

CHAPTER II

LITERATURE REVIEW

2.1 Definition of Competence and Performance

In the broad term the competence or the competency was defined as the "ability required to carry out a task sufficiently of qualification, quality of being functionally adequate or having sufficient skill for a particular function, competence is a potential which is realized at the moment of performance". Performance was "The carrying out of a task, the doing of any action or work, the execution of an action" (Guilbert, 1987).

Another writer defined competence as "the quality or state of being functionally adequate or of having sufficient knowledge, judgement, skill, or strength". Performance is defined as "the ability to perform, capacity to achieve an action (Schneider 1979)". According to Donna et al (1989) competence "denotes appropriate and expected behaviors within the area of professional activities to perform a task with desirable result and the varied circumstances of the real world".

2.2 Need of Prenatal Care

Prenatal screening processes include the assess maternal health and monitoring of fetal well being, growth and maturity. Screening reveals incipient evidence of conditions that put the pregnant women or her fetus at high risk before signs of the actual disease manifest (Margaret F Myles). Midwives must actively participate in the prenatal teaching of psychophysical technique if women in labour are to achieve emotional satisfaction and adequate pain relief. Each provider of prenatal care is responsible for informing the mother of the importance of an adequate diet, the benefit of breast feeding, the adverse effect of alcohol, drugs and tobacco, the alternative approaches for active participation in labour and delivery and use of contraceptive. There is evidence that those programme have lowered the incidence of low birth weight in some communities. Healthy mothers and child care are a major goal of MCH service. Optimal care of the mother throughout her reproductive life should lead to a healthier life after the childbearing year end (Last J.M.1986). Expected mothers who are considered to be at low risk in continuously followed appropriate antenatal screening and antenatal care, can be decided to

deliver at home or refer to other hospitals. The condition for referral are:

Primipara, age less than 18 years.

Gandmultiparity ie five or more previous pregnancies.

Over 35 years.

Adverse obstetrical history including previous caesarean section, diabetes, hypertension and any other conditions associated with problems in labour or delivery.

Pregnancy less than 12 month after the last delivery (A.E. Iseralumbe).

Fertility control programmes also have influence on maternal mortality because contraceptive reduce the risk associated with pregnancy and childbirth particularly in women of higher parity and the extremes of maternal ages when child bearing is more hazardous. Unwanted high fertility has a direct adverse effect on the health and welfare of women particularly in the poorer section of society. High fertility indirectly diminish socioeconomic status (Pramila 1986). The prevailing high mortality risk suggests contraceptive failure and thus subjecting the users to the health hazards of pregnancy and childbirth. This can be largely reduced by the provision of fertility regulation services and more

effective methods of family planning and by more effective use of contraceptive method, health education and follow up (Pramila 1986).

The study of Ubaldo Farnot (1986) mentioned that much higher mortality was found among women with no antenatal care than among those receiving such care. The effectiveness of antenatal care depends largely on adequate referral mechanism and back up services. The reason behind the large drop in Cuba's maternal mortality from 118 to 31/100,000 live birth during 1962 and 1984 was due to providing more health care delivery by adequately trained staff in hygienic condition ie establishment of maternity homes in which women from outlying district can be accommodated near hospital during the last two weeks of pregnancy. A substantial decrease in death from toxæmia was attributable to improved antenatal care and better socio economic and nutritional conditions (Ubaldo Farnot 1986). The component of prenatal care are monitoring fetal development, screening for risk factor and education for pregnancy and childbirth (Last J.M.1986). Activities in the antenatal clinic should be carefully planned to ensure the most effective use of time, to exclude meaningless routines and to include examination to detect major problems,

especially those of local importance. The burden of maternal, fetal and neonatal ill health can be reduced by simple prenatal supervision, simple treatment, advice and by simple but experienced care at delivery and puerperium (C.D.Williams 1980). Early prenatal, nutritious diet, modern sanitation and safe delivery conditions can help to compensate for the danger of these high risk pregnancies (population report).

