

A Conceptual Framework for Breastfeeding Training Nursing Research Utilizing Ludwing Von Bertalanffy's General System Model Framework

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Abstract— Introduction: Optimal breastfeeding practices that enhance child health and survival include beginning of breastfeeding soon after delivery usually within an hour and feeding exclusively. It means giving the baby just breastmilk for the first six months of life without the use of additional food, water, or medications. Also beyond six months maintaining nursing for not less than 2 years along with supplemental nutrition. It prevents infant fever, diarrhea, and acute respiratory infections. Maintaining adequate feeding is possible with good training on breastfeeding and supporting the postnatal mothers.

Methods: In breastfeeding training, nursing research targeted at helping the primi postnatal mothers to breastfeed their babies. Ludwing Von Bertalanffy General System Theory served as a reference. Quasi experimental design was adopted for 360 postnatal mothers. Prior to and following breastfeeding training, assessment of breastfeeding practices of postnatal mothers was done. The general system model's fundamental concepts provided a foundation for developing breastfeeding training and to see its effectiveness in improving breastfeeding practices among primi postnatal mothers.

Results: The study's findings indicated that both the intervention based on Ludwing Von Bertalanffy General System Model framework was effective to implement the training in the form of individual lactation consultations and peer to peer breastfeeding support group interventions in improving the breastfeeding among primi mothers.

Conclusion: The general system model, helps in comprehensive and effective training on this important topic, by increasing its significance and applicability to the unique challenges and problems faced in academic settings.

Index Terms: Breastfeeding, latch, peer to peer breastfeeding support group, individual lactation consultations.

I. INTRODUCTION

A conceptual framework lays out the criteria for defining a research question and identifying pertinent, significant responses to it. A solid conceptual framework is the foundation of quality research. In order to comprehend a research problem and direct the creation and analysis of the study, a conceptual framework is employed. By offering an outline that links various theories and thoughts related to the field of research, it serves as a blueprint for conceptualizing and organizing the task.¹

The framework includes the primary procedure parameters, characterizing variables, and relationships between them. Furthermore, when developing a conceptual structure, the primary emphasis remains on the caliber of the issues raised and the framework's responses. This will make the initiation process easier and enable to draw useful conclusions from it.²

It is frequently chosen and employed by nurse researchers in their research. Research is either explicitly or indirectly guided by conceptual models and theories. Both nursing and non-nursing models are used by researchers to give their study a structure. However, when it comes to applying

conceptual frameworks in their research, researchers and students face two difficulties. The first step is to determine which theory or conceptual model will best fit their research and serve as a guide. The second step is to incorporate the model into their research framework by clearly explaining how it relates to their study variables, strategies and outcomes.³

It is imperative for the researcher to recognize that not all of the variables in a particular model may be relevant to their own interests, but variables from multiple models may be applicable to the areas of discussion. Developing a study structure derived from models requires creativity on the part of the researcher. In research, the conceptual paradigms of nursing operates as a framework for expressing, summarizing, and documenting nursing theory and practice. In the end, the models also help researchers apply their findings in clinical settings.³

A. Application of Ludwing Von Bertalanffy's General System Model Framework for Breastfeeding Training:

Breastfeeding training is an approach to train the primi postnatal mothers in order to attain good latch, appropriate position and prevent breast problems. Ludwing Von

Bertalanffy's general system theory comprises the following concepts: input, throughput, output, feedback and boundaries. The theory of the system focusses on changes brought about by the interactions between different elements in a scenario.

Breastfeeding training should be given to every primi postnatal mothers for the first 24 hrs after delivery and after 3 days. This helps to greatly improve the exclusive breastfeeding rates among postnatal mothers. Breastfeeding training sessions should be kept in every hospital.

Various methods can be employed to provide training sessions. Two of which are used that is training by individual lactation consultations and peer to peer breastfeeding support group interventions and assessment is done to find out which one is more effective.

B. Input:

It refers to the factors that come into the system.⁴

In this study, input refers to assessing and scoring the breastfeeding practices based on the level of LATCH and Bristol (BBAT) scale of primi postnatal mothers within 24 hrs of delivery before giving the intervention.

Based on the pre-test scores, the study results indicated that both the group individual lactation consultation group and peer to peer breastfeeding support group had moderate and ineffective breastfeeding practice knowledge.

C. Throughput:

The processes that occur within the system. It happens somewhere in the middle of the input and output.⁴

In this study, it refers to intervention provided by the group, the individual lactation consultation group and peer to peer breastfeeding support group provides breastfeeding training to the postnatal mothers.

In peer to peer breastfeeding support group, breastfeeding training will be given for a chosen mother to lead a peer group of 5 other postnatal mothers, who have similar experiences or issues. The trained mother will offer support and guidance on breastfeeding to other mothers in the group in the form of counseling sessions of 30 min each, 3 days apart.

Mothers who are getting individual lactation consultations will be given two lactation counseling sessions of 30 min each, 3 days apart.

D. Output:

It refers to the results of the system.⁴

In this study, output refers to assessing and scoring the breastfeeding practices based on the level of LATCH and Bristol (BBAT) scale of primi postnatal mothers, 5 days after giving the intervention.

