

## Maternal Role Attainment in Mothers with Term Neonate: A Hybrid Concept Analysis

### Abstract

**Background:** A review of the literature shows that there is little consensus on the practical definition of maternal role attainment in the field of neonatal nursing care. The initial interaction between mother and neonate most often begins in the hospital and can be influenced by neonatal nurses, so it is necessary to clarify this concept in nursing. The purpose of this study was to show the basic characteristics and practical definition of maternal role attainment in mothers with term neonate in a new context. **Materials and Methods:** This study used a hybrid model three-step concept analysis: theoretical, fieldwork, and final analysis phases. At theoretical phase, articles indexed in credential databases were searched using keywords. Totally, 33 articles were analyzed. At fieldwork phase, 12 participants were interviewed. At final phase, the findings of the two earlier phases were analyzed. The study lasted from August to November 2018. After determining the attributes, antecedents, and consequences, a final definition of maternal role attainment was introduced. **Results:** The concept of maternal role attainment was defined as “a developmentally, interactive, adaptive, and committed multi-dimensional process based on the discovery of pregnancy, characteristics of the mother, receiving social support, which leads to maternal identity, formation of maternal skills, resiliency, development of newborn, improvement of mother-newborn interactions and increased well-being of the mother”. **Conclusions:** This study identifies the concept of maternal role attainment in nursing, providing a good basis for evaluating and applying this concept.

**Keywords:** *Concept formation, infant, maternal behavior, mothers, neonatal nursing*

### Introduction

The transition to motherhood can be considered as an important developmental event in a woman's life.<sup>[1]</sup> The process of maternal role attainment should begin at pregnancy and continue during the transition period.<sup>[2]</sup> Researchers have argued that no other event in life involves such a wide variety of experiences including pain, emotional stress, vulnerability, physical injury, role change, and acceptance of new responsibilities.<sup>[3]</sup> According to Fouquier, the term “maternal role attainment” was introduced in the 1960s by Robin as part of the transition process.<sup>[4]</sup> Then Mercer (1981) introduced a framework for studying the variables that she thought would affect the maternal role attainment.<sup>[1]</sup> According to Alligood, Mercer's maternal role attainment theory and descriptive model were proposed in 1991.<sup>[5]</sup> Being competent in a maternal role has a significant impact on the quality of parenting behaviors and ultimately the

social development of the child.<sup>[6]</sup> The quality of interactions between mother and child in the first years of a child's life has a strong relationship with his/her cognitive and linguistic abilities in later years.<sup>[7,8]</sup> Establishing a maternal identity contributes to a woman's psychosocial development.<sup>[1]</sup>

Culture is one of the most important variables affecting the development of maternal role.<sup>[9]</sup> In Iranian culture, childbearing is a social and cultural commitment for women and it is expected that women will have children soon after marriage, which reinforces the family institution.<sup>[10]</sup> Based on a study by Ahmadifaraz *et al.* (2014), Iranian women are emotional and child-centered and the preoccupation of proper performance of maternal role has always been experienced by them.<sup>[11]</sup> health care providers, as facilitators of this process, need to know about psychological adaptation that facilitates the process of maternal role

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprints@medknow.com](mailto:reprints@medknow.com)

Forough Rafii<sup>1</sup>,  
Mona  
Alinejad-Naeini<sup>2</sup>,  
Hamid Peyrovi<sup>1</sup>

<sup>1</sup>Nursing Care Research Center, Iran University of Medical Sciences, Tehran, Iran, <sup>2</sup>Department of Neonatal Intensive Care Nursing, Nursing Care Research Center, Iran University of Medical Sciences, Tehran, Iran

**Address for correspondence:**  
Dr. Mona Alinejad-Naeini,  
Department of Neonatal  
Intensive Care Nursing, Nursing  
Care Research Center, Iran  
University of Medical Sciences,  
Tehran, Iran.  
School of Nursing and  
Midwifery, Rashid Yasami St,  
Vali- e Asr St, Tehran, Iran.  
E-mail: [mona\\_alinejad@yahoo.com](mailto:mona_alinejad@yahoo.com)

### Access this article online

Website: [www.ijnmrjournal.net](http://www.ijnmrjournal.net)

DOI: 10.4103/ijnmr.IJNMR\_201\_19

### Quick Response Code:



**How to cite this article:** Rafii F, Alinejad-Naeini M, Peyrovi H. Maternal role attainment in mothers with term neonate: A hybrid concept analysis. *Iran J Nurs Midwifery Res* 2020;25:304-13.

**Submitted:** 27-Aug-2019. **Revised:** 11-Apr-2020.

**Accepted:** 27-Apr-2020. **Published:** 17-Jun-2020.

attainment in cultural groups in order to provide appropriate culture-friendly care.<sup>[5]</sup>

A review of the literature reveals the complexity and lack of clarity in the use of the terms for constructs, concepts, and variables of maternal role attainment.<sup>[4]</sup> Conceptualizing the maternal role attainment not only improves understanding of this concept and determines how nurses can help mothers, but also provides a basis for measurement instruments, and designing and developing care models through identifying the dimensions and characteristics of the concept. The purpose of this study was to show the basic characteristics and practical definition of maternal role attainment in nursing in Iran using the hybrid model concept analysis.