Nepal has relatively poor indicators of maternal and child health and only few women have any form of antenatal care. Even in areas without access to hospital obstetric facilities, simple antenatal care can provide screening for high risk cases and provide health education in subject such as nutrition, hygiene and neonatal care. Almost 40% of Nepali women have delivered their first child by 15 to 19 years. Hospital delivery in ANC attenders have been more common than in the general population. Due to the shortage of medical personnel and health posts, there is a need to educate TBAs and local communities about safe delivery and postnatal care to improve perinatal care in rural areas at present (Martin Kerkpatric 1990)

The study in Bangladesh showed that when

mother dies the infant she leaves has an 85% chance of death in the following year. There is evidence that a women who has lost many children in the past is even more likely to loose her own life. The basic thing for child bearing is that it is perfectly safe for mothers in good health. Whenever there is a large proportion of women who are free from disease throughout pregnancy, the maternal mortality rate would be low , especially if there is a health care system with prompt appropriate treatment. The major prerequisite for safe childbearing is a physically healthy mother and healthy service structure that can deal promptly with complication (DR. Fathalla et al 1986).

Lack of antenatal care was considered to be a risk factor to low birth weight newborn. The result of the study revealed that mother who lacked antenatal care were 2.26 times more at risk of low birth weight newborn than those who come for antenatal care 4 times (Termsri Chumnjaraka 1988).

2.3 Health Personal Performance assessment:

Performance assessment serve as a basis for improving performance. It identifies specific activities that need correction rather than personal

characteristics that must be changed. Health care facilities are dependent on the quality of their employees performance for the accomplishment of their goal (Stephan C Brushardl 1988). The personnel of health care system are its most valuable and most expensive resource and it makes good economic sense to manage them skillfully. In health care system technique are constantly changing and even recent graduate soon become out of date as health care practices change. Health service personnel must always keep abreast of current knowledge and technology in their areas of competence. Health personnel competence and motivation can be maintained effectively through a systematic programme of continuing education. Continuing education help health personal to maintain and learn competence relevant to their areas of responsibility in the provision of health care including protection from disease and promotion of health. Through continuing education, deficiencies in performance and problems can be solved by constantly increasing knowledge and competence of health personnel and encouraging them to maintain and improve (System of Continue Education their performance according to the accepted standard (System of Continue Education). Inadequate

performance may be due to (System of Continue Education 1989):

A lack of knowledge or ability to solve problems which must be taken into account in devising the essential education solution. Poor management of resources in which case continuing education should aim to improve management skill and as necessary change workers attitude towards primary care team.

Poor communication with the public, in which case continuing education must be designed to help workers who have contact with public to acquire communication skill or improve them.

Remoteness and difficulty of access to education facilities or resources can be a problem in which case distance education may be more appropriate. If a significant change in attitude and performance is to be achieved, it has to go hand in hand with some form of meaningful appraisal or assessment system that provide a basis for determining middle level management needs for further training and development (WHO 1989). It can be readily seen that the quality of patient care in the health care delivery system is affected by the maintenance of skill competency of the individual who provide inservice education. Accountability for the standard of nursing practice not only represents the protection for the consumer but is a vital part of the nurses continuing development as a health professional. To a great

extent, the quality of nursing care of patients depends on the quality of nursing practice for which each individual holds himself and herself responsible. The one important goal of inservice education is to improve patient care by assisting the learner in becoming a competent health care provider (Kathryn L Rufo 1981).

2.4 Status of Maternal and Child Health in Nepal

In Nepal the area of maternal and child health still faces the problem of low coverage. The Ministry of Health, in its 7th five year plan, has identified MCH service as a priority programme in the health sector. The Ministry of health has been effortful to devise different types of channel to bring the MCH/FP service closer to the rural mother and child population. The Ministry of Health with the financial support by UNFPA, has been running maternal and child health outreach clinics in remote rural area of Nepal. A health outreach clinic has been running by an auxiliary nurse midwife with the help of poen. It is supposed to run one time per month. It should be located at least 5 miles away from health post, should be located in a very populated village area. The service including for the delivery through

outreach clinic are distribution of contraceptive mainly temporary method such as pills, condom, and injection (depoprovera), health check up for mother, follow up of contraceptive users, motivation to the eligible couple and counselling to the contraceptive accepters and conducting immunization session for mother and children. The outreach clinic services extension has covered 55 districts out of 75 districts 1989 (Jewan K sht. 1990).