Based on the post-test scores, the study results concluded that postnatal mothers in both the groups had improved in breastfeeding practices. And individual lactation group intervention was more effective compared to peer to peer

breastfeeding support group intervention.

E. Feedback:

Mechanism that monitor and adjust the system based on the output.⁴

In this study, it refers to the assessment and follow up of the breastfeeding practices after the discharge to assess the adherence to the intervention.

According to this study procedure, we are not able to assess the postnatal mother's adherence to the intervention taught and the breastfeeding difficulties faced by the postnatal mothers after the discharge.

F. Boundaries:

The limits of the system, defining which factors are considered internal to the patient and which are external.⁴

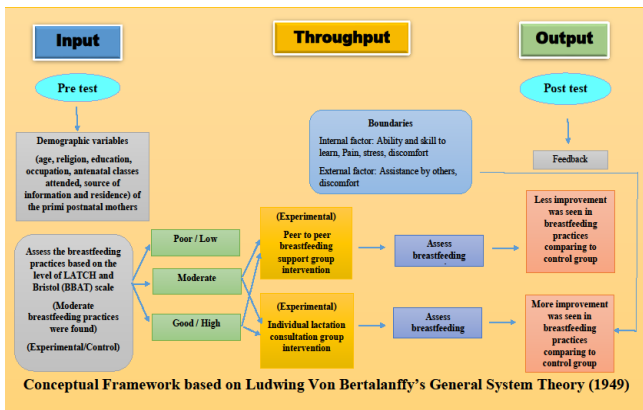
In this study, the internal factor is referred to the ability of the mother to grasp the intervention taught and the pain and emotional stress and discomfort due to the changes occurring in the body.

And the external factors refers to the knowledge and assistance provided by the other women and health care personnel in the hospital and also the discomfort suffered by the mother.

Several research, both nationally and internationally, demonstrate that exclusive breastfeeding rates are not up to the mark and effects due to adequate breastfeeding are seen in babies such as poor weight gain, etc, for mother – breast engorgement, breast abscess, sore nipples, inverted nipples, etc. therefore in order to maintain appropriate latch, breastfeeding training is mandatory in every hospital.

The study's goal was to assess the effectiveness of breastfeeding training by individual lactation consultation and peer to peer breastfeeding support groups to find out which is more effective. The breastfeeding practices of postnatal mothers were assessed both prior to and following the interventions. Training was provided as a component of the breastfeeding teaching session, teaching the postnatal mothers on importance of breastmilk, breastfeeding techniques and positions, good and bad latch, burping and management of problems faced during breastfeeding.

Ludwing Von Bertalanffy's General System model framework served as a philosophic backdrop for this study. Core concepts of model's input, throughput, and output have given developers and content creators a framework for developing breastfeeding training.



II. DISCUSSION

Optimal breastfeeding practices that enhance child health and survival include beginning breastfeeding soon after delivery and feeding baby exclusively with only breastmilk for the first six months of life without the use of additional food, water, or medications. It means breastfeeding infant beyond 6 months and not less than 2 years. In addition, early nursing lowers postpartum hemorrhage, protects against antibody damage and increases the production of breastmilk and also prevents infant fever, diarrhea and acute respiratory infections.⁵

In promoting breastfeeding, peer support has been acknowledged in a number of nations. Mothers who has faced similar experiences and challenges like the target population is known as peer support. Breastfeeding Peer Supporters, sometimes referred to as Breastfeeding Peer Counsellors, are women who have personally experienced breastfeeding and volunteer to offer breastfeeding counselling to others in their local community or hospital. Peer support patterns differ greatly around the globe. Additionally, the quantity of training that peer supporters undergo varies.⁶

Breastfeeding consultations from professionals who provide lactation care and support to families. Lactation consultants are prepared to assist parents and newborns who may have feeding problems. Lactation consultants can provide general information and nursing support. This involves teaching the kangaroo mother care, how to latch and position her infant for breastfeeding. Apart from providing useful remedies for typical breastfeeding challenges such as latching troubles, milk supply problems, or nipple pain, they also give emotional support and assurance to help the mother feel secure and in control of her breastfeeding journey.⁷

Finding a conceptual framework is essential when teaching and practicing breastfeeding training with postpartum mothers. This paper presents a conceptual framework that serves a link between nursing research and breastfeeding teaching using Ludwing Von Bertalanffy's General System Theory paradigm. Developing a better understanding of how nursing treatments might positively affect the lives of

postpartum mothers who are unable to breastfeed effectively is made possible by this conceptual framework. This unique breastfeeding requirements of postpartum mothers are also addressed by this innovative paradigm, which provides an organized approach to promoting evidence-based practices in the area of breastfeeding (OBG) in nursing. Because this paper is unique, it can lead to more dynamic training strategies that are based on solid research and effective patient centered approaches.

III. CONCLUSION

This conceptual framework integrates Ludwing Von Bertalanffy's General System Theory into the context of breastfeeding training, offering a fresh and innovative prospective on enhancing breastfeeding modifications for postpartum mothers. By extending its application to the unique challenges and sensitivities present in the contexts, the general system framework makes it possible for more comprehensive and effective instruction in this important area.

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