## Materials and Methods

This study was a combination of literature review and qualitative research and used a hybrid model three-step concept analysis.<sup>[12]</sup> The study lasted from August to November 2018. Concept analysis is the foundation of the theory development and leads to the expansion of the body of nursing knowledge. The premise of the hybrid model is that experiential data are a critical component in the study of central concepts in nursing.<sup>[13]</sup> A three-step approach, including theoretical stage, fieldwork stage, and analytic stage is used to develop the concept.

The main purpose of the theoretical phase is to create and develop an appropriate background for deep analysis and to redefine the concept in later phases. This phase included concept selection, literature review, dealing with concept meaning and measurements. At the end of this phase, the researcher will define the operational definition.<sup>[14]</sup> In the first step, literatures published on maternal role attainment were searched in accessible databases including Web of Science, PubMed, Scopus, Iran Medex, and Magiran without time limit and with the keywords “maternal role attainment”, “motherhood”, and “nurse”. All articles published from 1995 to 2018 were considered. Some of the questions that had to be considered in the literature review included “What is the definition of maternal role attainment in nursing or care settings? How is maternal role attainment measured?”

A total of 592 articles were found. Then, the articles were considered in terms of inclusion criteria (studies in Persian or English language with related keywords in the title, abstract, or list of keywords), and excluded criteria (articles in non English and non Persian languages). At the end, 31 articles remained. In order to complete the search, the reference list of the selected articles was reviewed and 2 papers were added. A total of 33 papers were used. To extract attributes, antecedents, and consequences of maternal role attainment, the articles were reviewed thoroughly and a summary of each was prepared. This stage was completed by codifying an operational definition

of concept, which was then used in the fieldwork phase. Some of the papers are listed in Table 1.

At the field work phase, qualitative data were collected from 12 mothers who had term neonate. The participants were selected by purposive sampling method and the maximum diversity was considered in terms of age, education level, and number of children. The characteristics of participants are presented in Table 2. Individual, face-to-face, in-depth, and semi-structured interview and observation of non verbal behaviors were the main ways to collect the data. Interviews were continued until data saturation. All interviews were recorded and transcribed. The location and the time of the interview were set based on the willingness of the participants, and the average duration of interviews was 75 min. Interview questions were designed to clarify the concept; For instance, “Explain your mothering experience?” “What have you achieved in this experience?” “How this is experience different?” and “What factors have been more important in this achievement?”

For data analysis, the conventional content analysis was used according to the process proposed by Graneheim and Lundman.<sup>[15]</sup> For this purpose, interviews were reviewed several times. Initial codes were extracted and classified according to similarities and differences. So that categories and subcategories were extracted. The key attributes of the concept of maternal role attainment were identified based on the categories obtained. To increase credibility, enough time was allocated for immersion in the data, and engagement with participants. After coding process, data from interviews was reviewed and revised by the research team. Member check was conducted to eliminate the ambiguity of and to complete the data. Then, two experts reviewed interviews and extracted the codes and themes. In order to meet confirmability, all stages of the research, methodology, and decisions made at various stages were explicitly explained to allow other researchers to follow the study steps.<sup>[16]</sup>

In final analysis phase, the themes extracted at the theoretical and field work phases were compared and then a comprehensive definition of the concept was presented. The meaning units were derived based on the research objectives, and finally, its attributes, antecedents, and consequences were categorized.

## Ethical considerations

The research proposal was approved by the Research Committee at the School of Nursing and Midwifery at Iran University of Medical Sciences (IR.IUMS.REC.1397.1312). Informed written consent was obtained from each participant prior to study commencement. The principles of confidentiality and anonymity were explained to each participant. To record interviews, all participants were allowed and assured that privacy would be maintained.

**Table 1: Some important studies with the issues of maternal role attainment**

References	Field of study	Attributes	Antecedents	Consequences
Kagawa <i>et al.</i> , 2017 <sup>[24]</sup>	Identify opportunities and challenges to attaining the maternal role among women who began childbearing in adolescence	Complex and dynamic process Cognitive and social process Learning process	The conceptualization of self Cognitive and emotional abilities Commitment, attachment and preparation Individual biology, physiology, behavior and social and cultural environment. Social support	Development a maternal identity Be aware of the baby Learn how to take care of infant Increasing the self confidence Ability to be a mother
Mercer, 2004 <sup>[1]</sup>	To present evidence for replacing the term maternal role attainment with becoming a mother	A major developmental life event New and unknown reality Requires restructuring goals, behaviors and responsibilities Achieve a new concept of self A progressive process Continuous process Intensive commitment and active involvement	Individual conditions of the mother Cultural beliefs Preparedness and knowledge, social conditions, information Personality dimensions Maternal experiences Social support, Personality traits Mother beliefs about parenting Mother's Health status Awareness and education Behavioral and cognitive dimensions	Achieve a new concept of self Establishing a maternal identity Mother's psychological development Feeling satisfied with the role Gratification in the maternal role Maternal sensitivity Feel the love for the baby Establish maternal competence Woman's psychological development
Tarkka, 2003 <sup>[37]</sup>	Establish factors that contribute to the maternal competence of first-time mothers	Complex social and cognitive process Affected by cultural context. Mother and infant's traits Interactional and developmental process Personal process	Social support Mother health Attachment to the infant The mother's self-concept Characteristics of the infant Infant behaviors Maternal resources	Attachment to the infant Approve role Maternal competence Strengthen her self-esteem in her new role
Kordi <i>et al.</i> , 2017 <sup>[9]</sup>	Determine the effect of maternal role training program on maternal role attainment	Personal process	Mother-infant relationship Cultural, socio-economic level Marital Status Birth experience Social support Spouse support Family members support Personality characteristics Baby health status such as baby's mood, baby's reaction and appearance	Increased attachment to the baby Learn how to take care of the baby Achieving maternal identity Maternal competence Improve cognitive behaviors and Physical development Feel the power of taking care of the baby without the help of others Evolve a sense of satisfaction and pleasure in the role of the mother Empowered

