assessment using the same tool to assess the change in knowledge and compliance with hand hygiene guidelines.

FINDINGS

Among 60 nurses, more than half of the participants (58.33%) were between 25-35 years of age and the professional qualification of the majority (71.67%) was General Nursing and Midwifery and the remaining participants were graduated in BSc Nursing and none of the participants had post graduation. Majority, (61.67%) had 1-4 years of working experience in NICU and only 25% of the total subjects had previous exposure to infection control workshops.

Table 1 : Distribution of staff Nurses according to their Demographic characteristics(N=60)

Sl No	Selected demographic variables	Characteristics	Frequency	Percentage
1	**Age in years**	< 25	17	28.33
		25-35	35	58.33
		36-45	7	11.67
		> 45	1	1.67
2	**Professional Qualification**	GNM	43	71.67
		BSc N	17	28.33
3	**Total years of experience**	<1 year	5	8.33
		1-4 years	36	60.00
		5-10 years	11	18.33
		>10	8	13.33
4	**Yrs of experience in NICU**	<1 year	7	11.67
		1-4 years	37	61.67
		5-10 years	12	20.00
		>10	4	6.67
5	**Previous infection control training**	Yes	15	25.00
		No	45	75.00

Table 2 : Frequency and percentage distribution of Nurses on level of knowledge before and after the educational intervention(N=60)

Level of knowledge	Pre Intervention		Post intervention	
	Frequency	Percentage	Frequency	Percentage
Poor	26	43.33	---	---
Average	34	56.66	---	---
Good	---	---	60	100

Before the implementation of educational intervention, majority, (56.66%) had only moderate knowledge on hand hygiene and none of them had good level of knowledge while after the educational program, 100% of them had good level of knowledge on hand hygiene guidelines.

Table 3 : Frequency and percentage distribution of Nurses on level of compliance to hand hygiene before and after the educational intervention(N=60)

Level of knowledge	Pre Intervention		Post intervention	
	Frequency	Percentage	Frequency	Percentage
Poor	39	65.00	---	---
Moderately Good	21	35.00	13	21.67
Good	---	--- ---	47	78.33

With regard to compliance to hand hygiene guidelines, majority, (65%) demonstrated poor compliance, while none of them showed good compliance with hand hygiene guidelines during pre intervention assessment. Whereas after the implementation of educational intervention, 47 (78.33%) demonstrated good practice while none of them showed poor compliance with hand hygiene guidelines. During the pre-intervention phase, the percentage of compliance with hand hygiene opportunities was 28% (84 observations of compliance from a total of 300). During the post intervention phase, the percentage of compliance with hand hygiene opportunities went up to 90% (271 observations out of 300).

Table 4: Comparing the mean scores of Pre and Post intervention level of knowledge and compliance to hand hygiene (N=60)

Variables	Pre intervention		Post intervention		MD	t	P value
	Mean	SD	Mean	SD			
Level of knowledge	3.57	0.83	9.00	0.00	-5.43	-50.652	<0.001 *
Level of compliance	3.32	0.89	9.61	1.12	-6.30	-45.26	<0.001

* Significant

There was a statistically significant difference in the mean knowledge scores ($t = -50.652$, $P<0.001$) and compliance score ($t = -45.26$, $P<0.001$) before and after the implementation of educational intervention on hand hygiene.

With regard to association between pre intervention level of knowledge and compliance to hand hygiene with selected demographic variables like age, professional qualification, years of experience in NICU and previous attendance to infection control workshops, the chi-square value showed a statistically significant association only between previous attendance with infection control workshop by nurses and pre intervention level of knowledge ($\chi 2$= 10.95, P<0.001).

DISCUSSION

The present study revealed that, the knowledge of nurses on hand hygiene guidelines was moderate and compliance with hand hygiene was poor among nurses before the implementation of educational intervention. During the pre-intervention phase, the percentage of compliance with hand hygiene opportunities was 28% (84 observations of compliance from a total of 300). Consistent findings were reported by Nteli C et al[16] who found the hand hygiene compliance among nurses was only 31.8% before the implementation of an educational programme. In the present study, during the post intervention phase, the percentage of compliance with hand hygiene opportunities went up to 90% (271 observations out of 300). It showed that the implementation of a multi-component educational intervention results in a significant improvement in the hand hygiene compliance among nurses in the NICU. Similar findings have been observed in a study by Picheansathian W.[17] who evaluated the effectiveness of a promotion programme on hand hygiene compliance in a neonatal intensive care unit, wherein the compliance was observed to be 6.3% before intervention and was increased to 81% after the intervention.

Consistent findings were reported in Nteli C et al[16] study which showed a significant improvement in the hand hygiene compliance in a PICU where in the compliance rate was increased from 31.8% during the baseline period to a staggering 67.7% after the implementation of the education programme.

Knowledge of nurses in NICUs on hand hygiene guidelines was moderate before intervention. Consistent findings were reported by Nair SS et al[18] who also found a moderate level of hand hygiene knowledge among nursing personnel.

With regard to the association between pre-intervention level of knowledge and compliance with hand hygiene guidelines, a significant association was found between previous attendance of infection control workshop by staff nurses with level of knowledge (P= <0.001).

The present study findings are in an absolute agreement with various other similar research findings that after educating the staff, there is a big improvement in the compliance with the hand hygiene procedures as far as the international standards for hand hygiene are concerned.[6-7,16-17]

WHO supports the participation of the health care professionals in programs that prevent infections and improvement of the compliance level.[10,19] Therefore organization of multi-component comprehensive educational programs which includes the different methods adopted in the present study will helps to achieve maximum results.

CONCLUSION

Even though the compliance with hand hygiene among nurses in NICU remains low, this study shows that the compliance can be improved by the implementation of a need based multi-component educational intervention. Findings of the study recommends that hospitals should implement hand hygiene promotion programmes among nurses by using multiple approaches and persistent encouragement and interventions in order to achieve sustained high level of appropriate hand hygiene practices among nurses working in various units of hospital settings.

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Undertaking Systematic Reviews in Nursing

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ABSTRACT

Health care knowledge is rapidly evolving with inexorable volumes of research based information getting published every day. Systematic reviews provide comprehensive and unbiased summaries of a research on a single topic. Systematic reviews are considered as the gold standard for summarizing evidence found in research literature. The objective of this article is to sensitize nurses regarding systematic reviews by summarizing major steps and process involved in doing a systematic review. Doing a systematic review requires significant planning and execution. This article is an introductory description on how to undertake a systematic review. A thorough understanding of systematic review is necessary to make a quality review. Following the systematic rigorous methodology helps to reduce bias and improve the reliability and accuracy of conclusions.

Keywords: *Evidence based nursing, Nursing, Systematic review, Meta-analysis.*

INTRODUCTION

Health care knowledge is rapidly evolving with inexorable volumes of research based information getting published every day. It is not advisable to make clinical decisions based on results of an individual study. Systematic reviews provides a means of having comprehensive and unbiased summaries of research on a single topic. This helps nurses to rapidly keep abreast with the current knowledge required for safe practice. When nursing practice is evidence based, patients will receive nursing care that is safe and effective that promotes comfort and facilitates best outcome.[1]

Systematic reviews provide comprehensive and unbiased summaries of a research on a single topic. A high quality systematic review is considered as the most reliable source of evidence. Systematic reviews are considered as the gold standard for summarizing evidence found in research literature.[2] The objective of this article is to sensitize nurses regarding systematic reviews by summarizing major steps and process involved in doing a systematic review.

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TERMS ASSOCIATED WITH REVIEWS

Various terms are widely used in association with reviews and are often confusing to readers. The widely known reviews are narrative review, scoping review, systematic review and meta-analysis.

Narrative Review: Traditionally narrative reviews were used to guide clinical decision making. Narrative reviews are descriptive summaries of various literature concerning to one focused area, which do not involve a systematic search of literature.

Scoping review: A review that involves the synthesis and analysis of a wide range of research and non-research material in order to generate better conceptual clarity about a specific topic. This review aims to develop a schema for future research. Scoping review outlines what is already known about an area, and then focuses on the gaps, arguments, blank and blind spots in literature.[3]

Systematic Review: A systematic review

attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question. Researchers conducting systematic reviews use explicit methods aimed at minimizing bias, in order to produce more reliable findings that can be used to inform decision making. [4]

Meta-analysis: Meta-analysis is the statistical analysis of a large collection of analysis results from individual studies. Data from various studies are pooled to a single quantitative estimate, or the effect size. Four types of effect-size are usually computed from various input data, they are, the standardized mean difference, the correlation coefficient, the odds-ratio, and the risk-ratio.[5]

FEATURES OF A SYSTEMATIC REVIEW

In this era of evidence based practice, health professionals rely on systematic reviews for high quality evidence. Higgins (2011), outlined the features of a high quality systematic reviews as, [6]

- a clearly stated set of objectives with pre-defined eligibility criteria for studies
- an explicit, reproducible methodology
- a systematic search that attempts to identify all studies that would meet the eligibility criteria
- an assessment of the validity of the findings of the included studies
- a systematic presentation, and synthesis, of the characteristics and findings of the included studies

STEPS IN CONDUCTING A SYSTEMATIC REVIEW

The Review Team: Doing a systematic review is a team work. The team can include nurses, librarians, statisticians, physicians, and undergraduate & postgraduate students. The lead author must organize team meetings and must discuss regarding the progress of the review. Each member in the team must be assigned to a specific task with a timeframe. The team must meet regularly, discuss the work progress, clarify the doubts and work systematically as per the protocol developed by the team.[2]

Initial Search: An initial literature review can be done to determine if a systematic review is being conducted or published on the selected question.[2] The various sources for systematic reviews are Cochrane Database of Systematic Reviews (CDSR), Database of Abstracts of Reviews of Effects (DARE), ARIF Reviews database from the Aggressive Research Intelligence Facility (ARIF) at the University of Birmingham UK ,The Campbell Collaboration library of systematic reviews, The Joanna Briggs Institute and PubMed (MEDLINE) database.[2,7,8] This will help to avoid duplication of review. If a systematic review is already done on the same area, the researchers can revise and address any another aspect.

Developing A Protocol: Protocol is a brief outline of the project. It is the plan the researcher desires to follow to complete the systematic review. All systematic review must start with a peer reviewed protocol.[2] Developing protocol is a complex process and it includes several decisions about the process and resource needed. Once the review area is finalized the researcher can develop the protocol. A protocol must include objectives, methods of literature research, selection criteria, ways of data extraction, and analysis. Writing a protocol and sticking on to it will reduce a considerable amount of bias in the review. The protocol will help in further replication of methods.[2] Each protocol must consist of cover sheet (provide the title, citation details and contact addresses), Text of the protocol, (consists of a background, objectives, selection criteria, search methods, plan for data collection and data analysis,) acknowledgements, conflicts of interest, tables and figures and references.

Formulate The Problem: Formulating a problem is the first step in doing a systematic review. Objective is to develop clear, unambiguous structured question. Problem intended to study is written in form of a well-structured question. It is a very crucial step as the rest of the steps will depend on the primary question formulated. The 'PICOS' acronym is the commonly used structured approach to frame the research question. Each letter of the acronym represents components of a well formulated question. P stands for Population, I stands for Intervention / treatment, C represents comparator/comparison group/alternative intervention/control, O represents outcome / results

of the study and S stands for study design.[8]

- **Population:** Providing information about the population

- **The intervention/s** under consideration in the systematic review need to be clearly reported. Interventions include drugs, devices, education, training methods and health care practice. diagnostic test, therapeutic regimens, lifestyle changes, educational intervention, behavior modification, risk prevention etc.

- **Clearly reporting the comparator**: explain to what the intervention is being compared. Usually comparison is done with usual care, placebo or drug.

- **Outcomes:** Specify the outcomes of the intervention being assessed. Usually outcome assessed are mortality, morbidity, symptoms relief and improvement in quality of life.

- **Study design:** mention the type of study design(s) to be included in the review.

Another framework for developing a focused question is the SPICE framework.[2,8] SPICE framework stands for Setting (where), Perspective (whom), Intervention (what), comparison (compared with what) and Evaluation (what conclusions can be drawn)

Locate & Select Relevant Literature: Locating and selecting relevant literature is one of the critical step in a systematic review. Objective of this step is to identify potential studies. Multiple sources of literature are searched. Search must include data bases and print search. A clear inclusion & exclusion criteria must be mentioned prior to the review.

- **Developing A Search Strategy:** The objective of developing an optimal search strategy is to balance sensitivity with specificity. Here sensitivity refers to retrieving a high proportion of relevant research works and specificity refers to retrieving a low proportion of irrelevant works.

- **Sources of Literature Search:** Cochrane controlled trials register, Medline, PubMed, CINAHL, Journals, conference proceedings, unpublished thesis, ongoing researches etc.

- **Data Extraction:** A data extraction form can be used to retrieve and compile data from various articles. Components for a general data extraction forms include Reference, Objective, study design, population, intervention, Control, Outcome and comments. [9] Data extractions forms can be tailored to the requirements of the study. Final decisions regarding inclusion and exclusion can be made after data extraction. It is recommended to do the data extraction by two independent reviewers. Any differences in opinion can be resolved by an expert consultation or mutual agreement. It is advisable to make a note on why an article was accepted/rejected as this justification may be needed at a later stage.[9]

Assess the quality of researches

This step involves quality assessment of all included researches. Assessing the quality of studies must be based on standard quality scales and checklists. Two independent reviewers can assess the quality of studies. Differences in opinion can be reconciled by mutual agreement or by a third reviewer.[9] Quality assessment can even be done by blinding informations like journal name, authors and affiliation. This method of blinding may be cumbersome and time consuming. 'Risk of bias tool' is used to assess the risk of bias in in randomized trials. Quality Assessment Tool for Quantitative Studies, developed by the Effective Public Health Practice Project, Canada is widely used to assess the quality of studies. [6]

Analyze & summarize the results

After the quality assessment of studies, the data analysis can be done. Involves summarization of study characteristics and results. Each study characteristics can be explained with simple description. A tabular format is usually adopted for this kind of description. Meta-analysis is done if appropriate. If an overall meta-analysis can't be done, a sub group meta-analysis can be undertaken. Due to clinical heterogeneity of studies, it may not be appropriate to do a meta-analysis, many times.

Interpret the Findings

Findings section involves interpretation of clinical relevance of each article. If a meta-analysis is done conclusion regarding the effectiveness of

an intervention can me made explicitly. If a meta-analysis is not done, the researcher can summarize the findings based on relative strength of studies.[9] Generation of inferences and recommendations can be made based on the findings of individual studies. Risk of bias need to be explained.

REPORTING GUIDELINES

Explicit and exhaustive reporting of the methods used in synthesis is also a hallmark of any well conducted systematic review.[10] Two commonly used guidelines for Cochrane reviews are the PRISMA and MOOSE guidelines

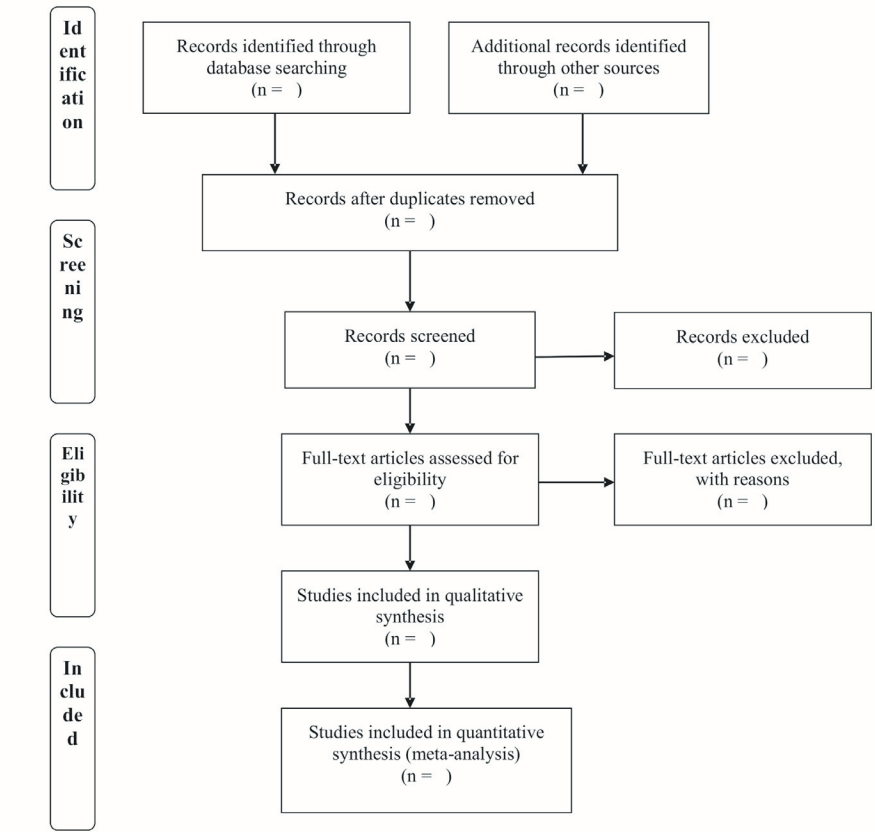
- PRISMA: PRISMA stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses. It provides specifications for reporting in systematic reviews and meta-analyses. The PRISMA statement consists of a PRISMA checklist and a PRISMA flow diagram. PRISMA checklist is a 27 item check list scale which pertains to the contents of systematic review and meta-analysis. The PRISMA flow diagram is a four phased diagram that depicts the flow of information through the various stages of a systematic review. PRISMA is mainly used for randomized trials but can be used in other types of research which focuses on evaluation of various interventions. [11,12]

- MOOSE: MOOSE stands for Meta-analysis of Observational Studies in Epidemiology. MOOSE checklist contains specifications for reporting of meta-analyses of observational studies in epidemiology.[13] The major areas under MOOSE are background search strategy, methods, results discussion and conclusion.