2.5 The Disparity Between Developed and Developing Countries

The World Health Organization estimates that half a million people in the world die in pregnancy and child birth every year. Out of it, 99% of deaths take place in developing countries. Maternal mortality rate varies from country to country. In Northern Europe there are two to 9 maternal deaths per 100,000 live birth, while in some part of Africa are over 1000. Most of the developing countries have ranged from 300 to 800 (The International Safe Motherhood Conference 1987).

Estimation of Maternal Mortality by Region

Region	No of maternal death /1000	mortality rate /100,000 live /birth
Africa	15	640
North	24	500
West	54	700
East	46	660
Central	18	690
Southern	8	570
Asia	358	420
West	14	340
South	230	650
Southeast	52	420
East	12	420
Latin America	34	270
Central	9	240
Caribbean	2	220
Tropical South	22	310
Temperature South	1	110
Ocean	2	100
Developing countries	494	450
Developed countries		
World	500	30

Source: World Health Organization 1985.

The infant mortality rates are on average, ten times higher in developing countries than in developed countries. In comparison, the risk of dying in pregnancy and child birth in developing countries is 50 to 100 times higher than that of women in North Europe or North America. The typical women in a developing country confronts that risk is not just once in her life, but an average of six to eight times in life in Africa. Her chance of dying in childbirth is between 1 in 15 and 1 in 70 but in developed countries the chance of dying ranges from 1 in 3,000 to 1 in 10,000.

Percentage of live birth and maternal deaths world wide, by region:

Region	Percentage of live birth	Percentage of maternal death
South Asia	14	59
Africa	41	30
Latin America	18	7
East Asia	10	3
Developed countries	17	1

Source: World Health Organization 1986.

In developed countries complications of pregnancy and child birth are often the leading cause

of death among women of childbearing age, averaging 20 to 45 percent of these death in women of the age group. In the United States, it is less than one percent. Among the health indicators used by WHO, this above figure has a large disparity between the developed and developing world. This figure indicates that if beginning in childhood, women are well nourished, healthy, have access to prenatal and general health care, practice safe and effective family planning measure as in developed countries, then above above death can be prevented.

Estimated Life Time Change to Dying from Pregnancy related causes, by region 1975- 84.

Region	Lifetime chance of maternal death
Africa	1 in 21
Asia	1 in 54
South America	1 in 73
Caribbean	1 in 140
North America	1 in 6,366
North Europe	1 in 9,850

Source: The Safe Motherhood 1987.

2.6 RELATED STUDY OF HEALTH PERSONNEL PERFORMANCE

4. 6.1 Study of practice and knowledge of

auxiliary nurse midwife in antenatal care: There has only been one study in Thailand on health personnel (midwife and sanitarian) knowledge and practice on high risk antenatal care by Somboon Kietinum (1987). This research studied the knowledge, practice and supervision to antenatal care in relation to the type of supervision and the level of quality of care as measured by the evaluation of the one system antenatal care accomplished form. Population of the study was 3 group of health personnel (midwife, sanitarian, supervisor).

Author used 25 questiones to test the knowledge and practice of health personnel. Recorded one system antenatal care forms were reviewed and the interview form was used to interview supervisor at Provincial Health Office and the district hospitals. Scoring of the answer to these questions were used on the policy that they are not allowed to accept high risk pregnancy but instead should refer to these cases to a higher level in order to ensure that the pregnant mother will be given the proper management. In both groups of health personnel, the response rate was 100% but the completeness was 46.5%. They neglected obstetric history, present pregnancy, physical examination and laboratory examination but the

information on follow up visit was complete. The author mentioned that because of incomplete information in the above form, it became impossible to assess the quality of antenatal care. The score of 80% or higher means satisfactory level of knowledge and practice while those below it indicated the need for improvement.