*Contd...*

**Table 1: Contd...**

References	Field of study	Attributes	Antecedents	Consequences
Özkan and Polat, 2011 <sup>[35]</sup>	Assess the effect of maternal identity development education on the maternity role attainment	Role performance process	The relationship between mother and baby Family Functions Social support Mother's knowledge about self-care and child care Physical and psychological support	Maternal identity Confidence in taking care of her baby Love to baby Feeling of competence Coping with maternal role Ability to incorporate maternal behaviors Compatibility with problems Childcare Skills
Fouquier, 2011 <sup>[18]</sup>	To provide an understanding of the experiences of three generations of African American women in the transition to motherhood	Individual process Influenced by social, political cultural and environmental factors	Discover pregnancy Spouse support Family members support Professional support Maternal understanding	Maternal identity Gaining confidence Development of a particular set of maternal behaviors Gaining confidence Competence in decision making
Khandan <i>et al.</i> , 2018 <sup>[25]</sup>	Determine the relationship between the MRA and development of the infant.	Stressful process Associated with physical, psychological and social changes Affected all aspects of mother's life	Attachment to the infant Maternal mental and physical health Quality of mother's relationship with spouse and family members Socio-economic status Preparing for pregnancy Previous childbirth experience Attractiveness of the Role Infant's appearance, behavior, mood and health	Learning maternal behaviors Gaining new identity Mother's pleasure in interacting with the baby Mother's confidence Increasing maternal self-efficacy Social and emotional development of the infant Understand the emotional, social, physical and emotional needs of the infant
Koniak-Griffin, 1993 <sup>[26]</sup>	Historical and empirical review of Maternal role attainment	Complex cognitive and social process Interactive, learning and Mutual Process Developmentally and Progressive process Process of preparing and defining yourself Multidimensional	Having interpersonal skills. Marital Status Mother's mental state Mother's personality traits Pregnancy Experience Social support Formal Support Mother's Preparation	Maternal identity A sense of balance, confidence and ability to performance Gaining skills in caring tasks Evolve a sense of satisfaction and pleasure in the role of the mother Compatibility
Fowles and Horowitz, 2006 <sup>[44]</sup>	A critical review of instruments for measuring components of mothering	Continuous and evolutionary process Changes are based on the age of the child		Acquire Intimate knowledge of her infant Feeling confident in her mothering activities Love to infant Acceptance of her new persona as a mother A woman's sense of satisfaction with being a mother Interact with the baby Attachment to the baby Baby Care Skills

*Contd...*

**Table 1: Contd...**

References	Field of study	Attributes	Antecedents	Consequences
Heydarpour <i>et al.</i> 2017 <sup>[32]</sup>	Explanation of the mothers' perspective towards factors affecting adaptation to the role of motherhood	Individual process Along with the fundamental changes in cognitive, functioning, socio-emotional and behavioral aspects	Mother health status Social support	Deep emotional connection with her infant Being able to meet the needs of her infant Self Confidence Satisfaction to take care of infant Self-efficacy Maternal competence

**Table 2: Demographic characteristics of participants in field work phase**

Participant	Maternal age (year)	Neonatal age (month)	Education level	Number of children
1	26	4	Bachelor's	1
2	31	2	Bachelor's	2
3	26	12	Master's	1
4	19	16	Diploma	1
5	24	18	PhD student	2
6	21	6	Master's student	2
7	32	3	Diploma	3
8	18	24	Under diploma	2
9	22	1	Master's	1
10	24	1	Bachelor's	1
11	34	3	PhD student	1
12	30	8	Under diploma	2

## Results

### Theoretical phase

#### *Definition of maternal role attainment*

The term “maternal” means relating to a mother, especially during pregnancy or shortly after childbirth. The term “role” has been defined as the function assumed or part played by a person or thing in a particular situation. The term “attainment” has been defined as the action or fact of achieving a goal which one has worked towards, especially a skill or educational achievement.<sup>[17]</sup>