SOFTWARE USED FOR CONDUCTING SYSTEMATIC REVIEWS

Review Manager (RevMan) is the software used for preparing and maintaining Cochrane Reviews. It is a mandatory authoring tool for Cochrane Reviews and is endorsed by the Cochrane collaboration and is free to use for authors preparing a Cochrane Review or for purely academic use. RevMan is used to prepare Cochrane Reviews of interventions, methodology, diagnostic test accuracy, and overviews of reviews. The latest major version, RevMan 5.3, was released on 13 June 2014.[14,15]

Fig: 1. PRISMA 2009 Flow Diagram [11]



GRAPHICAL REPRESENTATION OF DATA IN SYSTEMATIC REVIEW

The two plots which is commonly used to represent of data in systematic reviews are funnel plot and forest plot.

- **Funnel Plot:** Light and Pillemer in 1984 introduced the concept of funnel plot. Publication bias in systematic reviews and meta-analysis can be checked with the help of a funnel plot. In the absence of publication bias the plot takes a rough funnel shaped symmetrical distribution. Deviation form funnel shape indicates publication bias. [16]

- **Forest Plot:** Graphical representation of meta-analysis are usually done in form of a forest plot. A forest plot or blobbogram illustrates the relative strength of treatment effects in multiple quantitative scientific studies addressing the same question. Forest plot demonstrates the difference between studies and provide an estimate of overall effect.[17,18]

TIME LINE

Timelines are roadmaps for successful completion of the project. Be generous in allocating time to each step. After the formulation of time frame, an expert consultation can be taken and necessary amendments can be made. The average systematic review requires at least 12 months of work. The sample time frame as per Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 (Higgins JPT & Green S, 2011) is given below.[3]

Table 1: Sample time frame for systematic review

Months	Activity
1 - 2	Preparation of protocol
3 - 8	Searches for published and unpublished studies
2 - 3	Pilot test of eligibility criteria
3 - 8	Inclusion assessments
3	Pilot test of 'Risk of bias' assessment
3 - 10	Validity assessments
3	Pilot test of data collection
3 - 10	Data collection
3 - 10	Data entry
5 - 11	Follow up of missing information
8 - 10	Analysis
1 - 11	Preparation of review report
12 -	Keeping the review up-to-date

ADVANTAGES OF SYSTEMATIC REVIEWS [19]

On comparison with narrative reviews systematic reviews

- Reduce bias
- Replicability
- Resolve controversy between conflicting studies
- Identify gaps in current research
- Provide reliable basis for decision making

LIMITATIONS OF SYSTEMATIC REVIEWS [19]

- Results may still be inconclusive
- There may be no trials/evidence
- The trials may be of poor quality

CONCLUSION

This article is an introductory description on how to design a systematic review. Doing systematic reviews is an exhaustive task and it requires a good amount of proficiency in subject matter and review methodology. In the upcoming days nursing care must be evidence based, systematic review is the key to evidence based nursing practice. Following the systematic rigorous methodology helps to reduce bias and improve the reliability and accuracy of conclusions.[20]

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Influence of Socio-demographic and Clinical Characteristics on Quality of Life in Patients with Head and Neck Cancer among Indian Population

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ABSTRACT

Quality of life (QOL) has been widely used as an adjunct to traditional endpoints of survival in patients with cancer. It is equally crucial to identify the determinants of QOL in such patients especially in a diverse country like India. In a prospective study on quality of life and its relationship with socio-demographic and clinical characteristics among 120 patients with head and neck cancer in India, we found that socio-economic status of patients and had a major impact on their quality of life. Patients from rural areas (P = 0.01), with monthly income less than Rs. 3000 (P = 0.01) and those working as unskilled labourers (P = 0.02) had significantly lower quality of life scores than others. While this is not surprising, these differences in quality of life are deeply disturbing. This data is published as an indicator of the discrepancy that exists and the impact of the illness on socio-economically disadvantaged survivors.

The occurrence of oral cancers in India is one of the highest in the world. They account for one-fourth of male and one-tenth of female cancers in India. The present study also revealed that patients with cancers of oro-pharynx and oral cavity (P = 0.04) and those undergoing treatment for head and neck cancer (P < 0.001) had the worst QOL. This study, therefore, is an attempt to sensitise policy makers and health care providers to address the challenges faced by the head and neck cancer patients in India.

Keywords: *Clinical characteristics; Head and neck cancer; Socio-demographic characteristics; Quality of Life.*

INTRODUCTION

Cancer is one of the leading chronic illnesses that contribute to devastating morbidity and mortality. Cancer statistics reveal that cancers frequently observed in India are life style dependent, with offending factors like tobacco usage and low socioeconomic status.[1] According to World Health Organization statistics, India has the highest prevalence of orofacial cancer.[2] In India, the oral cancer burden alone approximates to 20-30% of all cancers.[3] The different treatment modalities used for head and neck cancer take their own toll on patients who are already ravaged by the burden of cancer and its symptoms. Socio-demographic and clinical characteristics, such as economical status and site of cancer among many others, can adversely affect the quality of life (QOL) in such patients.The present study seeks to gather empirical evidence about the influence of sociodemographic and clinical characteristics on QOL in patients with head and neck cancer.

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MATERIAL & METHOD

Design and setting: A descriptive research design was used to assess QOL in 120 patients with head and neck cancer. The study was conducted in a multi-specialty, tertiary care teaching hospital. The various treatment modalities offered for patients with head

and neck cancer in the study setting include surgery, chemotherapy, radiation therapy and palliative care, either in isolation or combination, depending on the site of the cancer and the extent of the disease.

Sampling technique: All patients with histopathological confirmation of head and neck cancer were included in the study. Patients with head and neck cancer who had severe coexisting morbidity that required inpatient treatment were excluded from the study.

Instruments: *Quality of life* was measured using the Functional Assessment of Cancer Therapy – Head and Neck (FACT – H&N) Scale. [4,5] This standardized scale has five subscales and each item in the scale was answered against a five point Likert scale. Addition of all the subscale scores gave the total score. Higher score inferred better QOL. The scale was used in English and Indian vernacular versions. Cronbach's alpha for the tool is reported to be 0.89, with the subscale's ranging from 0.63 to 0.89.[5,6]

Socio-demographic and clinical characteristics were gathered using a subject profile proforma. The socio-demographic characteristics included in the proforma were age, gender, religion, locality, occupation and monthly income. The clinical characteristics were the site of head and neck cancer, modality of treatment (surgery / radiation / chemotherapy / palliative), intent of treatment (curative / palliative / follow up) and status of treatment (pre-treatment / on treatment / short term and long term follow up).

Data analysis: T-test and ANOVA were used to examine the relationship between the QOL and socio-demographic and clinical characteristics. Regression analysis of QOL was done with socio-demographic and clinical characteristics.

FINDINGS

The study revealed that the maximum number of subjects (49.1%) belonged to the age group of 40-60 years, followed by those above 60 years (36.6%). Males constituted 79.2% of the samples and most of them hailed from urban locality (61.6%). Majority of them were professionals (35.8%) and belonged to the middle socio economic group (48.2%). Analysis of the clinical variables revealed that oral and laryngeal cancers were the leading cancers (36.6% each) among the study population. Most of the subjects were undergoing combination-treatment modality (43.3%) and had come for follow up (44.2%).

Table 1describes the influence of socio-demographic characteristics on their quality of life. QOL was found to be significantly lower in subjects from rural locality and those with low monthly income ($P = 0.01$). Unskilled laborers, housewives and retired subjects had poorer quality of life than their skilled and professional counterparts ($P = 0.02$). The influence of clinical characteristics on QOL is presented in Table 2. It was found that the site of head and neck cancer significantly influenced quality of life ($P = 0.04$). Subjects with cancers of oral cavity and oropharynx had poorer quality of life than those with cancers in other sites. Subjects for whom the treatment had not yet started, showed better quality of life than those who were on treatment ($P <0.001$). Subjects undergoing palliative intent of treatment had poorer quality of life than others ($P<0.001$).

On regressing the patient characteristics as presented in Table 3, the intent of treatment was found to be independently associated with the quality of life ($\beta = 0.647$, $P < 0.001$).

TABLE 1: Comparison of QOL based on socio demographic characteristics

Socio demographic characteristics	Number	Mean QOL Score	S.D.§	t / F value	P value†
AGE (years)					
<40	17	69.6	40.4	0.35	0.70
40-60	59	65.6	26.8		
>60	44	70.2	25.0		
GENDER					
Male	95	68.4	28.1	0.39	0.69
Female	25	65.8	29.6		
RELIGION					
Hindu	96	67.5	27.9	1.52	0.22
Muslim	12	61.0	28.7		
Christian	12	80.2	29.1		
LOCALITY					
Rural	46	59.8	23.4	2.50	0.01
Urban	74	72.8	30.0		
OCCUPATION					
Unskilled labourer	27	55.0	22.4	3.23	0.02
Professional	43	75.6	29.3		
Housewife	18	65.0	25.1		
Not working	32	69.9	30.0		
MONTHLY INCOME (Rupees)					
<3000	18	49.6	18.2	3.79	0.01
3000-5000	35	65.8	27.5		
5001-7000	23	73.3	27.8		
>7000	44	74.1	29.9		

† p values were obtained using students t-test and analysis of variance

§ S.D. = Standard Deviation

TABLE 2: Comparison of QOL based on clinical characteristics

Clinical characteristics	Number	Mean QOL Score	S.D. §	F value	P value†
SITE OF HEAD AND NECK CANCER					
Hyphopharynx	7	70.7	19.7		
Larynx	44	73.7	27.8		
Nasal cavity, paranasal sinuses & salivary glands	5	90.2	41.9	2.34	0.04
Nasopharynx	9	77.1	38.0		
Oral cavity	44	59.9	24.1		
Oropharynx	11	57.0	27.2		
MODALITY OF TREATMENT					
Pre treatment	17	71.7	19.2		
Surgery	15	55.8	24.6		
Radiation	30	69.6	30.1		
Chemo & palliative	6	48.8	22.7	1.69	0.15
Combination	52	71.3	30.3		
INTENT OF TREATMENT					
Pretreatment	17	71.7	19.2		
Curative	33	59.3	22.3		
Palliative	17	43.7	18.2	22.4	< 0.001
Follow up	53	84.4	26.9		
STATUS OF TREATMENT					
Pre treatment	17	71.7	19.2		
On treatment	50	50.7	21.5		
Short term follow up	13	70.1	23.1	19.9	< 0.001
Long term follow up	40	81.8	30.2		

†p values were obtained using analysis of variance

§ S.D. = Standard Deviation

TABLE 3: Regression analysis of QOL with socio-demographic and clinical characteristics

Characteristics		Quality of Life	
	b † (95% C.I.) †	β§	**P value**
AGE (Years)	0.145 (-0.24 to 0.53)	0.067	0.46
GENDER (1-Male, 2-Female)	-2.274 (-22.5 to 17.9)	-0.033	0.82
LOCALITY (1-Rural, 2-Urban)	4.807 (-7.5 to 17.1)	0.083	0.44
OCCUPATION			
Unskilled (reference)	-------	--------	------
Professional / semiprofessional	4.059 (13.1 to 21.2)	0.069	0.64
Housewife	-1.710 (-28.0 to 24.6)	-0.022	0.90
Not working¶	3.055 (-13.1 to 21.2)	0.048	0.71
INCOME PER MONTH (Rupees)	0.001 (-0.001 to 0.002)	0.065	0.54
INTENT OF TREATMENT			
Palliative (reference)	------	------	------
Curative	13.249 (-1.1 to 27.5)	0.234	0.07
Follow up	36.765 (22.2 to 51.3)	0.647	<0.001

†b = Un-standardized regression coefficient **†C.I. = Confidence interval**

§ β = Standardized coefficient **¶ = Students, retired**

DISCUSSION

The study intended to discover major socio-demographic and clinical characteristics that have a bearing on QOL of patients with head and neck cancer. Analysis of these characteristics revealed that the maximum number of patients (49.1%) were middle aged. It was also found that there was an almost 4:1 preponderance of males for head and neck cancer. This is in harmony with the literature review findings that suggest a predominance of males for head and neck cancer.[7,8,9,10] Majority of the subjects (36.6% each) had oral and laryngeal cancers. It supports conclusions from other studies that Indian population leads in oral cancers. [3,11] There was an almost equal representation of subjects in the curative intent (41.7%) and the follow up group (44.2%). The subjects in curative intent comprised of those who were undergoing either chemotherapy, radiation therapy, surgery or a combination of any

of these for curative purposes. The follow up group consisted of those who had finished their course of treatment and had visited the outpatient department as per the discharge instructions given to them. The rest (14.1%) comprised those, who had either unresectable tumours or metastasis and hence were undergoing either radiation, chemotherapy, pain relief measures or some sort of surgical interventions (tracheostomy, jejunostomy), purely intended for palliative management.

The present study revealed that the patients' perception of their quality of life significantly changed according to their socioeconomic background. Subjects hailing from rural locality (P = 0.01) and those with unskilled jobs (P = 0.02) had poorer quality of life than others. Quality of life was also found to be increasing with increasing monthly income with the poorest QOL for those earning less than Rs.3000 per month (P = 0.01). The authors attribute it to the observation that Indian patients in lower income group wait and think twice at the onset of a symptom before spending their hard earned money on a visit to a doctor. This usually leads to a more locally advanced disease that warrants multiple treatment modalities, which again drain their resources. When compared with other demographic studies relating socio-demographic characteristics with QOL, the present study findings are congruent in relation to occupation and level of income.[12,13]

Patients' quality of life was also significantly related to clinical characteristics. Patients with oropharyngeal carcinomas had the lowest QOL (P = 0.04), followed by those with oral cancer. This finding is also supported by other studies that report that general quality of life is reduced in oropharyngeal carcinoma patients.[14] It can be ascribed to the fact that specific problems of patients with oropharyngeal carcinomas are usually pain, problems with nutrition, impaired communication and facial disfigurement which adversely affect their lives more than other sites of head and neck cancer, thus resulting in poorer QOL. The study also identified that patients on treatment had lower QOL scores than those awaiting treatment and those in their follow up period (P < 0.001). Although the present study did not follow a longitudinal design, this trend of overall QOL can be explained as being due to the fact that each treatment modality has its own specific adverse effects that can take their toll on patients' well being. Therefore, the overall QOL decreases during the treatment period. This trend is also supported by other studies that report a significant deterioration of QOL immediately after treatment, followed by a slow recovery and return to baseline by 1 year. [15,16,17] Quality of life was also significantly influenced by the intent of treatment (P< 0.001). The quality of life of subjects in the follow up group was better than those in the curative group which in turn was better than those in the palliative group. This can be attributed to the fact that palliative management is reserved for those whose clinical condition is beyond treatment with conventional modalities. Although other studies have reported a significant relationship between QOL and treatment modalities, the present study did not find any significant relationship. [19,20,21]

Regression of the final QOL score on patient characteristics revealed that intent of treatment (curative / palliative / follow up) was independently associated with the QOL score (P < 0.001). The other variables, although found to be strongly related with QOL on computing univariate statistics (t-test, ANOVA), did not show independent association with QOL score on linear regression.

CONCLUSION

Since the measurement of quality of life is considered as an adjunct to the traditional end points of overall survival, disease-free survival and tumor response in cancer management, it is imperative to discover variables that significantly influence quality of life. The knowledge that patients from poorer socioeconomic background, those with oropharyngeal carcinomas and undergoing palliative treatment have the likelihood of having the worst outcome in terms of their QOL will definitely help caregivers to plan, prioritize, implement and evaluate their care.

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Predictors of Health Related Quality of Life in Type 2 Diabetes Mellitus Patients

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ABSTRACT

Introduction: Diabetes is a chronic disease with severe complications and high mortality rate. As a chronic disease, diabetes needs lifelong treatment and its complications have severely affected the patient's Quality of Life (QoL). Living with a chronic illness negatively affects an individual's perception of QoL. QoL impact all aspects of one's everyday lifestyle.

Objective: To determine the QoL of patients with type 2 diabetes mellitus. Factors that affect the quality of life of these patients.

Methodology: This was a cross sectional study on 140 type 2 diabetes mellitus patients, attended the diabetic clinic of a Tertiary care centre in Kerala, South India. Patients with type 2 diabetes mellitus between the age group of 25-75 were included in the study .The QoL of patients were assessed using SF 36V2 questionnaire along with the interview schedule for socio demographic and clinical data. The data were analyzed using appropriate descriptive and inferential statistics using SPSS.

