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An exploratory study to assess the prevalence of postpartum blues among the postnatal mothers in selected hospitals at Jabalpur Madhya Pradesh

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Abstract

The study adopted a non-experimental approach. The population consisted of postnatal mothers in selected hospital at Jabalpur Madhya Pradesh. Convenient sampling technique was used to select 50 postnatal mothers. In this study investigators used conceptual framework based on General system theory of Von Ludwig Bretanlanffy (1968). The investigators used an EPDS to determine the prevalence consisting of 10 items, semi structured interview schedule was used for assessment of degree of postpartum blues consisting 20 items. It was validated by experts; reliability was calculated by using split half method and the "r" value 0.9, which shows that the tool was reliable. After conducting pilot study main study was carried out, based on objective and assumption, the data was analyzed using various descriptive and inferential (χ^2) test. From the study it is inferred that out of 50 subjects, 30 subjects had postpartum blues and 20 subjects had no blues and 36% of postnatal mothers having mild blues, 24% of mothers were suffering from moderate blues and no one had severe blues. The study shows that there is significant association between postpartum blues and socioeconomic status & education and non-significant association between postpartum blues and age.

Keywords: EPDS- Edinburgh postnatal depression scale

Introduction

Health is the most sought after aspects by all in the world today and where health is concerned, care of a mother and child assumes greatest importance. Their well-being determines the present health of the family and the community and future health of the population. Care of the mother and child occupies a paramount place in our health service delivery system and gives special attention.

Psychological conditions have implication on the health of the mother and the newborn. Psychiatric disorder during puerperium period are classified as "Pinks", "Blues", "Postpartum depression" and "Postpartum psychosis". Baby blues or maternity blues are suffered by up to 80% of Postnatal mothers (and in some case fathers) symptoms typically last from a few hours to several days and include tearfulness, irritability, hypochondriasis, sleeplessness, impairment in concentration, feeling of isolation and headache.

Postpartum blues generally occurs within 6-8 weeks after child birth. A research finding has shown an average prevalence of postpartum blues of 13% in general population. In developed countries the risk factor for postnatal blues are past history of psychological disorder during pregnancy, low socioeconomic status, complicated delivery and poor marital relationship. In many countries women with low income face considerable inequalities, ranging from fewer opportunities in education and employment, to less control over personal decisions, such as

the use of contraception to plan pregnancies. In India the cultural view that male children are preferred over female children is an important reason that sex ratio is unbalanced in favors of men.

Understanding the biology of postpartum blues is important because, when it is severe, it leads to postpartum depression. Sometimes a pre-existing mental illness can be brought to the forefront through postpartum. It is widely found in women whose families have history of mental illness and disorders such as Bipolar disorder, Schizophrenia and Autism.

Need of the study

Postpartum blues affects approximately 10-15% of all mothers in Western societies (Kumar and Robson, 1984, O'Hara and Swain, 1996) [7]. Recent epidemiological inquiries have reported prevalence rate for postpartum blues of 15.8% in Arab women (Ghubas and Abou Saleh, 1997) [3] 16% in South African women (Cooper *et al.* 1999), 11.2% in Chinese women (Lee *et al.* 2001), 17% in Japanese women (Yoshida *et al.* 2001) and 23% in Goan women in India (Patel *et al.* 2002) [8]. Published reports on the epidemiology of postpartum blues from India are restricted to hospital based data (John *et al.* 1977, Gautam 1989, Patel *et al.* 2002) [8].

It is observed that some postnatal mothers are at high risk for the postpartum blues. It is necessary to know the prevalence of postpartum blues in postnatal mothers to

detect postpartum blues at an early stage and help in providing intervention and preventing further deterioration of the condition.

Review of literature

1. 2002: Vikram Patel MRC, Psych, Ph.D., Merlyn Rodrigues M.A. and Nandita Desouza, MD: "Gender, poverty and postnatal depression: A study of mothers in Goa, India."

Objective

This study described the natural history of depression in mothers who secretly gave birth in a low income country and to investigate the effect of risk factors, particularly related to infant gender bias, on the occurrence and outcome of depression.

Method

The authors studied a group of pregnant mother recruited during their third trimester of pregnancy from a district hospital in Goa, India. The mothers were interviewed at recruitment, 6-8 weeks and 6 month after childbirth. Interview data included presence of antenatal and postnatal depression, obstetric history, economic and demographic characteristics and gender based variables (preference for male infant presence of marital violence).