Mercer’s definition of maternal role attainment is “The process in which a mother acquires the competence in the role and integrates maternal behaviors into her established role set, so that she identifies as a mother.”<sup>[11]</sup> According to Fouquier, this concept helps us to understand the experiences of pregnant women as a framework and increases the effectiveness of nurses and health care providers in addressing the needs of women during the transition to motherhood.<sup>[18]</sup> According to Fowles, maternal role attainment as a mother’s perceived competence is described by her ability to carry out her baby’s care and nutrition, as well as the subjective evaluation of the baby and herself as a mother.<sup>[19]</sup> According to Bibring’s definition, maternal role attainment refers to changes

caused by pregnancy and the birth of the baby and it is a collection of developmental tasks that a woman is expected to be expert in.<sup>[20]</sup> The transition to motherhood is typically a profound change in one’s own feelings and methods of engagement with the world.<sup>[21]</sup>

#### *Attributes of the concept*

In the literature review, five categories of attributes were extracted including “process in nature”, “complex and multidimensional”, “developmental”, “interactive and mutual” “adaptative and committed.” Maternal role attainment was defined as a psychodynamic and continuous process.<sup>[22]</sup> So that is both an individual process and one that is influenced by a combination of social, political, cultural, and environmental factors. In order to achieve a new conception of self, the mother requires restructuring goals, behaviors, and responsibilities.<sup>[18]</sup> In fact, mothering has cognitive, social, psychological, behavioral, and emotional dimensions.<sup>[23-26]</sup>

Giving birth is recognized not only as a difficult emotional and physical experience but also is accompanied with behavioral adjustment.<sup>[27]</sup> Achieving maternal role is mainly a social cognitive process that relates to cultural and family contexts and maternal and infant characteristics, and feedback from peers is important to confirm proper functioning.<sup>[28]</sup> An overview of studies has shown that one of the dimensions of maternal role attainment is developmental. The sub-categories that led to the formation of this theme were: progressive<sup>[1,26,29,30]</sup> and it is challenging and stressful.<sup>[23]</sup> The transition into the maternal role is a stressful process, especially for primiparous women.<sup>[25]</sup> The tremendous physical, cognitive, and psychosocial changes that occur during pregnancy and early motherhood have led many to view the transition to motherhood as a major life stressor.<sup>[31]</sup> “Interactive and Mutual” is cited in the literature as interaction between mother and neonates starts with attachment to the baby.<sup>[27,29,32]</sup> According to Mercer, achieving maternal role is an interactive process that occurs at a given time and the mother becomes attached to her infant and becomes empowered in her role as mother.<sup>[1]</sup>

#### *Antecedents of the concept*

Antecedents of a concept are factors that should occur before the occurrence of the concept.<sup>[33]</sup> After the review

of the texts was carried out at the theoretical phase, the antecedents of maternal role attainment turned out to be: “discover the pregnancy”<sup>[18,25]</sup> as emotional and physical contact<sup>[9,27,34,35]</sup> and previous experience with babies.<sup>[9,25,36]</sup> Black noted in his study that first-time mothers generally had different experiences from mothers with previous children.<sup>[36]</sup> An overview of studies has shown that one of the attributes of maternal role attainment is “being socially supported” cited in the literature as social support,<sup>[1,9,23,28,37]</sup> professional support,<sup>[19,27,38,39]</sup> family member support,<sup>[9,18,27]</sup> and spousal support.<sup>[9,18,22,25]</sup> Developing and achievement of maternal identity involves forming an emotional bond between the mother and her baby that is influenced by her image as a mother and to support others.<sup>[40]</sup> “Maternal cognitive behavioral skills” is referred to in the literature as problem-solving competency,<sup>[41,42]</sup> mother’s skill, sensitivity, empathic response and nurturing behaviours,<sup>[23,26]</sup> cognitive abilities, and emotional and behavioral regulation.<sup>[32,42]</sup> Another antecedent of concept is “maternal emotional and physical characteristic.”<sup>[1]</sup> The sub-categories that led to the formation of this theme were physical closeness of the mother to the infant,<sup>[9,27,34,35]</sup> mother’s personality and trait dimension (temperament, empathy, and rigidity),<sup>[1,9,26,31]</sup> maternal health status,<sup>[1,27]</sup> and maternal emotional and physical well-being.<sup>[25,43]</sup>

### *Consequences of the concept*

According to the analysis of the texts in the theoretical phase, the consequences of this concept were classified into five categories including: “maternal identity formation” cited in the literature as acceptance of her as a mother,<sup>[1,2,44]</sup> adaptation with maternal role,<sup>[22,28,42]</sup> and gaining confidence<sup>[2,18,23,24,32]</sup> and competence in her decisions.<sup>[1,9,18,22,34,44,45]</sup> “The formation of maternal skills” as maternal competency in the role and performance and<sup>[30,31,35,36,43]</sup> developing her own unique set of maternal behaviors.<sup>[25,39]</sup> “Increased maternal well-being” as increased maternal emotional health,<sup>[2,25,27]</sup> gratification and satisfaction in the maternal role.<sup>[9,22,25,26,29,39]</sup> “Neonatal development” as cognitive/behavioral/physical/social development in neonate<sup>[23,27,29]</sup>, and “promoting mother-infant interactions” as interaction with her child<sup>[27,32,44]</sup> and her feelings of gratification and love and<sup>[1,2,25,35,36,46]</sup> being aware of the behavioural pattern of her infant.<sup>[24,31]</sup> Understanding the emotional, social, physical, and emotional needs of the baby.<sup>[22,30]</sup>