Result: The mean age of subjects was 56±11.6 years and the mean duration of diabetes mellitus was

10.9 ± 8.3 years. 47.9% of patients were overweight and 20.7% were obese. Most of the respondents performed fairly well on the SF 36 V2 quality of life instrument. The present study revealed that the overall health related quality of life was poor in all aspects in patients with type 2 diabetes mellitus. The most important predictors of impaired HRQoL were female gender, duration of diabetes, obesity, and exercise and glycemic control.

Conclusion: The findings could have implications for health promotion. QoL was better in male patients. Duration of diabetes, obesity, lack of exercise and poor glycemic control adversely affect the QoL of patients with type 2 diabetes mellitus. Therefore much attention must be paid to identify and implement appropriate polices for achieving better management of diabetes mellitus and ultimately improving the QoL of patients with type 2 diabetes mellitus.

Keywords: *Quality of life, Type 2 diabetes mellitus.*

INTRODUCTION

Diabetes is a complex metabolic disorder that affects 371 million people worldwide. India has 62.4 million people with diabetes at present which is expected to rise 100 million by the year 2030[1]. The prevalence of diabetes in India is continuously increasing and stands at 9% and it has been reported to be as high as 20% in some Southern areas.

Diabetes is a chronic disease with severe complications and high mortality rates. As a chronic progressive disease, diabetes needs life–long treatment and its complications have been severely patients' quality of life. The evaluation of diabetes treatment is not only based on objective indicators such as blood glucose level, but also includes subjective indicators such as QoL[2].

WHO defined QoL as individual's perception of their position in life in the context of the culture and value systems in which they live and in relation

to their goals, expectations, standards and concerns. QoL evaluation is an important outcome measure for chronic disease management [3].

Living with a chronic illness can negatively affect an individual's perception of QoL. Quality of life is particularly affected by diabetic complications that impact all aspects of one's everyday life style[4]. QoL is an important aspect in diabetes because poor QoL leads to diminished self –care, which in turn leads to worsened glycemic control, increased risk for complications and exacerbation of diabetes overwhelming in both the short run and long run [5]. The aim of the present study is to identify significant disease –specific and socio-demographic predictors of QoL of patients with type 2 diabetes mellitus.

MATERIALS & METHOD

This cross sectional study was conducted among 140 type 2 diabetes mellitus patients attended the diabetic clinic of a multispecialty tertiary care centre in Thiruvananthapuram, Kerala, and South India. Patients attending the diabetic clinic who satisfied the criteria for selection of samples were included in the study. Patients with gestational diabetes, type 1 diabetes mellitus and psychiatric disorder were excluded from the study. Informed consent was obtained from the patients. Socio demographic information and clinical characteristics were collected by the investigator using a structured questionnaire.

Health related QoL was measured with a standardized questionnaire of medical outcome study (SF-36v2). This questionnaire had eight domain-Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP),General Health (GH),Vitality(VT), Social Functioning(SF), Role emotional (RE) and Mental Health (MH).With higher scores (0-100) reflecting better perceived health. The scoring manual of ware *et al* was used for calculating scores [6].

RESULTS

Table 1: The socio demographic and diabetes related data are presented in table 1.

Mean Age (years)		56±11.6
Gender	Male	70(50%)
	Female	70(50 %)
Marital status	Married	131(93.6%)
	Widowed	4(2.9%)
	Separated	5(3.5%)
Family type	Nuclear	92(65.7%)
	Extended nuclear	46(32.9%)
	Joint	2(1.4%)
Family history of diabetes	Present	80(57.1%)
	Absent	60(42.9%)
Duration of diabetes	<5 year	46 (32.9%)
	5-10 years	35(25.0%)
	>10 years	59(42.1%)
BMI	Normal	44 (31.4%)
	Over weight	67(47.9%)
	Obese	29(20.7%)
Co morbidities	Hypertension	73(52.1%)
	Dyslipidemia	66 (47.1%)
Diabetic complications		
	CAD	33 (23.6%)
	Neuropathy	39 (27.9%)
	Retinopathy	52(37.1%)
	Nephropathy	11 (7.9%)

Out of the 140 respondents, 70 were males and the remaining 70 were females. The mean ages of respondents were 56±11.6 years. Out of the 140 respondents 93.6% were married, 65.7% belonged to nuclear family. The mean duration of diabetes was 10.9±8.3 years. 52.1% of subjects had hypertension and 47.1% were having dyslipidemia. The most common complication present was retinopathy (37.1%) followed by neuropathy (27.9%). Regarding BMI, 44 (31.4%) were having normal BMI, 67(47.9%) were overweight and 29(20.7%) were obese.

Table 2- Represents SF36 v2 scoring based on various socio demographic and clinical parameters. Gender distribution of SF 36 v2 domain scores

SF 36 component	Females	Males	P value
Physical functioning(PF)	33.66±11.01	40.90±7.17	0.000*
Role Physical (RP)	33.25±11.96	37.85±10.91	0.019*
Bodily Pain (BP)	40.80±32.71	44.36±10.97	0.389
General Health (GH)	36.96±7.55	41.50±8.11	0.001*
Vitality (VT)	46.93±47.13	46.81±9.50	0.982
Social Functioning (SF)	37.45±10.52	41.32±8.87	0.020*
Role emotional (RE)	29.06±12.39	31.78±15.45	0.252
Mental Health (MH)	31.62±13.45	40.24±11.85	0.000*
Physical component Summary(PCS)	37.58±9.15	43.97±6.99	0.000*
Mental Component Summary(MCS)	34.40±10.77	37.98±11.23	0.056

*significant

Data presented as mean± SD

Mean scores of all eight domains of QoLwere analyzed and found higher in males compared to females in PF, RP,GH,SF, MH, and PCS ($p<0.05$).

Table 3: Difference in SF 36 scores according to duration of disease

	Duration of diabetes (years)				
SF 36 component	**< 1**	**1-5**	**5-10**	**>10**	**P value**
Physical functioning(PF)	39.2±11.6	41.2±9.1	35.3±10.6	35.9±.2	0.042*
Role Physical (RP)	36.5±12.8	39.4±11.2	35.9±11.0	33±1.6	0.088
Bodily Pain (BP)	40.2±15.8	43.6±9.4	46.1±44.3	40.5±12.7	0.724
General Health (GH)	43.7±7.1	39.9±7.9	37.6±7.8	38.8±8.5	0.118
Vitality (VT)	48.3±12.6	46.7±8.4	42.0±8.3	49.5±51.1	0.777
Social Functioning (SF)	38.7±13.6	41.5±6.3	39.7±9.5	38.2±10.9	0.494
Role emotional (RE)	28.1±15.9	34.1±12.1	29.7±12	29.4±15.6	0.390
Mental Health (MH)	41.0±12.5	39.7±12.2	32.7±13.6	34.±13.3	0.066
Physical component Summary(PCS)	42.4±11.7	43.2±7.7	39.4±8.3	39.9±8.6	0.203
Mental Component Summary(MCS)	37.8±13.6	39.1±9.3	35.1±11.0	34.8±11.4	0.289

Data presented as mean±SD.

Table 3 shows mean scores of all domains of QoL in patients according to duration of diabetes. Physical functioning was significantly higher with less duration of diabetes mellitus.

Table 4: Difference in SF 36 according to exercise of subjects

	Exercise			
SF 36 component	**Regular**	**Irregular**	**None**	**P value**
Physical functioning(PF)	40.6±9.4	38±7.9	35.2±10.4	0.017*
Role Physical (RP)	39.1±11.8	34.4±8.7	34±12.1	0.063
Bodily Pain (BP)	51.4±40	40.6±9	38.4±12.8	0.019*
General Health (GH)	41.9±8.4	36.4±6.3	38.7±8.2	0.021*
Vitality (VT)	48±10.5	57.6±79.2	42.8±9.6	0.174
Social Functioning (SF)	44.6±8.4	38.4±8	36.8±10.2	0.000*
Role emotional (RE)	34.6±17.1	28.2±11.8	28.9±12.4	0.078
Mental Health (MH)	39.9±14.7	33.4±11.4	34.6±12.9	0.069
Physical component Summary(PCS)	44.2±8.1	40.8±5.5	38.9±9.4	0.008*
Mental Component Summary(MCS)	40.1±12.3	33.2±9.1	35.1±10.6	0.022*

* Significant

Table 4 shows that physical functioning, bodily pain, general health, social functioning and over all physical component summary were significantly higher among patients on regular exercise. There was no significant association observed with remaining domains of QoL (p>0.05).

Table 5: Difference in SF 36 scores by BMI of study subjects

	BMI			
SF 36 component	**Normal**	**Overweight**	**Obese**	**P value**
Physical functioning(PF)	36.3±10.7	39.6±7.7	33.4±12.1	0.013*
Role Physical (RP)	35.1±12.2	36.7 ±10.8	33.7±12.7	0.489
Bodily Pain (BP)	47.5±40.1	42.7±10.7	34.9±10.6	0.095
General Health (GH)	38.9±7.8	40.2±8	37.5±8.8	0.291
Vitality (VT)	53.9±58.6	44.5±8.1	41.8±12	0.241
Social Functioning (SF)	40.2±9.3	40.3±9	36±12.1	0.112
Role emotional (RE)	30.9±13.2	31.7±14.9	26.8±12.8	0.284
Mental Health (MH)	34.3±12.2	37.4±12.3	35±17.1	0.447
Physical component Summary(PCS)	40.3±9.5	42.7±7.3	37±9.5	0.012*
Mental Component Summary(MCS)	36.8±9.7	36.6±10.7	34.3±14	0.596

Data resented as mean±SD

Patients with diabetes mellitus according to their BMI were analyzed a shown in table 5.The result showed significantly higher scores in physical and overall PCS in patients with normal BMI.

Table 6: Difference in SF 36 scores based on HbA1c level

	HbA1clevel			
SF 36 component	**HbA1c (<7%)**	**7-8%**	**>8%**	**p value**
Physical functioning(PF)	42.82±12.13	40.30±7.72	34.59±9.72	<0.001*
Role Physical (RP)	44.95±11.21	38.14±11.21	32.31±10.67	<0.001*
Bodily Pain (BP)	41.06±11.81	35.21±14.59	25.78±12.11	<0.001*
General Health (GH)	42.78±7.88	40.18±13.68	32.31±2.4	<0.001*
Vitality (VT)	46.04±12.61	42.25±12.75	42.07±30.24	<0.835
Social Functioning (SF)	44.71±6.33	43.09±7.25	36.09±7.47	<0.001*
Role emotional (RE)	53.05±8.43	46.96±7.19	45.60±44.09	0.727
Mental Health (MH)	44.17±6.51	43.26±8.77	36.38±10	<0.001*
Physical component Summary(PCS)	46.20±9.46	43±7.34	38.52±8.57	0.001*
Mental Component Summary(MCS)	44.18±7.94	40.76±10.26	32.22±10.38	<0.001*

Patients with diabetes according to their glycemic control status were also analyzed as shown in Table 6.Group with HbA1c level <7%, 7-8% and >8% were compared. The results showed significantly higher scores in all components except bodily pain and vitality.

DISCUSSION

The present study aimed to assess the HRQOL in patients with type 2 diabetes mellitus. Many studies were conducted to assess the QoL in patients with type 2 diabetes mellitus in developed countries, where there is access to better health care facilities; but studies of HRQOL in diabetic patients in developing countries are rare. So it is important to understand the various factors contributing to overall QoL in these patients.

The present study showed that the overall HRQOL in patients with diabetes is poor in all aspects. This study finding is consistent with observations of other studies which showed that diabetes experience a significant loss of quality of life compared to those without diabetes [7-8].

Overall, the SF 36 score was lower in females than males. Males had higher scores than females in PF<RP, GH, SF<MH and PCS ($p<0.05$).These findings were consistent with observations of Chittleborough *et al* in Australian population where QoL scores among males were higher in all domains except in GH and VT [9]. The gender effect is quite pronounced in the study finding of Papadopoulos *et al* which showed that women have worse impact in HRQOL [10].

Duration of diabetes was found to be associated with decreased QoL. Patients with longer duration of disease (>10 years) had lower scores in most of the domains. Similar findings were noted in studies done by Riaz *et al*, who observed that patients having longer duration >10 years had lower scores in all domains[11].

Obese diabetics were found to have decreased QoL in all domains as compared to type 2 diabetes mellitus patients with normal BMI in the present study. The effect of obesity in lowering the HRQoL of patients with type 2 diabetes mellitus was found in similar studies by Redekop *et al* [12].

In another study Glasgow *et al* and Maddigan *et al* reported that level of self reported exercise was the only significant self management behaviour to predict QoL and BMI. They also showed that promoting regular exercise and weight loss helps to improve the functional and emotional status of patients [13-14]. The present study confirms the positive effect of exercise on QoL of patients with type 2 diabetes mellitus.

The present study showed that patients with good glycemic control (<7%) have significantly good QoL. This finding is consistent with the study finding of Maskari –MY-Al that showed that patients with Hb A1C less than 8% have significantly higher glycemic control [15].

CONCLUSION

Type 2 diabetes mellitus has negative influence on the QoL. The most important factors affecting the QoL of patients with type 2diabetes mellitus are gender, age, duration of diabetes, BMI, pattern of exercise and HbA1c level. The findings could have implications for health promotion. QoL was better in male patients. Duration of diabetes, obesity, lack of exercise and poor glycemic control adversely affect the QoL of patients with type 2 diabetes mellitus. Therefore much attention must be paid to identify and implement appropriate polices for achieving better management of diabetes mellitus and ultimately improving the QoL of patients with type 2 diabetes mellitus. It seems that diabetes education might be a solution to improve the QoL of patients with type 2 diabetes mellitus.

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Ethical Clearance: To conduct the study, ethical committee clearance was obtained from the Institutional Ethics Committee, Govt Medical College, Thiruvananthapuram, Kerala. Administrative permission was obtained from Medical Suprintendent, Govt. Medical college Hospital, Thiruvananthapuram and written informed consent was obtained from the study participants.

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A Study to Assess the Knowledge and Attitude on Janani Suraksha Yojana among Family Members in Selected Rural Areas, Amroha

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ABSTRACT

Background of the Study: Household family members may not have adequate knowledge about Janani Suraksha Yojana so there is need to impart knowledge and influence favorable attitude about Janani Suraksha Yojana to increase the utilization of its services. **Aim:** The main objective of the study was to determine the level of knowledge on Janani Suraksha Yojana among family members and describe the trend of institutional deliveries between 2005 to 2013. **Method:** Descriptive survey design was adopted. The study was conducted at rural areas of Amroha, Uttar pradesh. 1000 household family members living with 7 years of child or antenatal mothers where surveyed. Non-probability purposive sampling technique was used to select the samples. The tools designed to collect the data were socio-demographic Performa and structured knowledge questionnaire and 5 point Likert scale on Janani Suraksha Yojana. The method used to collect the data was structured interview schedule. **Results:** Collected data was analyzed by using descriptive and inferential statistics. Findings of the study is that the majority of respondents 510 (51%) were having inadequate knowledge, 401 (40.1%) were having moderately adequate knowledge and only 89 (8.9%) were having adequate knowledge on Janani Suraksha Yojana in case of attitude it was found that the majority of respondents 502 (50.2%) were having unfavourable attitude, 498 (49.8%) were having moderately favourable attitude and none of the participants were having favourable attitude on Janani Suraksha Yojana. The correlation coefficient value is +0.150, which is shows that there is moderately positive correlation which indicates; when knowledge level of family members is inadequate the attitude also becomes unfavourable on Janani Suraksha Yojana. The formative data obtained from the office of the Chief Medical Officer; Amroha district which shows that. The total number of institutional delivery at different CHC's, PHC's in amroha district, Uttar Pradesh between the periods 2005 to 2013 is 72456. The existing district hospital is having only 100 beds, the total number of CHC's are 08 and PHC's is 25. The total number of ASHA is 945 for the existing population. The trend of number of institutional deliveries between the period of 2005 and 2013 is found to be increasing as in 2006 it was only 913 and presently 2013 it has crossed over 13213 found to be increasing. The analysis of knowledge and attitude with selected demographic variables of family members revealed that there is a statistical significant association between the knowledge score and religion, family type, number of children's, number of visits to health centre related to pregnancy, number of pregnancies and distance of Health setting from residence at 0.05 level of significance. Similarly for attitude it was found that there is a significant association between the attitude score and number of children at 0.05 level of significance.

Conclusions: Even though the majority of the family members had moderate knowledge still they had unfavorable attitude towards Janani Surajsha Yojana. As well as there is a lack of infrastructure and health personnel Hence, the present study suggests that there should be adequate infrastructure and health personnel to optimize JSY services and awareness programmes have to be planned and executed to improve the attitude on JSY.

Keywords: *Knowledge, Attitute, Janani Suraksha Yojana, Institutional delivery.*

INTRODUCTION

In any community, mothers and children constitute a priority group. In sheer numbers, they comprise approximately 70% of the population in the developing countries. Mothers and children not only constitute a large group, but they are also a "vulnerable" or special-risk group as the problems affecting the health of the mothers and child is multifactor. The risk is connected with child-bearing and care of women and the infant during postpartum period. Despite current efforts, the health of mothers and child still considered to be one of the most serious health problems affecting the community, particularly in the developing countries as it is evidenced that Pregnancy complications and child birth related complications are the major causes of death among women in their reproductive ages[1].