Results

Depressive disorders was detected in 59 (23%) of mothers at 6-8 weeks after childbirth, 78% of these patients had clinically substantial psychological morbidity during the antenatal period. More than one way of the patients remained ill at 6 months after delivery. Economic deprivation and poor marital relationships were important risk factors for the occurrence and chronicity of depression. The gender of the infant was a determinate of postnatal depression, it modified the effect of the other risk factors, such as marital violence and hunger. Depressed mothers were more disabled and were more likely to use health services than non-depressed mothers. Conclusions-maternal and infant health policies, a priority in low income countries must integrate maternal depression as a disorder of public health significance intervention should target mothers in the antenatal period and incorporate a strong gender based component.

2. 2003: Dwendagjerdingen, MD, MS: "The effectiveness of various postpartum depression treatment and the impact of anti-depressant drugs on nursing infant."

Background

Postpartum depression is seen in approximately 13% of women who have recently given birth; unfortunately, if often remains untreated. Important causes for under treatment are provides' and patient's lack of information about the effectiveness of various treatment and their concerns about the impact of treatment on nursing infant. This article represent research-based evidence on the benefits of various treatments for postpartum depression and their potential risk to nursing infant.

Method

The medical literature on postpartum depression treatment was reviewed by searching medline and current contents using such key as "postpartum depression", "treatment", "therapy", "psychotherapy" and "breast-feeding".

Result and Conclusion

There is evidence that postpartum depression improves with antidepressant drug therapy, estrogen, individual psychotherapy, nurse home visit and possibly group therapy of the more frequently studied antidepressant drugs in breastfeeding women, and paroxetine, sertraline, and nortriptyline have not been found to have adverse effects on infant. fluoxetine, however, should be avoided in breastfeeding women. By administering effective treatment to women with postpartum depression, we can positively impact the list of mothers, their infants and other family members.

3. 2004: Mani Chandran, MD, Sulochna Abraham, MD: "Postpartum depression in a cohort of women from a rural area of Tamil Nadu, India."

Background

Community based epidemiological data on postpartum depression from developing countries are scarce.

Aims

To determine the incidence of and risk factors for developing postpartum depression in a cohort of women living in rural south India.

Method

Literature was assessed 359 women in the last trimester of pregnancy and 6-12 weeks after delivery for depression and for putative risk factors.

Result

The incidence of postpartum depression was 11% (95% ci 7.1-14.9). Low income, birth of a daughter when a son was desired, relationship difficulties with mother in law and parents, adverse life events during pregnancy and lack of physical health were risk factors for the onset of postpartum depression.

4. 2005: Bloch M Rotenberg N, Koren D, Klein E: "Risk factors associated with the development of postpartum mood disorders."

Background

Various factors have been reported to be associated with the development of postpartum mood disorders. The relationship between postpartum disorders and putatively hormone related phenomena such as premenstrual dysphoric disorder is unclear. This study attempts to determine whether such mood phenomena are risk factors for postpartum mood disorder.

Method

Postpartum women (n = 1800) were assessed for risk factor

for postpartum mood disorder during the first 2-4 days after parturition out of these 133 were defined as high risk and 109 as low risk according to fixed criteria. A structured phone diagnostic interview was performed at 6-8 weeks postpartum to assess for the presence of postpartum depression or the blues.

Result

Premenstrual dysphoric disorder (PMDD), mood symptom during the first 2-4days postpartum or past history of depression and mood symptoms during past oral contraceptive use were found to be significant risk factor for postpartum mood disorder. Women at high risk for postpartum mood disorder had a 9.3, 1.5, and 2.6 fold increase in risk for major depression. Minor depression the blues and adjustment disorder respectively compared to women at low risk.

Problem statement

“An Exploratory Study to Assess the Prevalence of Postpartum Blues among the Postnatal Mothers admitted In Selected Hospitals at Jabalpur Madhya Pradesh (M.P.).”

Objectives

- To identify the prevalence of postpartum blues among postnatal mothers.
- To assess the degree of postpartum blues among postnatal mothers.