### *Measuring the concept of maternal role attainment*

By reviewing and searching on all databases, special instruments are not available to quickly and reliably assess all of the key components of maternal role attainment in the first year after childbirth.<sup>[44]</sup> Several instruments have been used by numerous studies to measure this concept, including Myself-As-Mother scale developed by Waker (1980), My-Baby Scale developed by

Waker (1980) and Perceived Competence Scale developed by Rutledge and Pridham, (1987).<sup>[44]</sup> A score of over 45 in Myself-As-Mother Scale and a score of over 30 in My-Baby Scale and a score of over 4 in the Perceived Competence Scale means to succeed in maternal role attainment.<sup>[9]</sup>

### *Operational definition of the concept*

Based on the literature review, maternal role attainment is operationally defined as a developmentally, multidimensional, complex, interactive, adaptive, and committed process that involves discovering pregnancy, cognitive-behavioral mothering skills, maternal characteristics, and socially supported that leads to formation of maternal identity and maternal skills, development of a newborn neonatal development, promotion of mother-infant interactions, and increased well-being of the mother.

### *Field work phase*

At this phase, after completing qualitative content analysis of the interviews with mothers, initial codes were extracted, which were then reduced into 14 subcategories and 7 categories. The categories were “being process”, “beautiful and lovely feeling”, “ambivalent emotions”, “maternal identity formation”, and maternal resiliency”, “the formation of maternal skills”, and “being socially supported”. The categories are further discussed below.

#### *Being process*

Participants in this study repeatedly referred to the being process of maternal role attainment. And they mentioned that this course is time-consuming and involves continuous and progressive learning. A process that begins from the beginning of pregnancy and is manifested by the birth of a baby. One Participant said: “*During this period, and as long as I could do all my child’s work myself, I worked hard and gave it time and it had a good result as I saw that every day I learned new things and my duties are performed better. My stress was slowly diminished*”

Another participant said: “*I remember even the first day when I saw the baby, I thought how do I feed the baby? I was so scared that I sometimes woke up for hours and looked at my baby. But after a while, both these fears became less and less learned.*” (p10).

#### *Beautiful and lovely feeling*

Participants repeatedly mentioned their beautiful feeling during pregnancy and after the baby was born. According to Iranian religious culture, they considered the existence of a child a gift from God and described this event as a positive event in their lives. One Participant said “*If I want to tell you about my mothering feelings, I have to say, for me, it’s a beautiful feeling. I always thank God. Anyway, I think having a baby is a gift from God. I thank God that everything passed normally.*” (p6).

### *Ambivalent emotions*

Many participants talked about the contradictory feelings that they had during this time. Feelings like regret and confusion, on the other hand, having sweet moments and a sense of pleasure. One participant described her feeling of ambivalent emotions as follows “: *In the first days I was more involved in the adoption of the child because of the problems. But then when I talked to my husband and we came up with this, it made me feel much easier. But these ambivalent emotions really were with me until the day I gave birth. I would say every day, God willing, because I have children but sometimes I would say to myself what should I do next with their problems?*” (p2).

### *Being socially supported*

In all interviews, participants discussed the importance of supporting by others in achieving their role and the need for physical and emotional help during this period. These supporters included mother, spouse, family, nurse, physician, and friends. And they viewed their maternal role as a result of positive and negative support. In this regard, one participant said: “*First of all, it was my mother’s support, and my husband helped me a lot, and most of spiritual support was helpful. Especially in the first days that I had a physical injury and I really needed much help and support.*”(p9)

### *Maternal identity formation*

One of the consequences of “attaining maternal role” is to achieve maternal identity and to be comfortable in the role, and also to increase self-esteem in performing all maternal duties towards the infant, when the mother finds a new image of herself and adapts and eventually reaches self-efficacy. One participant said: “*Sometimes I think I’ve become another person. People around me tell me that you have changed a lot compared with the past. How responsible you are! They are right. Previously, nothing was so important to me to set it up. I think. And go with the thought. I am really satisfied.*” (p12)

### *Maternal resiliency*

Resilience is the capacity to withstand stress and disaster. Promotion of resilience leads to the growth of people in acquiring better self-management thinking and skills. Resilience means the ability to cope with difficult situations and adapt to the pressures of daily life. Resilience does not limit stress, it does not alleviate life’s problems, but it empowers the mother to cope with the challenges they face. Participants talked about increasing their capacity to withstand stress and less about getting into trouble. “*I became much more consistent than before. And I’m less embarrassed about any problem and I think this is a very good thing for the mothers.*” (p2)

Another participant said: “*I do most of the stuff myself. My mother was very good at being with me and sometimes even*

*talking to each other. Of course, I worked hard to adapt to my stressful responsibilities and circumstances.*” (p 3)

### *The formation of maternal skills*

Acquiring maternal skills leads to reduced dependency on others, being skilled at tasks, learning role-appropriate behaviors, gaining new experiences, identifying infant temperament, continuing breast feeding, recognizing child behavior patterns, and it increases the quality of infant care. Accordingly, one participant argues: “*Little by little, I got used to doing the baby’s work. Even when the baby was sleeping, I also did the computer work I could do and my dependency on the others was low. I learned how to behave. I arranged for both my older child’s lessons and my housework and the new baby.*” (p11)