As per Sample Registration System 2005, IMR in India was 58 and MMR was 301 whereas in Karnataka IMR was 50 per 1000 live births and MMR was 228 per 100,000 live birth (SRS 2001-2003)[5]. The causes for such mortality rates are socioeconomic status of the family, long distance to access health facility, illiteracy, home delivery, deliveries conducted by untrained dais, early age of conception, lack of utilization of health care services and other specific causes are anemia, hemorrhage, puerperal sepsis and toxemia, multiparity, birth spacing, high fertility age of the mother[1].

Uttar Pradesh has one of the highest infant and child mortality rates in India. Infant mortality rates in UP are higher in young mothers (< 20 years) compared to women 20-29yrs.UP's maternal mortality ratio is also very high, second only to Bihar. There are stark gender differentials in the post neonatal mortality and child mortality rates in UP indicating gender bias against the girl child. Priority trigger behaviors across all NRHM programs have been selected based on evidence of association of the behaviors to prevent outcomes such as maternal mortality, neonatal and child mortality, anemia, TB, vector borne diseases etc. and potential for change through BCC approaches[6].

Mother and family are among the key players in reduction of neonatal mortality and improvement in health status. The strength of any program lies in community mobilization and participation since the community participation is more of a challenge. So the investigator had a insight that to know the facts about the progress of janani suraksha yojana by conducting a household survey of family members about the knowledge and attitude on janani suraksha yojana who are belonging to Moradabad & Amroha district of Uttar Pradesh[11].

ATREIALS & METHODOLOGY

Objectives of the Study

1. To assess the knowledge and attitude on janani suraksha yojana among family members.
2. To find out the co-relation between knowledge and attitude on janani suraksha yojana among family members.
3. To find out the association between knowledge and attitude scores of family members with their selected demographic variables.
4. To describe the trends and effect of janani suraksha yojana in terms of variation in number of institutional deliveries from 2005 to 2012.

HYPOTHESES

H_1: There is a significant association between knowledge and attitude on Janani Suraksha Yojana among famil,y members with selected demographic variables.

H_2 - There is a significant relationship between knowledge and attitude on janani suraksha yojana among family members is accepted.

RESEARCH APPROACH & DESIGN

In the present study a quantitative approach & Descriptive design was used to assess the knowledge and attitude on Janani Suraksha Yojana among family members.

SETTING OF THE STUDY

The present study was conducted in various PHC covering villages in Amroha, Uttar Pradesh.

VARIABLES

Study variables

The study variables were knowledge and attitude on Janani Suraksha Yojana

among family members.

Extraneous variables

In the present study the extraneous variables include age, sex, occupation, marital

status, religion, income of the family, type of family, decision maker in the

family, distance of the health setting and source of information.

POPULATION

The population of the present study comprises of all the family members with antenatal mothers or children aged below 7 years including the antenatal mother in rural areas.

SAMPLE & SAMPLE SIZE

The sample of the present study includes Family members who fulfill the inclusion criteria. N = 1000.

SAMPLING TECHNIQUE

In the present study Non-probability purposive sampling technique was adopted to select the sample.

FINDINGS

SECTION – A: DISTRIBUTION OF KNOWLEDGE SCORES OF FAMILY MEMBERS ON JANAI SURAKSHA YOJANA AMONG FAMILY MEMBERS.

Table –1 : Frequency and percentage distribution of level of Knowledge among Family members on Janani Suraksha Yojana.

N=1000

S.No.	Knowledge level	Category	Respondents	
			f_x	%
1	Inadequate	Below 35 % Score	510	51%
2	Moderately adequate	35.5 - 60 % Score	401	40.1%
3	Adequate	Above 60 % Score	89	8.9%

The above table depicts that the majority of respondents 510 (51%) were having inadequate knowledge, 401 (40.1%) were having moderately adequate knowledge and only 89 (8.9 %) were having adequate knowledge on Janani Suraksha Yojana

SECTION – B: DISTRIBUTION OF ATTITUDE SCORES OF FAMILY MEMBERS ON JANAI SURAKSHA YOJANA AMONG FAMILY MEMBERS.

Table – 2 : Frequency and percentage distribution of attitude scores on Janani Suraksha Yojana among Family Members

N=1000

S.No.	Attitude e level	Category	Respondents	
			f_x	%
1	Unfavourable attitude	Below 35 % Score	502	50.2%
2	Moderately favourable attitude	36 - 60 % Score	498	49.8%
3	Favourable attitude	Above 60 % Score	0	0%

The above table depicts that the majority of respondents 502 (50.2%) were having unfavourable attitude, 498 (49.8%) were having moderately favourable attitude and none of the participants were having favourable attitude on Janani Suraksha Yojana.

SECTION – C : CORRELATION BETWEEN KNOWLEDGE AND ATTITUDE ON JANAI SURAKSHA YOJANA AMONG FAMILY MEMBERS.

TABLE – 3: Correlation of knowledge and attitude on institutional delivery among primi and multigravidae mothers. N=1000

S.No.	Aspects	Respondents			Correlation coefficient (r) Value
		Mean	SD	Mean %	
1	Knowledge	12.07619	3.475	60.38	+0.150
2	Attitude	16.92798	4.1143	22.57	

The above table reveals that the mean percentage of knowledge is 60.38% with standard deviation of 3.475 whereas the mean percentage of attitude is 22.57% with standard deviation of 4.1143 respectively.

The correlation coefficient value is +0.150, which is shows that there is moderately positive correlation which indicates, when knowledge level of family members is inadequate the attitude also becomes unfavourable on Janani Suraksha Yojana.

SECTION – D: FORMATIVE DATA ON JANANI SURAKSHA YOJANA, INSTITUTIONAL DELIVERIES AND OTHER DETAILS UNDER NRHM AS PER THE TRENDS FROM 2006 TO 2013

Table 4:- Distribution of Number of institutional deliveries as per the trend from 2006 to 2013.

Sl.No	DETAILS	EXSISITING DATA
1	Number of CHC	08
2	Number of PHC	25
3	Number of Sub-centers	169 (14 accredited)
4	Number of district hospitals	01 (100 bedded)
5	No. of villages covered	924
6	Population covered Rural	1393265
7	Population covered Urban	1838771
8	Total Population	3232036
9	No. of ASHA	945
10	No. of other health workers involved in Janani suraksha yojana	00
11	Amount paid for ASHA as incentives for motivating each mothers for institutional delivery in rupees.	Rs.600 (Rural)
12	24 hrs delivery services	08 CHC's
13	24 hrs ambulance services	08 CHC's
14	Date of starting services of Janani suraksha Yojana	September - 2005
15	Amount paid for mothers for institutional deliveries as incentives in rupees	Rs.1400/- (Rural)
		Rs. 1000 (Urban)
DETAILS OF INSTITUTIONAL DELIVERIES & INCENTIVES RECIVED		

Table 4:- Distribution of Number of institutional deliveries as per the trend from 2006 to 2013. (Cont...)

DURATION		NO. OF INSTITUTIONAL DELIVERIES	NO. OF MOTHERS RECEIVED INCENTIVES
16	2006 - 2007	913	913
17	2007 - 2008	3325	3325
18	2008 - 2009	9553	9553
19	2009 - 2010	14518	14518
20	2010 - 2011	15412	15412
21	2011 - 2012	15528	15528
22	2012 - 2013	13213	13213
TOTAL		**72456**	**72456**

The above table contains the data obtained from the office of the Chief Medical Officer; Amroha district which shows that the date of starting services of Janani suraksha Yojana was September-2005. It was found that against the total population of 3232036 in 924 villages the total number of institutional delivery at different CHC's, PHC's in amroha district, Uttar Pradesh between the period 2005 to 2013 is 72456.

The existing district hospital is having only 100 beds where as for the existing population there should be at least 300 beds as per IPHS (2011).

The total number of CHC's are 08 which shows that each CHC is covering around population of 404004 but as per the recommendation of 1 CHC per 80,000 - 1,20,000 as per IPHS (2012) there should be at least 26 CHC's for the existing population similarly the total number of existing PHC's is 25 which shows that each PHC is covering population of around 129281 but as per the recommendation 1 PHC for 20,000 – 30,000 population as per IPHS for the existing population there should be approximately 80 -90 PHC's.

The total number of ASHA is 945 for the existing population. But as per the recommendation of IPHS (2012) 1per 1000 population there should be at least 3200 ASHA's.

The ASHA receives of Rs. 600/- for each reference and motivation of mothers for institutional delivery and for each mother delivering in health setting have received Rs. 1400/- in rural areas and Rs. 1000/- in urban areas. The trend of number of institutional deliveries between the period of 2005 and 2013 is found to be increasing as in 2006 it was only 913 and presently 2013 it has crossed over 13213. So it can be stated that the national programme Janani Suraksha Yojana under NRHM has brought dynamic change in the institutional delivery which is further can be said that it has directly contributed in decreasing MMR and IMR.

Further the investigator feels that the number of CHC's, PHC's, and number of Beds in district Hospital, Number of ASHA's are lacking for amroha district, uttar-pradesh and there is a need to increase their numbers to optimize the health care services to the pregnant mothers and the public. There is a need to improve the infrastructure according to the population existing.

CONCLUSION

The major findings of the study is it was found that the majority of respondents 510 (51%) were having inadequate knowledge, 401 (40.1%) were having moderately adequate knowledge and only 89 (8.9%) were having adequate knowledge on Janani Suraksha Yojana

Regarding attitude it was found that the majority of respondents 502 (50.2%) were having unfavourable attitude, 498 (49.8%) were having moderately favourable attitude and none of the participants were having favourable attitude on Janani Suraksha Yojana.

The mean percentage of knowledge is 60.38% with standard deviation of 3.475 whereas the mean percentage of attitude is 22.57% with standard deviation of 4.1143 respectively.

The correlation coefficient value is +0.150, which

is shows that there is moderately positive correlation which indicates, when knowledge level of family members is inadequate the attitude also becomes unfavourable on Janani Suraksha Yojana.

Regarding association of knowledge and attitude on Jannai Suraksha Yojana with selected demographic variables it was found that statistical significant association was found between the knowledge score and religion, family type, number of children's, number of visits to health centre related to pregnancy, number of pregnancies and distance of Health setting from residence at 0.05 level of significance and significant association between the attitude score and number of children at 0.05 level of significance.

The formative data obtained from the office of the Chief Medical Officer; Amroha district which shows that the date of starting services of Janani suraksha Yojana was September-2005. It was found that against the total population of 3232036 in 924 villages the total number of institutional delivery at different CHC's, PHC's in amroha district, Uttar Pradesh between the period 2005 to 2013 is 72456. The existing district hospital is having only 100 beds, The total number of CHC's are 08 and PHC's is 25.

The total number of ASHA is 945 for the existing population. The trend of number of institutional deliveries between the period of 2005 and 2013 is found to be increasing as in 2006 it was only 913 and presently 2013 it has crossed over 13213 and found to be increasing. So it can be stated that the National programme Janani Suraksha Yojana under NRHM has brought dynamic change in the institutional delivery which is further can be said that it has directly contributed in decreasing MMR and IMR. Further the investigator feels that there is a need to improve the infrastructure according to the population existing.

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Nursing Contributions on Management of Patient with Hip Surgery

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ABSTRACT

Hip surgeries are carried out for the relief of pain and stiffness and improve the Quality of life. The purpose of this article is discuss the nursing contributions on management of patient with hip surgery through education which includes overview of hip surgery, pain management, exercise, nutrition, prevention of complication, discharge Instruction and Activities at home. The effectiveness of teaching depends, on the learning needs, and preference of the patient. Nurses are in key position to provide education and respond to patient's questions and concerns. In general preoperative teaching should include the most useful information about postoperative activities within the confined period. The surgical procedures expose the patients to pain, bodily injury and potential death. Education during pre-operative period effectively enables the patients to cope with the surgery, reduce the duration of hospitalization, elevates satisfaction and minimizes post surgical complications.

Keyswords: *Hip surgeries, pain, exercise, nutrition, prevention of complication.*

INTRODUCTION

The most common cause of musculoskeletal problem is injury from a traumatic event resulting in fracture, dislocations and soft tissue injuries pain, disability, medical expense and lost wages is enormous, for all ages accidents are exceeded than other diseases [9]. Falls account for problems in elderly patient, in that hip fractures are common in older adults. Approximately 1.6 million hip fractures occur worldwide each year; by 2050 this number could reach between 4.5 million and 6.3 million. In India 4.4 lack hip fractures occur annually it is estimated that Up to 20% of patients die in the first year following hip fractures, mostly due to pre-existing medical conditions. Less than half those who survive the hip fracture regain their previous level of function. [5] So Comprehensive education is essential to prevent complication and improve functional ability and their quality of life.

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COMPONENTS OF COMPREHENSIVE EDUCATION

1. Pain management
2. Exercise
3. Nutrition
4. Prevention of complication
5. Resuming normal activities

1. PAIN MANAGEMENT

Good pain relief is important and some people need more pain relief medicines than others. On return to the ward the nurses will reassess the degree of pain. An assessment scale is used to measure your pain regularly. Relaxation offers potential benefit for people in pain because of the relationship between muscle tension, pain and anxiety. Relaxation skills allow the individual to focus in ward ,evoke inner calm ,and control awareness and linear time .It is an acquired skill that needs to be taught prior to episodes

of pain to be effective (Guzzetta and Dossey 1992) [7]

Relaxation exercises - Relaxation exercises may help you to rest and sleep and may also distract you from the pain. [14].Nurses can demonstrate Relaxation exercise to relief pain and stress eg. Progressive muscle relaxation

Progressive muscle relaxation

Progressive muscle relaxation is a technique that involves tensing specific muscle groups and then relaxing them to create awareness of tension and relaxation. It is termed progressive because it proceeds through all major muscle groups, relaxing them one at a time, and eventually leads to total muscle relaxation. [11]

Reviews related to Pain relief

Montin et al., (2012) suggest that pain was reported to be more intense than expected by patients following hip replacement surgery. Patients' willingness to become active following THR surgery is believed to be dependent upon their pain tolerance .The post-operative pain following hip replacement surgery is more intense than expected, yet they were happy with pain management. While pain made mobility difficult, patients considered it important to do the exercises in accordance with the physiotherapy regime. Adequate pain control following joint replacement surgery is considered crucial for early mobility and for the prevention of complications [10]

2. EXERCISES [2]

Post operative exercise

These exercises are important for increasing circulation to your legs and feet to prevent blood clots. They also are important to strengthen muscles and to improve your hip movement. You may begin these exercises in the recovery room shortly after surgery. It may feel uncomfortable at first, but these exercises will speed your recovery and reduce your postoperative pain. These exercises should be done as you lie on your back with your legs spread slightly apart.

- Take at least 10 big deep breaths and cough to exercise and clear your lungs every hour. If you feel congested, do this more often.

Regular exercises to restore your normal hip motion and strength and a gradual return to everyday activities are important for your full recovery. Exercise 20 to 30 minutes 2 or 3 times a day during your early recovery. They may suggest some of the following exercises.

Ankle Pumps: Slowly push your foot up and down. Do this exercise several times as often as every 5 or 10 minutes. This exercise can begin immediately after surgery and continue until you are fully recovered

Ankle Rotations: Move your ankle inward toward your other foot and then outward away from your other foot. Repeat 5 times in each direction 3 or 4 times a day.

Bed-Supported Knee Bends: Slide your heel toward your buttocks, bending your knee and keeping your heel on the bed. Do not let your knee roll inward. Repeat 10 times 3 or 4 times a day

Gluteal set: Tighten buttock muscles and hold to a count of 5. Repeat 10 times 3 or 4 times a day

Abduction Exercise: Slide your leg out to the side as far as you can and then back. Repeat 10 times 3 or 4 times a day

Quadriceps Set: Tighten your thigh muscle. Try to straighten your knee. Hold for 5 to 10 seconds. Repeat this exercise 10 times during a 10-minute period. Continue until your thigh feels fatigued.

Straight Leg Raises: Tighten your thigh muscle with your knee fully straightened on the bed. As your thigh muscle tightens, lift your leg several inches off the bed. Hold for 5 to 10 seconds. Slowly lower. Repeat until your thigh feels fatigued.

Standing Exercises: From second postoperative day you will be out of bed and able to stand. You will require help since you may become dizzy the first several times you stand. As you regain your strength, you will be able to stand independently. While doing these standing exercises, make sure you are holding on to a firm surface such as a bar attached to your bed or a wall.