The analysis was mainly aimed at making crude assessment of the relationship between their level of knowledge and expressed practices to actual and quality of antenatal care rendered. He also aimed at determining possible confounding factors influencing the quality of antenatal care. But the reliable way to assess health personnel (Andrew 1977) performance is by direct observation. Asking opinions by questionnaire is difficult to get real answer. The finding showed that 62% of midwives needed improvement while 94% of the sanitarians needed improvement. This improvement may be in the form of closer supervision or more relevant training courses, which were not specified in the study. The author said that with respect to the training need their knowledge was questionably deficient in all topics of ANC and delivery of high risk cases. The author analysed the result for each question in the percentage of the

number of correct answer out of the total number of answers and sorted according to classification, mean, standard deviation and percentage and coefficient of variation. In the recommendation he advised to study the knowledge and practice of supervision at the district and provincial level to see if there is any defect at these levels aside from their method of supervision.

2. 6.2 Study on availability and quality of maternity care: H.Bella and G.J.Ebrahim studied about the availability and quality of maternity care in Sudan. They use only questionnaires to test the competency. The study sample were village midwives, expectant mother, medical assistant, trainee and pupil midwife. They also mentioned that they used direct observation method but did not write anything about method of measurement and scoring system. They select 3 provinces and select health centres by random number. Midwife and expectant mothers were randomly selected from the study area. They did not mention about exclusion the and inclusion criteria. The data was analysed in percentage, no other statistical tests were mentioned. In the result section it was mentioned that midwife were knowledgeable about referral cases to more skilled care, and about the

management of bleeding. The study did not give any recommendation.

2. 6.3 Follow up study on auxiliary nurse midwife in family planning performance: This study was conducted as a follow up study of the six groups of auxiliary midwives who had attended refresher course on family planning and those who did not attended. To measure the result of training related to ability of motivating people to accept and practice contraceptive methods, the researcher used the test on knowledge of communication, motivation and health education and surveying from family planning service delivery record form.

The data were collected using five set of questionnaires, four for the auxiliary midwife groups and one for the acceptor group. The staffs of the Training, Supervision and Education section and Family Health Division were sent to collect data. They gave training to these people about research methodology. The statistical method used were percentages, average weight, standard deviation and analysis of variance. Sampling of the population was drawn by using simple random sampling method stratified by the duration of family planning performance. Sample was taken as 50 %

of the total study population. The result of the study revealed that there was no statistical significance difference in knowledge on family planning services between the study and control groups of auxiliary midwife. There was no statistical significance difference in family planning performance between the study and the control groups of auxiliary midwife. There was no statistically significant difference in the attitude of auxiliary midwife towards family planning service between study and control group.

2.7 OTHER RELATED LITERATURE IN HEALTH PERSONNEL PERFORMANCE ASSESSMENT:

2. 7.1 Davis (1974) compared the level of performance on a specific task in an attempt to differentiate skills posses by clinical nurse specialist, baccalaureate nurses and diploma nurses with the objective of determining if different level of education make a difference in the quality of patient care. The author also measured whether quality and quantity of patient care delivered by the clinical specialist was superior to that of the baccalaureate nurse, who in tern superior to the diploma nurse with increasing years of experience and

without refresher courses, the quality and quantity of all the practitioners was found to decline.

2. 7.3 Another approach to evaluate task performance was presented by Dunn (1970). This was a study about how to measure the performance of the professional nurse practitioner. In this study five nursing procedures were chosen for the measuring instrument: tracheal suctioning, administration of tube feeding, administration of oral medication, administration of IM medication and administration of intravenous solution. Each of these procedures was expanded into several steps and checklist evaluation form generated. These checklists were established by a panel of experts and weights were assigned, between one and five, to differentiate the importance of each step in the procedure. The instrument after development, was used by two nurse supervisor raters to evaluate 5 participating nurse practitioners. Each nurse practitioner was evaluated four times in each of the five procedures.