### *Final analytic phase*

The results of the field work phase confirmed the theoretical phase findings. Most of the themes and categories obtained from texts were repeated in the field work phase. A comprehensive definition of maternal role attainment in nursing was obtained by integrating the findings of the theoretical and fieldwork phases:

*“maternal role attainment is a developmentally, interactive, adaptive, and committed multi-dimensional process based on the discovery of pregnancy, cognitive-behavioral mother’s skills, characteristics of the mother, and receiving social support, which leads to maternal identity, formation of maternal skills, resiliency, development of a newborn, promotion of mother-infant interactions, and increased well-being of the mother. ”*

### *Discussion*

In this study, the concept of maternal role attainment was investigated using the hybrid concept analysis model. Based on the results of this study in the field work phase, this concept is influenced by the mother’s perspective. Comparison of the findings in the two phases shows that almost all components of theoretical phase and fieldwork phase coincide with each other.

Regarding the characteristics of this concept in most studies as well as the findings of the interview, some characteristics are related to the essence of this phenomenon, and when these characteristics exist, motherhood occurs. The most important attribute in maternal role attainment is “being process” a process and its dynamics,<sup>[9,19,26,28,37]</sup> and mother must pass through them, an interactive and developmental process that occurs over a period of time.<sup>[1,27,37]</sup> In the study of Holditch-Davis, this concept is stated as a multi-dimensional and process-related one.<sup>[34]</sup> Lee et al. have referred to interactive, social, learning, and complexity of the process.<sup>[27]</sup> This psychodynamic process is accompanied by a change in the pattern of life, which is unknown and associated with self-knowledge that engages with the baby in a social setting.<sup>[47]</sup> In the field work, data

analysis identified the concept as a natural, interactive, and developmental process of competence and empowerment.

One of the attributes that participants in the field work phase outlined was having contradictory and ambivalent emotions in the process of maternal role attainment. Feelings such as regret and confusion and the sense of pleasure and prosperity, and they described this period as “different and critical”. In a study by Boyer, it was also noted that, although many contributors considered mothering to be a positive or at least neutral experience, they also considered it an experience of difficulty. And women, while describing their experiences as mothers, expressed a lot of ambivalent emotions.<sup>[46]</sup> The findings of the interviews showed that emotional regulation in the mother is accompanied by the passage of these ambivalent emotions. During the transition to motherhood, a number of changes occur at the neurological, hormonal, and psychological levels so that the mother can facilitate successful care. Beautiful and lovely feeling was one of the attributes that was mentioned only during the field work. Considering the religious culture of Iran, the existence of the child is considered a gift from God, and they referred to this as a positive event in their lives.<sup>[32]</sup> As a cultural phenomenon, child bearing is a unique process that includes systematic patterns of care and it has diverse perspectives.<sup>[48]</sup> The findings of the interview showed that Iranian mothers began to feel good about starting a pregnancy and reinforced these feelings by attaching to their religious roots.

One of the most important findings that has been mentioned in the theoretical<sup>[19,25,34,37-39,46]</sup> and field work phase was that being supported by the spouse, health care provider, and the family was formal and informal. In Reid's study, emotional and practical support have been mentioned,<sup>[22]</sup> or in the study of Kordi conducted in the Iranian cultural context, the support of the spouse and the support of family members have been referred to.<sup>[9]</sup>

Attaining maternal identity was one of the consequences that was mentioned in the theoretical and field work phase.<sup>[1,9,18,22,24,28,30,34,35,38,42,43,46]</sup> Acquiring the identity of motherhood in the transition process will lead to women's psychosocial development.<sup>[49]</sup> Achieving maternal role leads to maternal identity, self-confidence in doing mothering skills and doing newborn care, and being comfortable in the role.<sup>[38]</sup> Another consequence, which is mentioned in the theoretical.<sup>[1,2,18,24,32,34,44,45]</sup> and field work phase, is the formation of maternal skills. In acquiring a maternal role, the mother is aware of the behaviors of the infant, developing her own unique set of maternal behaviors, and gaining confidence and competence in her decisions and performance of her mothering skills.<sup>[18]</sup> Being competent in maternal role facilitates parental adaptive skills, such as sensitive behaviors and responsiveness and a better relationship between mother and baby.<sup>[50]</sup> Maternal resiliency was another consequence derived from the

field work phase, participants mentioned the increased capacity to withstand stress and less on being disturbed by problems. In a study by Zraly *et al.* (2013), the resiliency mentions the capacity of mothers to change during their parenting experience.<sup>[51]</sup> Several studies believe that the child bearing of many women promotes mental health and special attention should be paid to the role of resiliency and postpartum adaptation.<sup>[52]</sup> This study was limited by a lack of access to the full-text copies of some required papers. Another limitation of this study was that analysis in the theoretical phase was based on studies in several countries and the Western world, while field work phase data was collected only in one country. And, like other qualitative studies, the findings cannot be generalized.