Eg,. Standing Knee Raises, Standing Hip Abduction and standing Hip Extensions

Walking and Early Activity: Soon after surgery, you will begin to walk short distances in your hospital room and perform light everyday activities. Walking with Walker, Cane or Crutch

Stair Climbing and Descending

The ability to go up and down stairs requires both flexibility and strength. . Remember "up with the good" and "down with the bad''

Reviews related to physical Therapy

Cohort studies [8, 3] suggest that intense physical therapy (twice-daily session) may help improve long-term functional outcomes. Ideally, rehabilitation should begin on the first postoperative day with quadriceps contractions, isometric exercises, and gentle flexion and extension at the hip [4].On the second or third postoperative day, the patient may begin supervised ambulation using parallel bars for support, advancing to a walker or cane and then to independent ambulating tolerated [4]

3. NUTRITION

Healthy Eating for Healing

Healthy eating helps to prepare the body for surgery. Your body needs to be well nourished to heal the bones, muscles, and skin that are affected by the surgery. The nutrients from food provide us with the strength, energy, and ability to heal. People who are well nourished are less like to develop infection and heal faster. There are several nutrients from food that are important before, during, and after the surgery. Diet rich in Calcium Vitamin D, Iron, Vitamin B12 and folate/folic acid should be included. [14]

Jose J.L et al (2011) suggest that nutritional counseling in elderly hip fracture patients through face to face contacts and telephone calls is feasible. However, individual tailoring of the intervention is recommended .The majority of hip fracture patients needed >2 months oral nutritional supplements to meet their nutritional requirements. [8]

4. PREVENTION OF COMPLICATION [14]

Total hip replacement is usually very successful but a small percentage of patients may develop complications. Complications may occur due to prior health problems, the anesthetic, and disruption to the muscles, nerves and blood vessels that normally occur with the surgery. There is a great deal you can do to prevent or lessen complications. [14]

A. **Prevention of anemia and blood transfusion**

● Check the Hemoglobin level, if needed iron, and an additional vitamin supplement and blood transfusion will be given.

B. Prevention of infection:

● Eat healthy foods before and after surgery.

5 After surgery antibiotics are administered through intravenous.

5 Wash the hands frequently and follow the directions carefully for caring the incision and changing the dressing.

5 Avoid people who have colds or infections.

5 If you have a medical procedure, dental fillings, or any major dental work, tell the doctor or dentist that you've had a joint replacement surgery.

C. Prevention of harmful clots after surgery:

● Get up and move frequently. Every hour, pump the feet and ankles

5 Wear the leg sleeves (sequential compression devices)

5 Take the prescribed Low Molecular Weight Heparin (LMWH). More on LMWH (blood thinners) Dalteparin/Nadropin

D. Swelling

You can expect to have some swelling in the operated leg for a number of weeks after surgery.

To help reduce the swelling:

5 Elevate the leg

5 Do not sit for more than 30 minutes at a time

5 Pump the feet and ankles to keep your circulation going

5 Ice your hip for 10-15 minutes after activity and at least 3-4 times per day

E. Prevent Lung Complications before and after surgery

Lung complications such as fluid in the lungs or pneumonia may occur due to the anesthetic and prolonged bed rest.

5 Do not eat or drink after midnight on the night before your surgery.

5 Get up and move, change your position in bed frequently.

5 Take 10 big deep breaths and cough every hour on the days after your surgery.

5 Stop smoking! People who smoke are at high risk for lung complications after surgery.

F. Prevention of dislocation

Dislocation occurs when the components separate from one another or when the 'ball comes out of the socket'. After surgery, the muscles and ligaments that normally support your joint in place have been stretched and weakened by surgery and require time to heal. While healing, they are weak

It is vital that you DO NOT:

● twist your hip

5 Cross your legs

5 sit on any surface lower than your own knee height

5 Bend the operated hip no more than 90 degrees or as directed by your surgeon or health care team

These rules apply for at least 3 months after the surgery.

G. prevention of loosening and wear:

5 carefully follow the precautions provided to you, during your Hospital Stay

H. Leg-length Inequality

Sometimes after a hip replacement, one leg may feel longer or shorter than the other. Your orthopedic surgeon will make every effort to make your leg lengths even, but may lengthen or shorten your leg slightly in order to maximize the stability

5. RESUMING NORMAL ACTIVITIES [1]

Notify your doctor immediately if you notice tenderness, redness, or pain in your calf, chest pain, and/or shortness of breath. These are all signs of a possible blood clot. Because you have an artificial joint, it is especially important to prevent bacteria from entering your bloodstream that could settle in your joint implant. You should take antibiotics whenever there is the possibility of a bacterial infection, such as when you have dental work or a colonoscopy / endoscopy. Be sure to notify your provider that you have a joint implant; they are trained to prescribe antibiotics for you to take by mouth prior to an invasive procedure

Diet: By the time you come home from the hospital, you should be eating a normal diet. Your physician may recommend that you take iron and vitamin supplements. Continue to drink plenty of fluids and avoid excessive intake of vitamin K if you are taking the blood-thinning medication Coumadin (warfarin). Foods rich in vitamin K include broccoli, cauliflower, Brussels sprouts, liver, green beans, garbanzo beans, lentils, soybeans, soybean oil, spinach, kale, lettuce, turnip greens, cabbage and onions. Try to limit your coffee intake, and avoid alcoholic beverages altogether. You should continue to watch your weight to avoid putting more stress on the joint.

Basic activities. [1] : Generally, the following guidelines will apply:

Weight-bearing: Be sure to discuss weight-bearing restrictions with your physician and physical therapist. Their recommendations will depend on the type of implant and other issues specific to your situation.

Driving: You can begin driving an automatic shift car in four to eight weeks, provided you are no longer taking narcotic Pain medication. If you have a stick shift car, this may take longer. The physical therapist will show you how to slide in and out of the car safely. Placing a plastic bag on the seat can help.

Sexual relations: It can be safely resumed four-

to-six weeks after surgery

Sleeping position: Sleep either on your back or on your side. In either case, keep a pillow (or two) between your legs Be sure to use the pillow for at least six weeks or until your doctor says you can do without it

Sitting: For at least the first three months, sit only in chairs that have arms. Do not sit on low chairs, low stools or reclining chairs. Do not cross your legs. The physical therapist will show you how to sit and stand from a chair, keeping your operated leg out in front of you. Do not sit for too long; get up and move around on a regular basis.

Return to work [1]: Your surgeon will determine when you are medically fit to return to work. At your six-week follow-up visit, if everything is normal, your surgeon may give you the go-ahead to return to work full-time. If your work is not too physically demanding and you feel up to it, you can return to work even earlier, at least part-time (perhaps a few hours.

Once or twice a week). Don't push yourself too hard. If your work is more physically demanding, it may take more time (approximately three months) to return to work.

Other activities [1]: Walk as much as you like once your doctor gives you the go-ahead, but remember that walking is no substitute for your prescribed exercises. Swimming is also recommended: You can begin swimming as soon as your surgeon has determined that your surgical wound is well healed. By three months, most patients can return to an active lifestyle, which could include golfing, bowling, bike riding, dancing, playing doubles tennis and, in some cases, even skiing. Most surgeons discourage high-impact aerobic activities like jogging and basketball. Do not do any heavy lifting (more than 40 pounds) or perform weightlifting exercises.

Avoiding fall [14]: Joint replacement surgery will affect your leg strength, balance and joint awareness. You will be at greater risk for tripping and falling. To avoid falls, follow the suggestions listed under "Getting your home in shape" and the following guidelines:

- o wear non-skid, supportive footwear at all times
- o use handrails when available, especially on stairs
- o do not lean against unstable furniture
- o know if the side effects of your medications can cause drowsiness or dizziness
- o wear your eye glasses if needed
- o always get up slowly after sitting or lying down and ensure you have your balance before taking a step

Nurses Interventions include prescribing strengthening exercises combined with gait and balance training; assessing the patient s home and eliminating hazards; and monitoring and adjusting the patient`s medications[6]. A meta-analysis[12] showed that hip protectors may help prevent hip fractures in patients who have risk of falling and in older patients living in nursing homes.

CONCLUSION

Health care delivery systems have been restructured in recent years to focus on achieving high-quality outcomes for patients by using the most cost-effective methods. Optimizing outcomes for patients undergoing surgery requires the collaborative and coordinated efforts of physicians, nurses, and allied health personnel. So Nursing contribution through education influences the patient outcome after hip surgery.

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Am I Born to be Hurt? The Voice of Women Living in Urban Squatter Settlement of Karachi, Pakistan: A Case Study

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ABSTRACT

Background: Violence Against Women is a serious public health problem present in all social, cultural, economic and religious groups. It is more common in societies where, gender roles are strictly defined. The purpose of this paper is to highlight the incidences of women who are suffering in silence due to cultural norms, misinterpretation of religious beliefs, inferior status, and lack of legal support.

Method: Eight hours exploratory interview that comprised of 4 sittings with a woman, belonging to low socio-economic country was conducted maintaining the confidentiality and privacy of the client.

Findings: The case enlightens the concept of fairness, gender discrimination, injustice, human rights and ethics etc. In countries like ours, curse on women start even before her birth, because the girl-child is not a particularly 'wanted' child. Being female in these type of societies means to be punished all the time. Abuse of women is part and parcel of every Pakistani women's life. It is apparent that violence against women can spoil individual's own lives, destroy families' future, smash and ruin communities, which ultimately increases the global burden. Though, every religion promotes equity but men have always placed themselves above equality. Distribution of health is even not equally distributed among genders. However, women needs are far more than the resources they are getting.

Conclusion/ Recommendations: In a nutshell, it is a very valuable piece of information that can help us to voice out the pain and distress of every other women of our country. This paper is an evidence for the researchers, health professional and policy makers to step forward for women's assistance by advocating their issues, bring changes in policies and law etc. Hence, the field dimension of this paper is to highlight the original experience of learning communities around health equity and rights.

Keywords: *Violence against women, gender discrimination, injustice and low income country.*

BACKGROUND

The United Nations defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life"[(1)]. Understanding violence against women is a complex issue and several explanations have been offered through various theories to understand the phenomenon. Research reports from different countries suggest that violence against women still exists, though their forms may vary from one society and culture to another. It is a major public health and social problem requiring considerable attention, as it entails severe physical, psychological, social and emotional consequences[(2).] In 48 population based studies from different parts of the world, (10- 69%) of the women reported having been physically assaulted by an intimate partner during their lifetime[(3)]. Unfortunately in Pakistan, domestic violence is considered as a private matter & therefore least focus is paid on its assessment, intervention or policy

changes[4]. In Pakistan, women on the basis of cultural and religious norms have to face discrimination and violence[5]. According to an estimate, approximately 70% to 90% of Pakistani women are subjected to domestic violence[6] various forms of domestic violence in the country include physical, mental and emotional abuse [7]. Unluckily, the Pakistani and Indian societies still run on tribal and feudal system and the majority of the population lives under rural and feudal control. In feudal system, there is no education; no freedom and women are treated like slaves or prisoners in the households making violence against women in these societies very common.

Some tribal societies consider women as the source of all evils and men are exempted from such believes. There is a famous proverb, that is very frequently used and believed universally, in such societies, "Zan, Zar, Zameen" (Woman, Money, Land) being the source of every evil. This is used, not as a source of learning but as a tool to put blame on the women and not on the men in case of any undesirable behavior on part of the men. In such societies, women's personality is determined by the men's desires. If she is non-compliant, and insubordinate, she is penalized through whippings, seclusion, and virtual custody and sometimes even assassinated.

METHODOLOGY

We conducted a case study and enrolled a 38 year old female Sakina (fake name) who worked in a garment factory at Korangi Karachi, Pakistan. After acquiring an informed consent an eight hours exploratory interview was conducted in 4 sessions at the participant's house. The duration of each interview was 2 hours. Data was collected by conducting in-depth interview in Urdu by using a semi structured interview guide. We maintained complete confidentiality and privacy during the interview and assured the participant that her identity will not be disclosed. For the analysis the interview was transcribed and further translated to English. A thematic analysis was done by identifying core key concepts.

FINDINGS

This was the story of women who had gone through a very tough time in her life. After interviewing her, we were shocked because these are stories which we thought were only in movies and dramas but unfortunately these are actual bitter realities of life. We are really obliged to Sakina for sharing her personal life with us.

Childhood Story: Our first interview was dedicated on Sakina's childhood story. She was originally from Multan. She was very skinny with very dark complexion. She was the eldest daughter in her family, having 3 more sisters and 1 brother. Her mother was a housewife and her father was a salesman the only bread earner of the family who had very limited salary therefore they were living hand to mouth.

Unfortunately, she was the only one who had a dark complexion (i.e black) in her family. This made her parents very worried because people use to make fun of Sakina's dark complexion and as a consequences her father use to beat her mother assuming that, she is the one who is responsible for Sakina's dark complexion although her mother was much more fairer than the father. This made Sakina anti-social, because she thought her dark complexion was a stigma for her family. She acquired only primary education, she was a very introvert sort of a girl and she use to spend most of her time in loneliness thinking about her future. As she could see her dark future ahead of her due to her dark complexion, with the passage of time, her parents started getting very nervous about her marriage because every time she got rejected by people and people preferred to get their son's married to her younger sister. Her father use to get extremely annoyed at her and use to mistreat her by abusing her verbally.

Both her sisters were already tied in the knot of marriage when she turned 18 but she was still single. It was after two years of her sister's marriage, a proposal came for Sakina, it was told to her that the guy was a very good person and he has no problem with Sakina's dark complexion. But he only had one condition that she will not allowed to do work because of the required household chores. So she got married at the age of 20.

Married Life Story: In the next 2 sessions of her interview we asked her about her married life. Unfortunately her sufferings and tragedies of life increased tremendously. Her husband concealed his

first marriage from her. He was married to his cousin who was a very pretty girl but she had infertility issues. Therefore on these grounds he decided to get married to sakina so that he could father a child. In her in-laws, she had a mother-in-law and one unmarried and unemployed brother-in-law. Sakina said "My husband's first wife was very dominating because she was very pretty and my husband use to love her more than me".

According to Sakina, her status was not more than a servant in that house. She use to spend most of her time crying during the night because of the plot that was made against her by her own parents and husband. But there was more to come ahead, it was very shortly after her marriage when her husband started abusing her physically as she was not able to conceive a child during the first year of her marriage. As a consequence of too much stress, lots of physical work and unwarranted sexual intercourse she developed Leucorrhea (excessive vaginal discharge). And when she use to complain to her husband about this, he used to beat her up. She also added "That once he threw acid on my face as he use to feel disgusted of my dark complexion and always felt ashamed to introduce me as his wife". He use to also tell her that " if you give birth to girl with the same complexion then I will murder your daughter". But she had a strong faith in Allah, and fortunately after 2 .5 year of her married life she gave birth to twins, one boy and one girl, and fortunately both had lighter complexions.

In addition, just after her delivery, it was told to her by her husband that "As you are very weak and anemic so you can't rear both the kids" therefore her son was taken away from her and was given to the husband's first wife. Since then her husband rarely use to come to her room and talk to her. Sakina and her daughter were non existing for him.

Furthermore, both her kids were of the same age but priority was always given to son. He was send to a private school whereas the daughter was sent to a nearby government school. Sakina also shared that she was not allowed to give polio drops to her daughter because her in-laws had this myth that Polio drops will make her infertile. It was very hard for Sakina to accept this injustice but she always had strong faith in Allah that He will do justice.

But this was not the end of her sufferance and yet was more to come. Her daughter, at the age 14 was physically harassed by her brother in-law and his friend when Sakina was out for some funeral. This was one point in her life when she was totally shattered and was living with the guilt that she was responsible for the damage to her daughter's life. She wanted to make a police complain against her brother in law and his friend but her cruel husband stopped her and accused both the mother and daughter and forced them to leave the house. Sakina got divorced after six month of this incidence.

Current Life Story: Our last interview was based on her current life. She shifted to Karachi after getting divorced and started working in a factory as a part timer to earn a living so that she could bear the cost of her daughter's studies. When we had a word with her daughter she said "I am very thankful to my mother, because she protected me from every hard time. She is very resilient as she has gone through such miserable times but never complained once rather she has always been grateful to Allah. ". They both strongly believed that Allah only gives challenges to those who, He loves the most and who He thinks can bear it. When we asked Sakina that do you have any complains so she said "No! Although everybody hurted and betrayed me, but I have forgiven my husband, my parents and everyone else, because I care for them and will always love them" and she also added that "sometimes it's hard to hold back my tears and hold a fake smile plastered on my face but still I am doing so because I don't want people to know the reasons behind my tears and I don't want to portray that I am weak, because I have to take care of my daughter and I never want people to pity on me and my daughter".

DISCUSSION

Overall, this interview was very touchy, this story is only of one woman. There are millions of such females in our country who are facing similar kinds of problems.

Sakina's salient experience has influenced us a lot. We firmly believe that women's life is very difficult to analyze. Their sufferings and pains can never be understood easily. One needs a very strong and tough heart to listen to their sufferings. Thus her story

highlights many important issues of our society.

Primarily, it was her dark complexion that had made her life miserable. Moreover the violence her mother had to face at the hands of her husband for delivering a female child. Husband's frustration was further aggravated by the dark complexion of his children that further triggered him to beat up his wife [8]. Is it the justified act? who are we to challenge Allah's creation. Nobody can invade other's right because everyone has a right to lead a dignified life.