To find out association between postpartum blues and selected demographic variables

Hypothesis

- **H0:** There will be significant association between postpartum blues and age.
- **H1:** There will be significant association between postpartum blues and education.
- **H2:** There will be significant association between postpartum blues and socio-economic status.

Methodology

Research approach

An exploratory survey approach was used to assess the prevalence of postpartum blues among the postnatal mothers.

Research design

A non-experimental research design was adopted for the present study to find out the relationship between prevalence of postpartum blues among postnatal mothers and selected demographic variables.

Setting

The setting of this particular study is proposed to be postnatal mothers admitted in Neta Ji Subhash Chandra Bose Medical College Hospital, Jabalpur (M.P.).

Population

In this study the population consists of postnatal mothers admitted in selected hospitals at Jabalpur (M.P.).

Sample size and sample technique

Sample size: In this study there are 50 samples of postnatal mothers admitted in the NSCB medical college Hospital Jabalpur (M.P.).

Sample technique

The sample selection approach used is the non-probability one (Henry 1990), out of 6 non probability design the convenient sample was thought to be the most appropriate for study. The convenient sampling is a group of individual who are convenient for participation in a study.

Data collection instrument

An EPDS was used to determine the prevalence and semi structured interview schedule was used for assessment of degree of postpartum blues among the postnatal mothers.

Scoring

Edinburgh Postnatal depression Scale –EPDS is used to assess the prevalence of postpartum blues among the postnatal mothers.

The maximum score – 30

Possible depression – 10 or greater

Semi structured interview schedule

Semi structured interview schedule is used in which a researcher gathers a large number of statement for which 4 options were given as “Rare” “Sometimes” “Often” & “Always”.

The maximum score - 80

The minimum score - 0

Scoring key

For rare - 1

For sometimes – 2

For often – 3

For always – 4

Table 1: Degree grade and distribution of score

| S. No. | Scoring | Degree |
|--------|---------|----------------|
| 1. | 0-20 | No Blues |
| 2. | 21-40 | Mild Blues |
| 3. | 41-60 | Moderate Blues |
| 4. | 61-80 | Severe Blues |

Development of tools

The investigators developed the tool by going through the following process-

To give a realistic design to the tool the investigator went to the experts. A thorough review of the published as well as unpublished literature concerning postnatal mothers, Prevalence of postpartum blues and relation with socio demographic was undertaken to get clues for the development of a scientific instrument.

Discussion holds with experienced person in the field of nursing as they help in selection of items for the instrument. The first draft had 10 items for prevalence and 20 statements for degree of postpartum blues. All the items were used to assess the prevalence of postpartum blues among the postnatal mothers.

- First draft- The first draft was made in English and then it was translated in Hindi. It was given to English and Hindi experts. The first draft was given to 7 experts for their opinion. The experts did not consider any item inappropriate then it was changed into second draft.
- Second draft- The second draft was used for the pilot study. The investigators interviewed to 6 postnatal mothers. The score were then analyzed and item analysis was done. Thus, the third and final draft was prepared.
- Third draft- The third draft was used for the final study and it is given in appendix.

Description of tools

To conduct this study following tools were prepared-

Section-A

- Demographic Performa with 6 items i.e. age, qualification, socio economic status, number of children, religion and family type.

Section-B

- TOOL 1- Standard Edinburgh postnatal depression scale was used to know the prevalence of postpartum blues among post natal mothers.
- TOOL 2- The semi structured interview schedule to assess the degree of postpartum blues among postnatal mothers. Total items were 20 with total score of 80. Arbitrary classification on degree score was No blues, mild blues, moderate blues and severe blues.

Pilot study

A pilot study was conducted at Seth Govind Das district hospital Jabalpur (M.P.).After taking prior permission from the administrator of the hospital. The pilot study was conducted on 6 postnatal mothers admitted in Seth Govind Das district hospital at Jabalpur (M.P.) those who were willing to participate in the research study.

Pretesting of tools

After obtaining permission as well as taking consent from 6 subjects. The tools were pretested in the month of December. The subjects were able to understand all the items and the language was reported to be clear. The time taken for the completion of the tool was 60 minutes.

Reliability

The tools were administered to 6 Postnatal mothers admitted in Seth Govind das district hospital Jabalpur, who were coming under 1-7 postnatal days.

The reliability co-efficient of the semi structured interview schedule was found by using co-efficient of internal consistency through Karl Pearson’s correlation co-efficient formula. The reliability of this was found to be 0.9, which indicates that the tools were reliable.