## Conclusion

The findings of this study clarified the characteristics of the concept of maternal role attainment and it also showed that this concept is broad process, multidimensional, and is influenced by various factors such as maternal support and resilience. Understanding the factors affecting the achievement of the maternal role can be the first step in developing and improving the quality of care for neonates and their parents. Also, the findings can help to develop or revise the models, theories, and instruments that are collected for this purpose. An analysis of the concept is an endless process, and as long as knowledge and experience are available, further development of a concept is always necessary.

## Acknowledgements

This article is part of a PhD thesis with project number 31534. The authors would like to acknowledge all those who cooperated in the research project especially mothers who kindly participated in the interviews and stated their valuable experiences.

## Financial support and sponsorship

Research Committee at the School of Nursing and Midwifery at Iran University of Medical Sciences

## Conflicts of interest

Nothing to declare.

## References

1. Mercer RT. Becoming a mother versus maternal role attainment. *J Nurs Scholarsh* 2004;36:226-32.
2. Nakamura Y, Takeishi Y, Ito N, Ito M, Atogami F, Yoshizawa T. Comfort with motherhood in late pregnancy facilitates maternal role attainment in early postpartum. *Tohoku J Exp Med* 2015;235:53-9.
3. Olza I, Leahy-Warren P, Benyamini Y, Kazmierczak M, Karlsdottir SI, Spyridou A, *et al.* Women's psychological experiences of physiological childbirth: A meta-synthesis. *BMJ Open* 2018;8:e020347.
4. Fouquier KF. State of the science: Does the theory of maternal role attainment apply to African American motherhood? *J Midwifery Womens Health* 2013;58:203-10.