Secondly, the principles of ethics seemed gobbled in Sakina's case i.e autonomy , justice and beneficence. When she had no say for deciding for her own marriage and the true profile of the groom was concealed from her although it was her right to know about her life partner. As in Universal Declaration of Human Rights, Article 3 & 16 stated that "Both men and women are entitled to equal rights as to marriage and its dissolution. Marriage shall be entered in to only with the free and full consent of the attending spouses."[9]. Therefore, I strongly believe that the knowledge of ethics should not be limited to books and forums only, it has to be implied in lives also. According to Farkhanda Lodi; a spirited feminist writer in one of her interview with The Daily Dawn, November 27, 2001 mentioned that "Man is a moment but woman is life but all these beautifully constructed sentences take a180 degrees turn while considering the status of women specifically in Pakistan. Our women still seem to be living in the dark ages."[10] . In our country curse on women starts even before her birth, because female child is not a particularly 'wanted' child which was also evident from Sakina's story, when her husband said he can murder his own daughter.

Her husband discriminated between her son and a daughter, where people prefer providing health benefits to men whereas females are more of its need. As in this case Sakina's daughter was deprived of polio vaccine. Her daughter was underprivileged to have good education too. We speculate, from where these discriminations are raised? Because according to Constitution of Pakistan "All Citizens are equal before law and are entitled to equal protection of law. There shall be no discrimination on the basis of sex alone."[10]. In addition, Allah has given the privilege to a mother to conceive and deliver a child and lactate him/her without discriminating on the basis of gender. Therefore, these feminist are trying to change the mind of people as Gloria Steinem once said "Feminism has never been about getting a job for one woman. It's about making life fairer for women everywhere. It's not about a piece of the existing pie; there are too many of us for that. It's about baking a new pie." [11]

Later, when she tried to make complain about her brother-in-law, she couldn't, instead she had to prove her own and her daughter's loyalty. Why is it so difficult to raise voice against crime in Pakistan? Here in Pakistan women who file charges open themselves up to the possibility of being prosecuted for illicit sex if they fail to 'prove' rape under the 1979 Hudood Ordinance which criminalizes adultery and fornication [10]. As a result, when women victims of violence resort to the judicial system for redress, they are more likely to find further abuse and victimization"[10]. Here, we strongly feel that there is a need to have females majority in policy maker who can influence the law maker by showing their angle. As recent news also highlights the significance of females in our society and urges us to accept their due rights, give them proper share in the policy making institutions and work for their development because male population alone cannot overcome the existing problems.[12]

CONCLUSION

Thus, after going through all the analysis, we second Hina Jilani, Lawyer and Human Rights Activist, that "The right to life of women in Pakistan is conditional on their obeying social norms and traditions." [13]

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Effectiveness of Social Support during Labour on Behavioural Response among Primi Mothers

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ABSTRACT

Objectives: The study aims to evaluate the effectiveness of Social support on behavioural responses of primi mothers during labour in experimental and control group.

Material and Method: A social support scale is used for this study to assess the effect of social support and behavioural responses of the women in labour which consists of 3 sections: 1. Baseline data 2. Numerical pain intensity scale to assess the behavioural response during labour. 3. Social support scale to assess the effect of social support of women at labour.

Result: The following conclusions were draw from the study findings. The level of numerical pain scale of primimothers in the experimental group is lower after the intervention by giving social support, The level of social support is effective among primimothers in the experimental group by giving the intervention, There is no there is no significant association between the behavioural response with selected demographic data other than the social supporter and the chi square value is 0.002 and the relationship to the mother the chi square value is 0.002. The results clearly indicate that there is significant association between the behavioural response and the social supporter and the relationship to the mother.

Keywords: *Primi mothers, Social support, Behavioural response.*

INTRODUCTION

Childbirth is a significant event in the lives of women and their families. It is a critical time in the human development that transforms women into mothers. Women remember their childbirth for the rest of their lives.[1] Thus, the quality of support that women receive during labour and delivery is important and nurses need to be concerned. Previously, women were delivered at homes; they received emotional support from female relatives.[2]

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Now women give birth in hospitals; they are separated from their families. Although nurses are adept at providing physical and emotional support, they may have to care for several other women. Nurses sometimes may give support to an individual woman a low priority because they have various clinical responsibilities and paper work.[3] It may create women's' experience emotional loneliness and deal with labour pain and in unfamiliar environment alone. These situations can contribute negative effects on childbirth outcomes. Having a close female relative to support a woman in labour can reduce maternal stress and anxiety and improve childbirth outcomes.[4]

The present article provides guidelines for including a close female relative on the labour unit to support a woman during labour and delivery.[5] Emotional support in the form of encouragement, praise, reassurance, listening and a continuous

physical presence have all been recognized as key components of intrapartum care. Support in labour is a crucial component of sensitive and responsive woman centred care; however this aspect of core midwifery input equally applies to the needs of the woman's birth partner.[6]

A study conducted a randomized controlled trail among primigravidas in Botswana to determine the effectiveness of the presence of a female relative as a labour companion on labour outcomes. In this study one hundred and nine primigravidas in uncomplicated spontaneous labour were randomly distributed in to a control group who laboured without family members present, and an experimental group who had a female relative with them during labour.[7] They evaluated mothers in the experimental group had a spontaneous vaginal delivery (91 % vs. 71%), less intrapartum analgesia (53% vs. 73%), less oxytocin (13 % vs. 30%), fewer vacuum extractions (4% vs 16%) and fewer caesarean section s (6% vs. 13%) than in the control group. These differences were all significant at $p<0.05$. The only analgesics used were intramuscular pethedine or hyoscine N-butyl bromide. It was concluded that the presence in labour of a female relative was shown to be associated with fewer interventions and a higher frequency of normal delivery compared with the outcomes of those without family members support.[8]

METHODOLOGY

The present study aim to evaluate the effectiveness of social support during labour on behavioural response among primi mothers. Quantitative research approach was adopted for the study. Quasi experimental research (pre test- post test control group design) was used. The study population was conducted in primary health centre. It has got the bed capacity of 50 and the bed occupancy is 20-30.The study population consists of all the primi mothers in selected hospitals. Purposive sampling will be used to select the subjects for the study.

The sample of the study consists of 60 primi mothers who are admitted in a selected hospital. Purposively 30 primi mothers assigned to experimental group and 30 control group. A social support scale is used for this study to assess the effect of social support and behavioural responses of the women in labour which consists of 3 sections: 1.Baseline data **2.**Numerical pain intensity scale to assess the behavioural response during labour.3.Social support scale to assess the effect of social support of women at labour. Validity and reliability was done. Reliability of the tool is established by test re test method the reliability is found(r=0.99).

After securing written permission from the respective authority, based on Inclusion and exclusion criteria the subjects are selected. 30 primimothers to the Experimental group and 30 primi mothers to the control group are purposively assigned. Informed consent will be taken from the selected family members and mother safter explaining the purpose of the study.

Pre-test to see behavioural response and effect of Social support in both experimental and control group will be measured by numerical pain intensity scale and social support scale. The post test will be conducted to measure the mother's behavioural responses and social support after the delivery in both experimental and control group Data is organised, tabulated and analysed using descriptive and inferential statistics.

Table 1: Numerical pain intensity scale among primi mothers in control and experimental group

Level of numerical pain	Control group				Experimental group			
	Pre		post		Pre		Post	
	f	%	f	%	f	%	f	%
Mild pain	-	-	-	-	-	-	-	-
Moderate pain	-	-	-	-	-	-	-	-
Severe pain	-	-	-	-	-	-	27	90
Worst pain	30	100	30	100	30	100	3	10

Table: 1 shows that 30 (100) of pre-test score and 30(100) of post test score had worst pain in control group. In experimental group, 30(100) of pre-test score has worst pain and 27(90%) had severe pain and 3(10%) had worst pain. Thus, as it is stated in the first objective the effectiveness of behavioural response of primimothers in experimental post-test had a higher change in score of pre-test 100% to post-test sore 10% after giving intervention. So, the researcher recommends the health team workers to have the supporter with the mother at the time of labour.

Table: 2 Distribution on level of social support among primimothers

Level of social support	Control group				Experimental group			
	pre		post		pre		Post	
	f	%	F	%	f	%	F	%
Strongly disagree	2	7	4	13	7	23	-	-
Uncertain	28	93	26	87	23	77	1	3
Strongly agree	-	-	-	-	-	-	29	97

Table-2: shows that that 93% belongs to uncertain in pre-test in control group, 87% belongs to uncertain in post-test in control group, 77% belongs to the uncertain level of social support in pre-test in experimental group and 97% belongs to strongly agree among experimental group. Thus, it is stated in the second objectives the effectiveness of social support shows the higher acceptance of social support with the result of 97% of strongly agreeing the supporter for the mother at labour. So, the researcher recommends the health team members to implement the intervention in reality or in day to day activities.

Table 3: Unpaired 't' test is found for the effectiveness of post test among control and experimental group

	control-post			Experimental-post			Diff In Mean%	't'value	P value
	Mean	SD	Mean%	Mean	SD	Mean%			
Numerical pain intensity scale	10	0	100	9	0.45	90	10	12.04	0.000
Level of social support	45.22	2.5	36	101.17	4.11	81	45	63.66	0.000

Table-3: shows that the numerical pain intensity has the mean of 10 in control group and the 't' value is 12.04 and the level of social support mean score is 45.22 and the 't' value is 63.66. Thus the p <0.001 and is found to be highly significant. The above findings clearly imply that the effect of social support on behavioural response had highly significant for the primimothers at the time of labour. Because the tabulated value (0.000) is less than the calculated value (63.66). so, that the research hypotheses (H_1) is accepted.

RESULTS

The first objective of the study was to assess the effectiveness of primi mothers during labour in experimental and control group. In this study the primigravida mothers were selected. The purpose of the study and steps of the procedure were explained clearly. Informed consent will be taken from the selected family members and mothers after explaining the purpose of the study. Pre-test to see behavioural response and effect of Social support in both experimental and control group will be

measured by numerical pain Intensity scale.

The second objectives of the study were to evaluate the effectiveness of social support during labour among primi mothers in experimental and control group. The current study findings shows that primigravida mothers shows that there is no change in pre and post test scores in control group, but in experimental group the score has reduced to 100% to 10% after giving intervention.

The third objective of the study is to find out the association between the selected demographic variables and behavioural response among primi mothers in experimental group. The present study finding shows that shows that there is no significant association between the behavioural response with selected demographic data other than the social supporter and the chi square value(x^2) is 0.002 and the relationship to the mother the chi square value(x^2) is 0.002. The results clearly indicate that there is significant association between the behavioural response and the social supporter and the relationship to the mother.

DISCUSSION

Findings related to post test behavioural response of numerical pain intensity scale among primi mothers in experimental and control group

In this study, it shows in percentage wise distribution that there is no change in pre and post test scores in control group, but in experimental group the score has reduced to 100% to 10% after giving intervention. Thus there is significant difference between numerical pain scale among experimental and control group. The overall mean in the control post-test is 10 and the mean score of 9 in the experimental group.

Findings related to the post test of behavioural response of level of social support among primi mothers in experimental and control group

In this study, it shows in percentage wise that the majority 93% belongs to uncertain in pre-test among control group, the majority 87% belongs to uncertain in post-test among control group, majority of 77% belongs to the uncertain level of social support in pre-test among experimental group and the majority of 97% belongs to strongly agree. Thus, there is significant difference between level of social support among experimental and control group. The overall mean in the pre-test score is 45.22 among control group and the post test score is 101.17 among experimental group.

Findings related to the association between the level of social support during labour on behavioural response among primi mothers in control group with selected demographic data

The findings of the study was concluded that there is no significant association between the behavioural response with selected demographic data other than the social supporter and the chi square value is 0.002 and the relationship to the mother the chi - square value is 0.002. The results clearly indicate that there is significant association between the behavioural response and the social supporter and the relationship to the mother.

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Ethical Clearance: Thus the ethical issue were ensured in this study.

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Effect of White Reflecting Curtains on Neonatal Jaundice

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ABSTRACT

Introduction: One of the most common causes of hospitalization of neonates is hyperbilirubinemia, as 60% of term neonates and 80% of pre-term neonates are affected in the first week of life.

Method: Randomized control trials were followed to obtain error free results. In this research trial 30 term and pre-term neonates with physiological jaundice were selected. They were randomized into groups. Control group received conventional phototherapy without cover around the apparatus and the other group received conventional phototherapy with white reflecting curtains around the phototherapy unit. After enrolment, total serum bilirubin was measured at baseline, (before phototherapy), after 24 hours and 48 hours of phototherapy. Phototherapy was continued until the total serum bilirubin decreased to or less than 12.5 mg/dl.

Results: Phototherapy was effective in decreasing bilirubin levels in both experimental as well as in control group, but the response was faster in the experimental group than the control group; (9.1 ± 0.9 vs. 12.4 ± 1.8.7, $p<0.05$), (4.7± 0.9 vs. 9.4 ± 2.1, $p<0.05$) at different intervals. In the treatment of significant hyperbilirubinemia, there is rapid and effective bilirubin reduction in where white reflecting curtain were used group than the group without curtains due to higher spectral irradiance and larger body surface area being exposed to phototherapy.

Conclusions: This study demonstrated that phototherapy with white reflecting curtain is an effective in the treatment of neonatal hyperbilirubinemia requiring intensive phototherapy without evidence of increased adverse effects.

Keywords: *Neonates, Phototherapy, Serum Bilirubin, White reflecting Curtains.*

INTRODUCTION

Neonatal Jaundice is the most common condition that requires medical attention in neonates. The yellow discolouration of the skin and sclera in the newborn with jaundice is the result of accumulation of unconjugated bilirubin. In most infants, unconjugated hyperbilirubinemia reflects a normal transitional phenomenon. However, in some infants, serum bilirubin levels may rise excessively, which can be cause for concern because unconjugated bilirubin is neurotoxic and can cause kernicterus and death in neonates. Phototherapy is the primary treatment for neonatal jaundice.

The efficacy of phototherapy in prevention and treatment of neonatal jaundice in newborn infants has been well established. Phototherapy is the use of fluorescent lights for the treatment of neonatal jaundice. This relatively common therapy lowers serum bilirubin level by transforming bilirubin into water soluble isomers that can be eliminated without conjugation in the liver. The dose of phototherapy largely determines how quickly this process can occur. The dose is determined by the wavelength and intensity of light and the distance between the light

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and the infant and amount of the body surface area exposed to the light.

The short-term side effects of phototherapy include interference with maternal-infant interaction, imbalance of thermal environment and water loss, electrolyte disturbance, bronze baby syndrome and circadian rhythm disorder. In addition, phototherapy may be associated with some long-term side effects such as melanocytic nevi and skin cancer, allergic diseases, patent ductus arteriosus and retinal damage. Therefore, it is necessary to develop evidence-based guidelines, new light devices and alternative agents, as well as individualized treatments, to minimize the side effects of phototherapy.[1]

Duration of phototherapy is directly proportionate to the phototherapy induced complications. Reducing the duration of phototherapy, the side effects such as loose stool, poor skin turgor, increased body temperature and variation in the vital signs and possible long term complications such as retinal damage, melanoma, skin cancer, and infertility can be prevented. Health care institutions as well as patients will be benefitted from this research study by saving the cost on each phototherapy unit and reducing the duration of hospital stay for neonates. The purpose of the study was to evaluate the efficacy of using white reflecting curtains during phototherapy for treatment of neonatal jaundice.

METHODOLOGY

This randomized controlled trial, was conducted on neonates with hyperbilirubinemia admitted to Neonatal Intensive Care Unit of Himalayan Hospital, Dehradun, Uttarakhand, India. Inclusion criteria was: neonates who had completed gestational age of 37 weeks, birth weight ≥ 2500gm and total serum bilirubin level between 18 to 21 mg/dl at the start of phototherapy. Neonates with major congenital anomalies, hemolytic disease, using of Phenobarbital or herbal medications (such as Alhagipseudoalhagi, Fumariaparviflora, Zizyphus jujube, Purgative manna and CichoriumIntybus), elevated direct bilirubin (direct bilirubin more than 20% of total serum bilirubin), symptoms of infection and postnatal age less than 48 hours and more than two weeks at the start of phototherapy were excluded. Thirty newborns were randomly assigned into two groups. The control group was treated by standard phototherapy without white reflecting curtains and the experimental group received standard phototherapy with white reflecting curtains around the phototherapy unit. After enrolment, serum bilirubin level was monitored in both the experimental and control group at baseline (before phototherapy- day- 1), 24hrs (day-2) and 48hrs (day-3) after phototherapy. Neonates were continuously observed for side effects such as poor skin turgor, skin rash, loose stool, increased body temperature and variation in pulse, respiration and blood pressure. The study was approved by Ethical committee of Himalayan Institute Hospital Trust. After explaining about the research study in their local language written informed consent was taken from the parents prior to enrolment. Parents were free to withdraw their neonates from the study, at any time.

RESULTS

Table No.1: Table No. 2: Description of homogeneity of selected personal variables of study participants

N= 30

Sample Characteristics	Experimental Group		Control Group		Chi square value*	P value
	F	%	F	%		
Gender:						
• Male	8	53.3	7	46.6	0.1	1.0
• Female	7	46.6	8	53.3		
Mode of delivery:						
• NVD	6	40.0	9	60.0	1.2	0.2
• LSCS	9	60.0	6	40.0		

Table No.1: Table No. 2: Description of homogeneity of selected personal variables of study participants. (Cont...)