Validity

Validity was established by adopting two techniques-

- Content Validity- The instrument was validated by getting opinion of 7 experts and researches. All the experts supported all the 20 statements of the semi structured interview schedule.

- Criterion Validity- To establish the criterion based validity and instrument was administered to postnatal mothers admitted in NSCB Medical college Hospital Jabalpur (M.P.)

Data collection process

A formal written permission was obtained from the Medical and Nursing Superintendent before data collection. Data collection period extended from 11/01/2021 to 13/01/2021 as per the convenient sample of postnatal mothers. The study was explained to the Medical Superintendent and postnatal mothers admitted in NSCB Medical college Hospital Jabalpur (M.P.).The investigator assured the confidentiality of their responses and consent was obtained from each mother. The postnatal mothers were thanked for their participation and co-operation. Investigator’s completed the data collection and the collected data was compiled for analysis.

Procedure for data collection is as follows-

Table 2: Data collection process

| S. No. | Date | Institution | Conducted at |
|--------|------------|---|------------------|
| 1. | 11/01/2021 | NSCB Medical College Hospital, Jabalpur | 8:00 AM -1:00 PM |
| 2. | 13/01/2021 | NSCB Medical College Hospital, Jabalpur | 8:00 AM -1:00 PM |

Plan for data analysis

The data obtained was planned to be analyzed by both Descriptive and Inferential statistics based on objective and hypothesis of the study. To compute the data a master data sheet was prepared by the investigator.

1. Demographic Performa containing sample characteristics would be analyzed using frequency and percentage.
2. Prevalence would be analyzed using frequency and percentage.
3. Degree would be analyzed in terms of frequency, percentage, mean and standard deviation.
4. Chi square would be computed to find out the association between postpartum blues and selected demographic variables.

Analysis and interpretation of data

This Chapter deals with the analysis of data collected from 50 postnatal mothers using EPDS and semi structured interview schedule. The Data were analyzed according to the objective of the study. Analyzation of data was done after the data were transferred to the study. Analyzation of data was done after the data were transferred to the master data sheet using descriptive and inferential statistics and data is presented using tables and diagrams. The data collected from the subject is organized, analyzed and as follow:

Organization of finding

The data collected was organized and presented under the following steps.

1. Frequency, percentage, distribution of demographic variables.

2. Prevalence of postpartum blues among the postnatal mothers.
3. Degree of postpartum blues among the postnatal mothers.
4. Association between postpartum blues and demographic variables.

Distribution of prevalence of postpartum blues among postnatal mothers: Data revealed that out of 50 subjects, 30 had postpartum blues and 20 had no blues.

Degree percentage of postpartum blues among postnatal mothers

Table 3: Distribution of degree and its frequency, percentage, mean and standard deviation

| S. No. | Degree | Scoring | Frequency | Percentage | Mean | Standard deviation |
|--------|----------------|---------|-----------|------------|------|--------------------|
| 1. | No Blues | 0-20 | 20 | 40% | 34.6 | 14.2 |
| 2. | Mild Blues | 21-40 | 18 | 36% | | |
| 3. | Moderate Blues | 41-60 | 12 | 24% | | |
| 4. | Severe Blues | 61-80 | 00 | 0% | | |

N = 50

Data depicted in table 10 shows that maximum 36% of postnatal mothers were suffering from mild blues, 24% of postnatal mothers were suffering from moderate blues, 40%

of postnatal mothers had no blues and no one had severe blues.

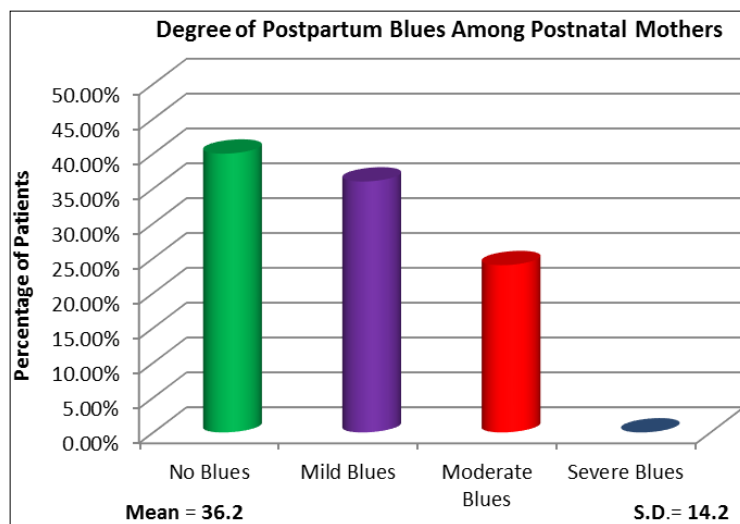


Fig 1: Bar diagram representing percentage distribution of degree of postpartum blues among post-natal mothers