Maternal blood group: • A • B • AB • O	 1 6 6 2	 6.6 40.0 40.0 13.3	 5 5 3 2	 33.3 33.3 20.0 13.3	3.7	0.2
Blood Group of Neonate: • A • B • AB • O	 5 4 5 1	 33.3 26.6 33.3 6.6	 2 8 3 2	 13.3 53.3 20.0 13.3	3.4	0.3

*χ^2 **test** (df=1, χ2 table p> 0.05 = 3.48 df=3, χ2 table p> 0.05 = 7.82

- Nearly half (53.3%) of neonates in the experimental group were males whereas in the control group 53.3% neonates were females.
- The large proportion (60%) of neonates were delivered through LSCS whereas in control group 60% were delivered through NVD.
- Most of the mothers in the experimental group had blood group B or AB (40% each) whereas in the control group one third (33.3%) were blood group A and another one third were blood group B. One third (33.3%) of the neonates in the experimental group belonged toblood group A and AB while in the control group majority (53.3%) were in blood group B.
- The sampling distribution statistics (p>0.05) denotes that both experimental and control groups were homogenious in terms of Gender, Mode of delivery, Maternal and Neonatal blood gruop.

Table No. 2: Description of homogeneity of selected personal variables of study participants

N=30

S.No.	Characteristics of Subjects	Experimental group (Mean ± SD)	Control group (Mean ± SD)	t- value*	p value
1.	Age in days	4.4 ± 1.4	3.8 ± 1.2	1.3	0.1
2.	Weeks of gestation	37.0 ± 1.8	36.6 ± 2.3	0.5	0.6
3.	Weight in gms	2198 ± 311.2	2233.3 ± 436.9	0.2	0.8

t =2.05 at at **df=(28), p at 0.05 level of significance. *Independent sample t-test**

- Mean age of experimental group was 4.47 ± 1.4 days whereas in control group was 3.80± 1.26 days.
- Mean weeks of gestation in the experimental group were 37±1.89 weeks and in control group was 36.60 ± 2.32 weeks.
- Mean weight of the experimental group was 2198 ± 311.2gm whereas in the control group was 2233.3 ± 436.9 gms.
- The mean varience statistics (p>.05) proved both experimental and control groups were homogenous in terms of age, weeks of gestation and birth weight.

Table No. 3: Reduction in the level of Serum Bilirubin in neonates receiving Phototherapy with White Reflecting Curtains

n= 15

Variable	Baseline (Before Phototherapy)	24 hours of Phototherapy	48 hours of Phototherapy	p value*
Serum bilirubin level mg/dl (Mean ±SD)	14.9± 1.1	9.1± 0.9	4.7± 0.9	<0.001

*Repeated Measures ANOVA test

The data presented in Table no.3 depicts that neonates in the experimental group (n=15) showed a significant decrease in the mean serum bilirubin level from baseline (14.9 ± 1.1) to after 24hrs (9.1 ± 0.9) and after 48hrs (4.7 ± 0.9) of intervention.

Table No.4: Effect of Treatment with each observation for the groups receiving Phototherapy with White Reflecting Curtains

n= 15

Variable	Time Interval	Mean Difference	Standard Error	p value*
Serum bilirubin level mg/dl (Mean±SD)	Baseline Bilirubin 24hrs	5.7	0.3	0.001
	Baseline Bilirubin 48hrs	10.1	0.3	0.001
	24 hrs 48hrs	4.3	0.2	0.001

Table No. 5: Reduction in the level of Serum Bilirubin in neonates receiving Phototherapy without White Reflecting Curtains

n= 15

Variable	Baseline (Before Phototherapy)	24 hours of Phototherapy	48 hours of Phototherapy	p value*
Serum bilirubin level mg/dl (Mean ±SD)	15.3 ± 1.7	12.4 ± 1.8	9.4 ± 2.1	<0.001

The data presented in Table no.5 shows that neonates in the control group (n=15) showed a significant decrease in the mean serum bilirubin level from baseline (15.3±1.7) to 24hrs (12.4±1.8) and to 48hrs (9.4±2.1) of phototherapy. Also Table No.4: depicts that as the phototherapy duration increases, the bilirubin level significantly decreases.

Table No.6: Effect of Treatment with each observation for the group receiving Phototherapy without White Reflecting Curtains

n= 15

Variable	Time Interval	Mean Difference	Standard Error	p value*
Serum bilirubin level mg/dl (Mean±SD)	Baseline Bilirubin 24hrs	2.9	0.2	0.001
	Baseline Bilirubin 48hrs	5.9	0.3	0.001
	24 hrs 48hrs	3.0	0.2	0.001

Objective-3

To compare the efficacy of phototherapy with and without white reflecting curtains during phototherapy.

Table No.7: Comparison of Serum Bilirubin level in the groups receiving Phototherapy with and without White Reflecting Curtains.

N= 30

Groups	Serum Bilirubin Level in gm/dl (Mean ±SD)	Between Subject Effect		
	Baseline	24 hours	48 hours	p value*
Phototherapy with white reflecting curtains (n=15)	14.9± 1.1	9.1± 0.9	4.7± 0.9	<0.001
Phototherapy without white reflecting curtains (n=15)	15.3± 1.7	12.4± 1.8	9.4± 2.1	

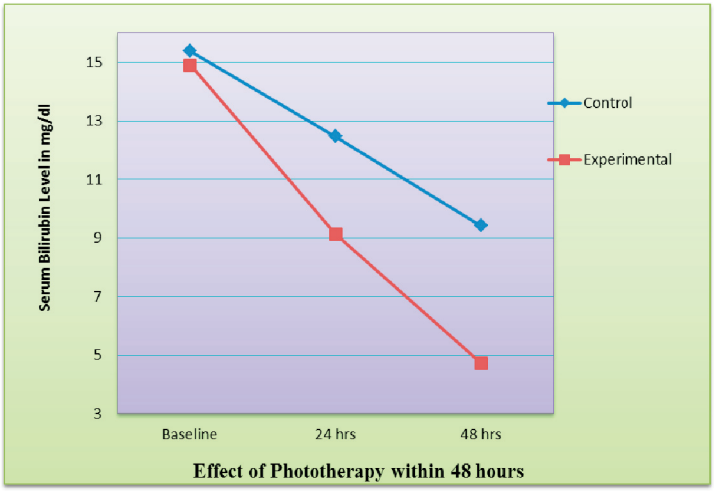

Figure No. 1: Decline in Serum Bilirubin level in Experimental and Control group at baseline, 24hrs and 48 hrs after phototherapy N= 30

Figure No.1 Illustrates mean serum bilirubin level was almost similar (15.3± 1.7and 14.9± 1.1 in control and experimental respectively) at baseline in both the experimental and control groups. After 24 hrs of phototherapy, though there was significant decline in bilirubin level of both the groups, bilirubin level of experimental group (9.1± 0.9) at 24 hrs of phototherapy was less than the bilirubin level of control group (12.4± 1.8). After 48 hrs of phototherapy, the bilirubin level of experimental group (4.7± 0.9) was significantly lesser than that of control group (9.4± 2.1). This suggests that there was a faster as well as higher decrease in bilirubin level in experimental group than in control group. Between group effect (ANOVA) showed that there was significant difference between control and experimental group ($p<0.001$) in terms of decrease in bilirubin level.

DISCUSSION

Many of the clinical trials have validated the efficacy of phototherapy in reducing excessive unconjugated hyperbilirubinemia, and its implementation has drastically curtailed the use of exchange transfusions. The study result shows that the using white reflecting curtain around the phototherapy unit can accelerate decreasing serum level of bilirubin in neonates, and decrease hospital stay, without an increase in phototherapy complications. Hanging white curtains around phototherapy units significantly increases efficacy of phototherapy in the treatment of neonatal jaundice without evidence of increased adverse effects.[2]

White, reflecting curtains in phototherapy units was significantly more effective than phototherapy without curtains for treatment of neonatal jaundice.[3] Though hanging of white reflective sling on sides of CFL phototherapy equipment resulted in marginal increase in irradiance, it did not decrease the duration of phototherapy.[4]

CONCLUSION

The overall findings of the present study clearly indicated that use of white reflecting curtains during Phototherapy was significantly effective in decreasing the serum bilirubin level for the treatment of uncomplicated neonatal jaundice at 24hrs and 48hrs of treatment. Hence this can be concluded that hanging white reflecting curtains around phototherapy units significantly increases effectiveness of phototherapy in the treatment of neonatal jaundice without evidence of increased adverse effects.

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Conflict of Interest - Nil

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Effectiveness of Planned Teaching Programme on Knowledge Regarding Care of Patient on Mechanical Ventilation among B.Sc. Nursing Students

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ABSTRACT

Mechanical ventilation is a life support system frequently used in critical care. Aim of study was to evaluate the effectiveness of planned teaching programme on knowledge regarding care of patient on mechanical ventilation among B.Sc. nursing students. Quantitative approach was applied and quasi experimental non randomized control group design was used. Total 130 B.Sc. nursing students, 65 in experimental group & 65 in control group were selected by total enumeration sampling technique from the Mata Sahib Kaur College of Nursing, Balongi (Mohali). A self administered structured knowledge questionnaire was used to collect the data. Pre test was taken from the both groups. Then planned teaching programme was administered to experimental group. After one week of teaching post test was taken from the both groups. The difference between mean pre test and post test knowledge score of experimental group was statically significant at $p < o.o5$. It was found that there was no association between pre test level of knowledge on care of patient on mechanical ventilation among B.Sc. nursing students with socio- demographic variables. So, it was concluded that planned teaching programme was highly effective in enhancing knowledge of B.Sc. nursing students regarding care of patient on mechanical ventilation.

Keywords: *Effectiveness, Planned Teaching Programme, Knowledge, Mechanical Ventilation.*

BACKGROUND OF THE STUDY

Mechanical ventilation has been used for decades to support the respiratory function of patients with various degrees of respiratory failure. Patients who have weak or absent spontaneous respirations usually require mechanical support to assist in ventilation and oxygenation.[1]Mechanical ventilation is a life support system frequently used in critical care setting in order to ensure adequate ventilation and oxygenation or it is a device to inflate lungs artificially by positive or negative pressure.[2]

Mechanical ventilation is a technique through which gas move toward and away from the lungs through an external device connected directly to the patient. The clinical objectives of mechanical ventilation can be highly diverse which includes maintenance of gas exchange; reduce or substitute respiratory effort; diminish consumption of systemic and/or myocardial Oxygen; obtain lung expansion; allow sedation, anesthesia and muscle relaxation and to stabilize the thoracic wall.[3]

Since a wide variety of ventilators are available, the ventilator selection depends on the severity of the disease process and the length of time that ventilator support is required. Two major types of ventilator are negative pressure ventilators and positive pressure ventilator.[4] Positive pressure ventilators use positive pressure to inflate the lungs of the patient. Different types of positive pressure ventilators are used like pressure-cycled ventilator, time-cycled ventilator, and volume-cycled ventilator Negative

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pressure ventilators apply negative pressure around the chest wall. They are old generation mechanical ventilators that are not in use now, for e.g. iron lung, pneumowrap.[5]

Mechanical ventilator is used in different conditions such as PaO_2 less than 50mmHg with fiO_2 more than 0.60, PaO_2 more than 50mmHg with pH less than 7.25, respiratory rate more than 35 breaths/minute, acute respiratory failure, definite airway obstruction such as with tracheal tumor or laryngeal edema, apnea, neuromuscular disease, use of muscle relaxants and depressant drugs, inadequate oxygenation such as acute respiratory distress syndrome (ARDS), severe chronic obstructive pulmonary disease, impaired alveolar ventilation such as in drug overdose, status asthmatics and neurological disease.[6,7]

Clients on mechanical ventilators are highly dependent, need comprehensive holistic care with constant attention, and care which includes airway maintenance, fluid electrolyte balance, nutritional needs, hygiene, elimination needs, coping, comfort, safety and infection prevention.[8] Therefore, the role of professional nurse in caring client with mechanical ventilator is challenging. Nurse should assume different responsibilities, show enough expertisation and skillful to safeguard the client life and enhance the health condition of the client.[9]

OBJECTIVES

1. To pre test the knowledge regarding care of patient on mechanical ventilation among B.Sc nursing students.

2. To develop and administer planned teaching programme on care of patient on mechanical ventilation to experiment group.

3. To post test the knowledge regarding care of patient on mechanical ventilation among B.Sc nursing students.

4. To compare the pre test & post test knowledge regarding care of patient on mechanical ventilation among B.Sc nursing students.

5. To associate the findings with the selected socio demographic variables.

HYPOTHESIS

H_1: Post test knowledge of nursing students of experimental group is significantly higher than the knowledge of nursing students of control group regarding care of patient on mechanical ventilation.

H_2: There is significant association between knowledge of nursing students regarding care of patient on mechanical ventilation and selected socio demographic variables.

MATERIAL & METHOD

Research approach: A quantitative research approach

Research design: Quasi experimental non randomized control group research design

Research setting: The study was conducted at Mata Sahib Kaur College of Nursing, Balongi (Mohali).

Target population: B.Sc. Nursing 2nd, 3rd and 4th year students

Sample and sampling technique: The sample consisted of total 130 B.Sc. Nursing students, 65 in experimental group & 65 in control group selected with total enumeration sampling technique.

Inclusion and Exclusion Criteria:

Inclusion criteria : B.Sc. Nursing 2nd, 3rd and 4th year students studying in Mata Sahib Kaur College of Nursing, Balongi (Mohali), who were willing to participate.

Exclusion criteria: B.Sc. Nursing 1st year students studying in Mata Sahib Kaur College of Nursing, Balongi (Mohali) and B.Sc. Nursing 2nd, 3rd and 4th year students who were absent at the time of data collection procedure.

Selection and development of tool: A self administered structured knowledge questionnaire was selected to assess knowledge regarding care of patient on mechanical ventilation.

Description of tool: The self structured knowledge questionnaire consists of Part – A: Socio-demographic data, Part – B: Self administered structured knowledge questionnaire on care of

patient on mechanical ventilation. This section consists of 30 items to assess the knowledge of B.Sc. nursing students on care of patient on mechanical ventilation.

The validity of the tool was established by consultation with experts. Internal consistency of the structured knowledge questionnaire was computed with split half method using Karl Pearson's correlation coefficient formula. The obtained 't' value is 0.82 which shows tool was internally consistent.

FINDINGS

The collected data was analyzed using descriptive and inferential statistics.

Table 1: Frequency, percentage distribution and homogeneity of socio- demographic variables of B.Sc. Nursing students in both experimental and control group

N = 130

Socio demographic variables		Experimental Group (n_e=65)		Control group (n_c=65)		chi square	p-value
		f_e	%	f_c	%		
Age (in years)	18-20	54	83. 1	54	83.1	0.000	1.000^{NS}
	21-23	11	16.9	11	16.9		
Year of course placement	B.Sc.2nd year	23	35.4 32.3	23 21	35.4	0.000	1.000^{NS}
	B.Sc.3rd year	21	32.3	21	32.3		
	B.Sc.4th year	21			32.3		
Religion	Hindu	02	03.1	24	36.9	23.267	0.000*
	Muslim Sikh	-	-	-	-		
	Christian	63	96.9	41	63.1		
		-	-	-	-		
Living arrangements	Hostler	54	83.1	54	83.1	0.000	1.000^{NS}
	Day scholar	11	16.9	11	16.9		
	Paying guest	-	-	-	-		
Type of family	Joint	65	100	57	87.7	6.527	0.011*
	Nuclear	-	-	8	12.3		
Educational status of father	Illiterate	-	-	-	-	12.168	0.016*
	Primary	-	-	03	0.46		
	Matric	23	35.4	31	44.7		
	Secondary	10	15.4	01	01.5		
	Graduate	26	40.4	22	33.8		
	Post graduate	06	09.2	08	12.3		
Educational status of mother	Illiterate	-	-	01	01.5	19.919	0.001*
	Primary	05	07.7	07	10.8		
	Matric	18	27.7	36	55.4		
	Secondary	19	29.2	01	01.5		
	Graduate	16	24.6	14	21.5		
	Post graduate	07	10.8	06	09.2		
Monthly income	55000	01	01.5	03	04.6	22.325	0.000*
	5,001-10.000	05	07.7	19	29.2		
	10.001-20,000	23	35.4	33	50.8		
	520.001	06	54.4	10	15.4		
Source of information	Family members	08	12.3	13	20.0	14.083	0.029*
	Health care professionals	07	10.8	13	20.0		
	Printed media	10	15.4	17	26.2		
	Electronic media	44	61.5	22	33.8		

*** = significant at p<0.05, NS = Not significant**

It was found that in both experimental and control group, majority of B.Sc. nursing students were in age group of 18-20 years. Most of students were from B.Sc. nursing 2nd year. Maximum subjects belonged to Sikh religion and were hostlers. All B.Sc. nursing information from electronic media. students were unmarried and belonged to nuclear family. Maximum students' educational status of father was graduate and mother's educational status was secondary education Majority of B.Sc. nursing students had monthly income of family more than or equal to 20,001. Majority of subjects had acquired

SECTION II

Table 2: Comparison of pre test and post test level of knowledge among B.Sc. nursing students of experimental and control group

N = 130

LEVEL OF KNOWLEDGE	SCORE	EXPERIMENTAL GROUP (n_e=65)				CONTROL GROUP (n_c=65)			
		pre test		post test		pre test		post test	
		f_e	%	f_e	%	f_c	%	f_c	%
Poor	0-10	10	15.4	-	-	10	15.4	11	16.9
Average	11-20	53	81.5	23	35.4	53	81.5	52	80.0
Good	21-30	02	03.1	42	64.6	02	03.1	02	03.1

Table 2 denotes that in experimental group, majority of subjects (81.5%) had average level of knowledge in pre test. But in post test, majority of subjects (64.4%) had good level of knowledge. In control group, maximum subjects (81.5%) had average level of knowledge in pre test. and in post test also, majority of subjects (80.0%) had average level of knowledge

Table 3: Comparison of mean pre test knowledge score among B.Sc. nursing students of experimental and control group

N= 130

	Group	n	Mean	SD	Unpaired t- test value	p- value
Pre test Knowledge scores	Experimental group	65	13.66	3.572	0.049	0.9608 NS
	Control group	65	13.63	3.560		

NS = Not significant

Table 3 reveals that the obtained unpaired t-test value of pre test (0.049) was statistically not significant at $p_{<0.05}$ and hence there was no significant difference among the pre test knowledge scores of the experimental & control group.