Association between prevalence and selected demographic variables

This analysis depicts the effect of selected demographic variables with the prevalence of postpartum blues among postnatal mothers.

Chi-Square value was calculated for the selected demographic variables to see the association between the prevalence of postpartum blues among postnatal mothers

with selected demographic variables.

Formula used

$$\text{Chi square} = \frac{\sum(O-E)^2}{E}$$

O = Observed frequency

E = Expected frequency

Table 4: Chi square test showing association between postpartum blues and age

| S. No. | Age | Frequency | Postpartum blues | No blues | Chi square value | P. value |
|--------|-------------|-----------|------------------|----------|------------------|--|
| 1. | 18-22 Years | 11 | 5 | 6 | 1.63 | <0.50 Non Significant at the 3 degree of freedom |
| 2. | 23-27 Years | 25 | 15 | 10 | | |
| 3. | 28-32 Years | 14 | 10 | 4 | | |
| 4. | >32 Years | 0 | 0 | 0 | | |

N = 50

Data in the above table shows that 11 subjects of postnatal mothers were between 18-22 years of age out of these, 5 subjects had postpartum blues and 6 subjects had no blues, 25 subjects of postnatal mothers were between 23-27 years of age out of these, 15 subjects had postpartum blues and 10 subjects had no blues, 14 subjects of postnatal mothers were between 28-32 years of age out of these, 10 subjects had

postpartum blues and 4 subjects had no blues.

The maximum numbers of postpartum blues were found in 23-27 years of age and minimum numbers of postpartum blues were found in 18-22 years of age.

Chi square value of age was Non-significant. The calculated (Chi square value = 1.63, P>0.50) is Non-significant.

Hypothesis

H0 – There is significant association between postpartum blues and selected demographic variables. Thus, it informed

that there is a Non-significant association between postpartum blues and age. So this hypothesis is rejected.

Table 5: Chi square test showing association between postpartum blues and qualification

| S. No. | Qualification | Frequency | Postpartum blues | No blues | Chi square value | P. value |
|--------|----------------------------|-----------|------------------|----------|------------------|--|
| 1. | Illiterate | 14 | 10 | 4 | 8.71 | >0.50 Significant at the 3 degree of freedom |
| 2. | Primary | 18 | 11 | 7 | | |
| 3. | Middle | 13 | 09 | 4 | | |
| 4. | Higher Secondary./Graduate | 5 | 0 | 5 | | |

N = 50

Data in the above table shows that 14 subjects of postnatal mothers were Illiterate out of these, 10 subjects had postpartum blues and 4 subjects had no blues, 18 subjects of postnatal mothers had primary education out of these, 11 subjects had postpartum blues and 7 subjects had no blues, 13 subjects of postnatal mothers had middle education out of these, 9 subjects had postpartum blues and 4 subjects had no blues. 5 subjects of postnatal mothers had higher secondary or graduation out of these, 5 subjects had no blues.

The maximum number of postpartum blues found in

primary level of education and minimum no. of postpartum blues found in higher secondary or graduation.

Chi square value of qualification was significant. The calculated (Chi square value = 8.71, $P > 0.50$) is significant.

Hypothesis

H1– There is significant association between postpartum blues and selected demographic variables. Thus, it informed that there is a significant association between postpartum blues and qualification. So this hypothesis is accepted.