Table 4: Comparison of mean post test knowledge score among B.Sc. nursing students of experimental and control group

N= 130

	Group	n	Mean	SD	Unpaired t- test value	p- value
Post test Knowledge scores	Experimental group	65	21.58	2.686	14.458	0.000*
	Control group	65	13.69	3.486		

*** significant at p<0.05**

Table 4 summarizes the unpaired t- test analysis of post test knowledge scores of experimental & control group. The obtained unpaired t-test value of the post test (20.350) was statically significant at p < 0.05 and hence there was significant difference among the post test knowledge scores of experimental & control group.

Post test knowledge of nursing students of experimental group is significantly higher than the knowledge of nursing students of control group regarding care of patient on mechanical ventilation, hence research hypothesis (H_1) was accepted

Table 5: Comparison of mean pre test & post test knowledge score among B.Sc. nursing students of experimental and control group

N=130

Group	Knowledge scores	Mean	SD	Unpaired t- test value	p- value
Experimental group	Pre test Post test	13.66 21.58	3.572 2.686	20.350	0.000*
Control group	Pre test Post test	13.63 13.69	3.560 3.486	0.264	0.792 NS

*** = significant at p<0.05, NS = Not significant**

Table 5 summarizes the paired t-test analysis of pre test and post test knowledge scores conducted on both experimental & control group subjects. The obtained paired t-test value of the experimental group (20.350) was statically significant at p < 0.05. While in control group paired t-test value (0.264) was statically not significant at p < 0.05.

SECTION III

Table 6: Association between pre test level of knowledge among B.Sc. nursing students and socio-demographic variables

N=130

Socio demographic variables		Poor f_1 (%)	Average f_2(%)	Good f_3(%)	Total	χ^2, df, p-value
Age (in years)	18-20 21-23	18 (13) 02 (01)	86 (66) 20 (15)	04 (03) -	108 22	1.782, 2, 0.410 NS
Year of course placement	B.Sc.2nd year B.Sc.3rd year B.Sc.4th year	09 (06) 05 (03) 06 (04)	35 (26) 36(27) 35 (26)	02 (01) 01 (0.7) 01 (0.7)	46 42 42	1.534, 4, 0.821 NS
Religion	Hindu Muslim Sikh Christian	03 (02) - 13 (17) -	21 (16) - 85 (65) -	02 (01) - 02 (01) -	26 - 104 -	2.565, 2, 0.277 NS
Living arrangements	Hostler Day scholar Paying guest	16 (12) 04 (03) -	89 (68) 17 (13) -	03 (02) 1 (0.7) -	108 22 -	0.379, 2, 0.827 NS
Type of family	Joint Nuclear	17 (13) 03 (02)	101 (77) 05 (03)	04 (03) -	122 8	3.351, 2, 0.187 NS
Educational status of father	Illiterate Primary Matric Secondary Graduate Post graduate	01 (0.7) 06 (04) 02 (01) 08 (06) 03 (02)	02 (01) 46 (35) 08 (06) 39 (30) 11 (08)	- 02 (01) 01 (0.7) 01 (0.7) -	03 53 11 48 14	4.038, 8, 0.854 NS
Educational status of mother	Illiterate Primary Matric Secondary Graduate Post graduate	- 02 (01) 06 (04) 02 (01) 08 (06) 02 (01)	01 (0.7) 10 (07) 45 (34) 18 (13) 21 (16) 11 (08)	- - 03 (02) - 01 (0.7) -	01 12 54 20 30 13	6.915, 10, 0.7333 NS
Monthly income	55000 5,001-10.000 10.001-20,000 520.001	- 05 (03) 09 (06) 06 (04)	04 (03) 18 (13) 46 (35) 38 (29)	- 01 (0.7) 01 (0.7) 02 (01)	04 24 56 46	2.322, 6, 0.888 NS
Source of information	Family members Health care professionals Printed media Electronic media	03 (02) 03 (02) 05 (03) 09 (06) -	18 (13) 15 (11) 22 (16) 51 (39) -	- 02 (01) - 02 (01) -	13 13 17 22 -	4.97, 6, 2.547 NS

NS = Not significant

There was no association between pre test level of knowledge on care of patient on mechanical ventilation among B.Sc. nursing students and their age, year of course placement, religion, living arrangements, marital status, type of family, educational status of father, educational status of mother, monthly income of family & source of information was found to be statistically not significant at $p < 0.05$. Hence, research hypothesis (H_2) was rejected.

CONCLUSION

Study concludes that B.Sc. nursing students had average level of knowledge regarding care of patient on mechanical ventilation. Also, level of knowledge of B.Sc. nursing students was enhanced after planned teaching programme regarding care of patient on mechanical ventilation. It was found that age, year of course placement, religion, living arrangements, marital status, type of family, educational status of father, educational status of mother, monthly income of family & source of information had no influence on the prior knowledge of B.Sc. nursing students regarding care of patient on mechanical ventilation.

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Conflict of Interest: There was no conflict of interest in the study. No personal relationships have influenced actions of author. There is no bias in the study. There were no dual commitments or competing interests.

Source of Funding : Self

Ethical Clearance: Informed consent was taken from the B. Sc Nursing students and no identifying data of the students have been revealed.

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A Study on Challenges Faced by Mothers and the Coping Strategies Adopted by Them During the Postpartum Period

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ABSTRACT

Postnatal is a period beginning immediately after the birth of the child and extending for about 6 weeks. It is significant for the mother, for the baby and for the family as it is a time of physiological adjustment for the mother and the baby and emotional and social adjustment for all involved in the care[1]. During the postpartum period a woman's whole being is called upon to make mandatory adjustments that may result in important consequences for her present and future ability to function. The postpartum period is the most vulnerable period of the maternity cycle. The transition from a non-mother to a mother, or from being a mother of one child, to becoming a mother of two children, calls for changes in a woman's role relationships, and/ or alteration in her behaviour and in herself in the social context[6].

Objectives of study:-

1. To identify the challenges faced by postpartum mothers
2. To assess the coping strategies adopted by them.

Materials and method: A Quantitative descriptive research approach was carried out among 50 postnatal mothers by using purposive sampling technique in postnatal wards of OBG, at Justice K. S Hegde Hospital by using structured rating scale for challenges faced by mothers. For coping strategies, structured check list is used.

Results: - Postpartum challenges were assessed through structured rating scale and coping strategies through structured checklist. Almost all the mothers had positive adaptation towards postpartum challenges and they were also able to cope well in the post partum period.

Keywords: - *Postpartum challenges, coping strategies, mothers.*

INTRODUCTION

The postpartum period is a very special period in the life of a woman. It is marked by strong emotions, spectacular physical changes new and altered relationships and adjustments[2,] the birth of the child may also alter the mother's feelings and fatigue in the postpartum period. This can be helped more by situation specific support from family and friends[3]. Most of the births today occur within the confines of the hospital settings and many mothers embark upon a journey for which they are ill prepared. Following birth a woman may need time to readjust, to regain normalcy. At the positive end of the spectrum is a mother who is overwhelmed with love for her baby, one who is completely euphoric and satisfied with her birth experience. However at the negative end of the spectrum is the mother who feels traumatized by her experience of childbirth and postpartum[4].

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The extent of postnatal health problems warrants close attention. It is estimated that approximately about 58% women experience tiredness, 23% perineal problems, 23% sexual problems, 20% vaginal bleeding, 46% urinary incontinence, and 43% women experience after-pains[5].

During the postpartum period a woman's whole being is called upon to make mandatory adjustments that may result in important consequences for her present and future ability to function. The postpartum period is the most vulnerable period of the maternity cycle. The transition from a non-mother to a mother, or from being a mother of one child, to becoming a mother of two children, calls for changes in a woman's role relationships, and/ or alteration in her behaviour and in herself in the social context[6].

Additional support comes from the family through the shifting of boundaries to accommodate a new member and altered roles (Abell, Baker, Clover, & Ramsey, 1991). The inability of the family to adapt and accept the changes in family member roles could impact the woman's role identification and cause greater conflict with maternal adaptation[7].

The various studies shows that maternal adaptation to postnatal period is influenced by maternal age, social status, duration of hospital stay, type of delivery, marital status. It is also to be noted that a woman's perception for the motherhood role influences postpartum adaptation and satisfaction with motherhood roles. Studies on the impact of education on childbirth have revealed that women were able to increase their knowledge about childbirth experience[8].

REVIEW OF LITERATURE

Predictors of crying problems in the early postpartum period. A case control study on 7765 mother child dyads who received postnatal home care by midwives (n= 1636 cases of midwife reported crying problem , n=6129 controls) and the results showed Maternal health and mood problems in the immediate postpartum period were significantly associated with reported crying problem. Maternal health and mood problems included physical complications after birth, psychological complications after birth, Psychological decompensation, and depression. Further risk factors for infant crying problems were planned resumption of paid work directly after paid maternity leave[9].

A study was conducted on 78 Chinese mothers on assessment of stress and maternal role competency in Pregnancy, at 6 weeks and 6 months postpartum and the results indicate maternal stress increases and role competence decreases during early motherhood. Thus it was concluded by the authors that Culturally competent health care interventions should be developed to promote maternal competence and satisfaction, in particular during early motherhood ,and to equip women with effective coping skills to deal with stress of maternal role transition[10].

A descriptive cross-sectional study was conducted on Factors influencing maternal role performance in transition to being the first time mother among 200 post natal mothers in Thailand. The results show that significant factors influencing maternal role performance of women in transition to being the first-time mother were social support (β=0.261, p<.001), maternal perception of parenting (β=0.248,p<.001), depression (β=-0.206,p<.01), and maternal competence (β=0.180, p<.01). Social support, maternal perception of parenting, maternal competence, and depression explained 34% of variance in maternal role performance (R2=0.340, p<.001).[11]

A study conducted in Medical University in Taiwan among 861 primi mothers to find out the major stress after child birth. The results show that greater stress levels were concerned with their new maternal role. 32% of primi mothers had stress about feeding the baby, bathing the baby, 24% regarding negative physical and life style changes and 38% related to lack of social support.[12]

A descriptive correlation study was conducted on Perceived Social Support and Adaptation to the Maternal Role in First- time Mothers during the Postpartum Period among 40 mothers. The results shows that the mean score of the perceived total functional support was 116.6±37.5 points (affective: 38.1 affirmative: 39.3, aid: 39.3), and the score of the total network support was 45.2±13.9 points (size: 4.9, duration: 19.8 frequency: 20.4). These scores tended to be slightly low. The mean score of the self confidence on the infant care activity as the subjective aspect of the maternal role adaptation (MRA) was 56.5

points (86.9%), whereas that of the sensitivity of the mother-infant interaction of the MRA was 78.9 points (63.2%).[13]

PROBLEM STATEMENT

A Study on Challenges Faced by Mothers and the Coping Strategies Adopted by them during the Postpartum Period in a Selected Teaching Hospital, Mangalore.

OBJECTIVES OF THE STUDY

1. To identify the challenges faced by postpartum mothers

2. To assess the coping strategies adopted by them.

MATERIALS & METHOD

A Quantitative descriptive research approach was carried out among 50 postnatal mothers by using purposive sampling technique in postnatal wards of OBG, at Justice K. S Hegde Hospital by using structured rating scale for challenges faced by mothers. For coping strategies, structured check list is used.

RESULTS

Table no. 1:- Distribution of demographic characteristics of postnatal mothers n=50

		Freq-uency	%
Age	18 – 20	1	2
	21 – 24	19	38
	25 – 29	22	44
	30 – 34	6	12
	>=35	2	4
Religion	Hindu	38	76
	Muslim	11	22
	Christian	1	2
Educational Status	1 – 7	10	20
	8 – 10	26	52
	PUC and above	14	28
Occupation	Working	5	10
	Non working	45	90
Income	Rs. 5000	13	26
	Rs. 5001 - 10000	15	30
	Rs. 10001 - 15000	13	26
	>Rs. 15000	9	18
Number of children	One	24	48
	More than one	26	52
Mode of delivery	Normal	36	72
	Caesarean	14	28
Gestational week	37 weeks	14	28
	38 weeks	9	18
	39 weeks	12	24
	40 weeks	15	30
Sex of the baby	Male	26	52
	Female	24	48
Condition of the mother	Good	50	100
Condition of the baby	Good	50	100

The above table describes the following demographic findings:-

- 38% were in the age group 21 – 24 yrs 2% were in age group of 18 – 20%
- Most of the subjects were of Hindu religion 76%
- Regarding educational status, 52% studied upto high school. Most of the subjects were non working 90%
- Regarding family income, 30% were between Rs 5001 – 10000 and 26% were between 10000 – 15000 and 5000 – 52% had more than one child and 48% had one child
- Most of the subjects had normal vaginal delivery 72%
- With regards to gestational age at delivery 30% delivered at 40 weeks and 24% at 39 weeks
- 52% delivered male baby and 48% female baby

PHYSIOLOGICAL CHALLENGES

With regards to physiological challenges, most of the mothers had positive adaptation. 34% of the subjects had after pains most of the time. 42% were fatigued sometimes. 44% were never able to rest

comfortably. 34% had sleep disturbance sometimes and 62% had no breast engorgement.

EMOTIONAL CHALLENGES

Under emotional challenges, most of the areas mothers were able to face the challenges positively with good adaptation and some subjects had few negative adaptation. 96% of mothers never had persistent feelings of not being a good mother. 64% of mothers were not depressed due to exhaustion. All the mothers had positive feeling towards the sex of the baby. 72% were never anxious and 84% of the mothers were joyful.74% of the mothers were never depressed due to the physical changes of pregnancy and child birth.88% never had panic attacks. Hardly 8% were irritable always whereas 86% were never irritable.

ENVIRONMENTAL CHALLENGES

With regards to environmental challenges, 44% were not distressed with the physical set up. 42% felt that visitors were a hindrance sometimes. Only 10% felt that there was noise in the ward always.34% felt that privacy was maintained always, whereas 20% felt that privacy was never maintained, and 28% felt that privacy was maintained sometimes.

FINANCIAL CHALLENGES

With regards to financial challenges, 80% of mothers were never worried about the financial instability. Only 14% were worried about financial instability sometimes, but 50% were never financially sound whereas 16% were financially sound always. 44% had only one earning member in the family always.

BREAST-FEEDING CHALLENGES

86% were extremely happy with breast feeding, whereas only 2% were never happy with breast feeding. 48% had no latching difficulty. 30% expected breast feeding assistance sometimes and 34% never expected breastfeeding assistance.94% of mothers were never reluctant to feed, 24% expected breastfeeding assistance most of the time and 12% always.

COMMUNICATION CHALLENGES

With regards to communication challenges, 54% expressed that all the health professionals communicated to them always and 8% felt that all the health professionals never communicated with them. 40% felt that proper communication eased their discomfort always. 34% felt that midwives were involved in their care always and 34% most of the time

NEWBORN CHALLENGES

Regarding newborn challenges, 84% were never irritated when the baby was crying. 34% were never aware of the newborn care. 32% were totally aware of the newborn care always.36% of mothers never had difficulty in making the elder sibling understand.

EMPLOYMENT CHALLENGES

Regarding the employment challenges, 90% of the subjects were homemakers. Only 2% were never worried of leaving the baby and going for work and 8% were sometimes worried.

FAMILY SUPPORT

68% of the mothers felt their family members were supportive always and 2% felt that their family members were never supportive. 68% felt that their in-laws were caring always.98% felt that their spouse was caring always.

COPING STRATEGIES

A structured checklist with yes/no categories were used to assess coping strategies and it was found that almost all the mothers were able to cope up well. All the mothers expressed that they were able to console the baby appropriately when the baby was crying. 96% were able to participate in childcare. 92% did not react hastily or emotionally.

CONCLUSION

Findings of the study revealed that majority of the women had a positive adaptation towards various postnatal challenges and also they were able to cope well during the post partum period. It may be assumed that in Indian settings as the support system of the family members is relatively sound thus indicating that majority of women is able to cope up with the postpartum challenges. Family members especially the mothers, grandmother of the postnatal woman play a major role in bringing about a positive

feeling towards motherhood.

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