Table 6: Chi square test showing association between postpartum blues and economic status

| S. No. | Economic status | Frequency | Postpartum blues | No blues | Chi square value | P. value |
|--------|--------------------|-----------|------------------|----------|------------------|--|
| 1. | ≤2000 rupees | 14 | 7 | 7 | 2.48 | <0.50 Significant at the 3 degree of freedom |
| 2. | 2001 – 4000 rupees | 15 | 11 | 4 | | |
| 3. | 4001-6000 rupees | 13 | 07 | 6 | | |
| 4. | > 6000 rupees | 8 | 05 | 3 | | |

N = 50

Data in the above table shows that 14 subjects of postnatal mothers economic status was ≤2000 rupees out of these, 7 subjects had postpartum blues and 7 subjects had no blues, 15 subjects of postnatal mothers postnatal mothers economic status was 2001 – 4000 rupees out of these, 11 subjects had postpartum blues and 4 subjects had no blues, 13 subjects of postnatal mothers economic status was out of these, 7 subjects had postpartum blues and 6 subjects had no blues. 8 subjects of postnatal mothers economic status was ≤6000 rupees out of these, 5 subjects had postpartum blues and 3 subjects (3 had no blues).

The maximum number of postpartum blues found in economic status 2001-4000 rupees and minimum no. of postpartum blues were found in economic status >6000.

Chi square value of economic status was significant. The calculated (Chi square value = 2.48 $P < 0.50$) is significant.

Hypothesis

H2 – There is significant association between postpartum blues and selected demographic variables. Thus, it informed that there is a significant association between postpartum blues and economic status. So this hypothesis is accepted.

Discussion

The findings of the study are discussed with reference to the objectives, hypothesis and findings of the similar studies. Discussion of the findings is based on the sample characteristics, prevalence and degree of postpartum blues among the postnatal mother’s, association between the prevalence and selected demographic variables from

selected hospitals at Jabalpur Madhya Pradesh.

Findings of the study

Demographic characteristics

1. 50% of the postnatal mothers were in the age group of 23-27 years.
2. 36% of the postnatal mother’s qualification was primary education
3. 30% of postnatal mothers had 2001-4000Rs monthly income.
4. 88% of the postnatal mothers belong to Hindu religion.
5. 58% of the postnatal mothers had two children.
6. 60% of the postnatal mothers live in joint family.

Prevalence assessment of the subjects

The finding of the study revealed that out 50 samples 30 postnatal mothers having postpartum blues and 20 postnatal mothers having no blues.

Degree assessment of the subjects

Maximum 36% of the postnatal mothers had mild blues, 24% of the postnatal mothers had moderate blues, 40% of the postnatal mothers had no blues and none of them had severe blues.

Association between prevalence and selected demographic variables (Age, qualification and economic status)

There is non-significant association between prevalence and age (chi–square = 1.63 at 3 degree of freedom, $p < 0.50$ level

of significance).

There is significant association between prevalence and qualification (chi-square = 8.71 at 3 degree of freedom, $p > 0.50$ level of significance)

There is significant association between prevalence and economic status (Chi-square = 2.48 at 3 degree of freedom, $p > 0.50$ level of significance)

Conclusion

The main aim of the study was to assess the prevalence and degree of postpartum blues among postnatal mothers. In order to fulfill this objective a standard EPDS and semi structured interview schedule was administered to the sample and analysis of the data was done. The following conclusion were drawn from the finding of the study – 36% of the postnatal mothers had mild blues, 24% of the postnatal mothers had moderate blues, 40% of the postnatal mothers had no blues, and none of them had severe blues.

The socio demographic variable such as qualification and economic status were found to be significant and age were found to be non-significant.

In the view of findings of the study that is being aware of the Prevalence and degree of the postpartum blues among the postnatal mothers, various nursing implication arise to help them to assess the postpartum blues.

What does this study convey?

Nurse can educate the postnatal mothers to decrease their depression level in the postpartum period, through providing psychological support and maintaining good relationship.

Who will use this finding?

In this world of competition nursing education never lacks behind in terms of quality technology used and acceptance of the people taking up the nursing as a profession. To achieve high level of education standards, nursing education needs to be raised to greater extend. This can be achieved if all the aspects of health needs are considered as whole and nurse play an important role in promoting health through education.

How can the findings be put into practice?

As a part of administration, nurse administrators play a vital role in educating client and taking up action. This research will help the student nurse in future to enhance the knowledge of students and staff nurses so that they can help the health agent in educating the society and community.

Nursing research

Nurse can prove their proficiency in the field of education, practice and administration in health care aspect. There is a need for extended and intensive nursing research in the area of health needs in our society.

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