5. Alligood MR. *Nursing Theory-E-Book: Utilization & Application*: Elsevier Health Sciences; 2013.
6. Sanders MR, Woolley M. The relationship between maternal self-efficacy and parenting practices: Implications for parent training. *Child Care Health Dev* 2005;31:65-73.
7. Kinsey CB, Hupcey JE. State of the science of maternal-infant bonding: A principle-based concept analysis. *Midwifery* 2013;29:1314-20.
8. Nicholson JM, Berthelsen D, Abad V, Williams K, Bradley J. Impact of music therapy to promote positive parenting and child development. *J Health Psychol* 2008;13:226-38.
9. Kordi M, Fasanghari M, Asgharipour N, Esmaily H. The effect of maternal role training program on role attainment and maternal role satisfaction in nulliparous women with unplanned pregnancy. *J Educ Health Promot* 2017;6:61.
10. Abbasi-Shavazi MJ, Inhorn MC, Razeghi-Nasrabad HB, Toloo G. The "Iranian ART Revolution" infertility, assisted reproductive technology, and third-party donation in the Islamic Republic of Iran. *J Middle East Women's Stud* 2008;4:1-28.
11. Ahmadifaraz M, Abedi H. The experiences of employed women related to their maternal role: A phenomenological qualitative research. *J Qual Res Health Sci* 2014;3:137-48.
12. Schwartz-Barcott D, Kim HS. An expansion and elaboration of hybrid model of concept development. In: Rodgers BL, Knaf KA, editors. *Concept Development in Nursing: Foundation, Techniques, and Application*. 2<sup>nd</sup> ed. Philadelphia: W.B. Saunders; 2000. p. 129-59.
13. Schwartz-Barcott D, Patterson BJ, Lusardi P, Farmer BC. From practice to theory: Tightening the link via three fieldwork strategies. *J Adv Nurs* 2002;39:281-9.
14. Rafii F, Soleimani M, Seyed-Fatemi N. Concept analysis of participation of patient with chronic disease: Use of hybrid model. *Iran J Nurs* 2010;23:35-48.
15. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 2004;24:105-12.
16. Elo S, Kyngäs H. The qualitative content analysis process. *J Adv Nurs* 2008;62:107-15.
17. [Internet]. OED. Available from: [http://www.oxforddictionaries.com/us/definition/american\\_english/maternalroleattainment](http://www.oxforddictionaries.com/us/definition/american_english/maternalroleattainment). [Last cited on 2018 Feb 09].
18. Fouquier KF. The concept of motherhood among three generations of African American women. *J Nurs Scholarsh* 2011;43:145-53.
19. Fowles ER. Relationships among prenatal maternal attachment, presence of postnatal depressive symptoms, and maternal role attainment. *J Spec Pediatr Nurs* 1996;1:75-82.
20. Bibring GL, Dwyer TF, Huntington DS, Valenstein AF. A study of the psychological processes in pregnancy and of the earliest mother-child relationship: I. Some propositions and comments. *Psychoanalytic Stud Child* 1961;16:9-24.
21. Miller T. *Making sense of motherhood: A narrative approach*: Cambridge University Press; 2005.
22. Reid T. Maternal identity in preterm birth. *J Child Health Care* 2000;4:23-9.
23. Liu CC, Chen YC, Yeh YP, Hsieh YS. Effects of maternal confidence and competence on maternal parenting stress in newborn care. *J Adv Nurs* 2012;68:908-18.
24. Kagawa RM, Dearthoff J, Dominguez Esponda R, Craig D, Fernald LC. The experience of adolescent motherhood: An exploratory mixed methods study. *J Adv Nurs* 2017;73:2566-76.
25. Khandan S, Riazi H, Amir Ali Akbari S, Nasiri M, Montazeri A. Adaptation to maternal role and infant development: A cross-sectional study. *J Reprod Infant Psychol* 2018;36:289-301.
26. Koniak-Griffin D. Maternal role attainment. *Image: J Nurs Scholarsh* 1993;25:257-62.
27. Lee SN, Long A, Boore J. Taiwanese women's experiences of becoming a mother to a very-low-birth-weight preterm infant: A grounded theory study. *Int J Nurs Stud* 2009;46:326-36.
28. Spinelli M, Frigerio A, Montali L, Fasolo M, Spada MS, Mangili G. 'I still have difficulties feeling like a mother': The transition to motherhood of preterm infants mothers. *Psychol Health* 2016;31:184-204.
29. Kim A, Tak Y, Park H, Lee H. Psychosocial determinants of maternal role development in mothers of the premature infants, among Korean married women: The roles of attachment, identity, and marital intimacy. *J Pediatr Mother Care* 2018;2:118-24.
30. Iwata H, Mori E, Maekawa T, Maehara K, Sakajo A, Ozawa H, *et al.* Developing the Maternity Portfolio to promote maternal role attainment in women who have undergone artificial reproductive treatment. *Japan J Nurs Sci* 2012;9:122-6.
31. Schachman KA, Lee RK, Lederma RP. Baby boot camp: Facilitating maternal role adaptation among military wives. *Nurs Res* 2004;53:107-15.
32. Heydarpour S, Keshavarz Z, Bakhtiari M. Factors affecting adaptation to the role of motherhood in mothers of preterm infants admitted to the neonatal intensive care unit: A qualitative study. *J Adv Nurs* 2017;73:138-48.
33. Mushta J, L. Rush K, Andersen E, editors. *Failure to rescue as a nurse-sensitive indicator*. Nursing forum: Wiley Online Library; 2018.
34. Holditch-Davis D, Miles MS, Burchinal MR, Goldman BD. Maternal role attainment with medically fragile infants: Part 2. Relationship to the quality of parenting. *Res Nurs Health* 2011;34:35-48.
35. Özkan H, Polat S. Maternal identity development education on maternity role attainment and my baby perception of primiparas. *Asian Nurs Res* 2011;5:108-17.
36. Black BP, Holditch-Davis D, Miles MS. Life course theory as a framework to examine becoming a mother of a medically fragile preterm infant. *Res Nurs Health* 2009;32:38-49.
37. Tarkka MT. Predictors of maternal competence by first-time mothers when the child is 8 months old. *J Adv Nurs* 2003;41:233-40.
38. Isaacs KB. *A Grounded Theory Model of Mother Role Development While in the Neonatal Intensive Care Unit* [dissertation]. [Lexington]: University of Kentucky UKnowledge; 2013. 123p.
39. Ngai FW, Chan SW, Ip WY. Predictors and correlates of maternal role competence and satisfaction. *Nurs Res* 2010;59:185-93.
40. Flacking R, Ewald U, Nyqvist KH, Starrin B. Trustful bonds: A key to "becoming a mother" and to reciprocal breastfeeding. Stories of mothers of very preterm infants at a neonatal unit. *Soc Sci Med* 2006;62:70-80.
41. Javadifar N, Majlesi F, Nikbakht A, Nedjat S, Montazeri A. Journey to motherhood in the first year after child birth. *J Family Reprod Health* 2016;10:146-53.
42. Parratt JA, Fahy KM. A feminist critique of foundational nursing research and theory on transition to motherhood. *Midwifery* 2011;27:445-51.
43. Jirapaet V. Factors affecting maternal role attainment among low-income, Thai, HIV-positive mothers. *J Transcult Nurs* 2001;12:25-33.
44. Fowles ER, Horowitz JA. Clinical assessment of mothering during infancy. *J Obstet Gynecol Neonatal Nurs* 2006;35:662-70.
45. Rossman B, Greene MM, Meier PP. The role of peer support

- in the development of maternal identity for “NICU moms”. *J Obstet Gynecol Neonatal Nurs* 2015;44:3-16.
46. Boyer K, Spinney J. Motherhood, mobility and materiality: Material entanglements, journey-making and the process of ‘becoming mother’. *Environment and Planning D: Soc Space* 2016;34:1113-31.
  47. Osofsky JD, Thompson MD. Adaptive and maladaptive parenting: Perspectives on risk and protective factors. *Handbook of early childhood intervention*. 2000;2:54-75.
  48. Bassey Etowa J. Becoming a mother: The meaning of childbirth for African–Canadian women. *Contemp Nurse* 2012;41:28-40.
  49. Rubin R. Maternal identity and the maternal experience. *Am J Nurs* 1984;84:1480.
  50. Koniak-Griffin D, Logsdon MC, Hines-Martin V, Turner CC. Contemporary mothering in a diverse society. *J Obstet Gynecol Neonatal Nurs* 2006;35:671-8.
  51. Zraly M, Rubin SE, Mukamana D. Motherhood and resilience among rwandan genocide-rape survivors. *Ethos* 2013;41:411-39.
  52. Sexton MB, Hamilton L, McGinnis EW, Rosenblum KL, Muzik M. The roles of resilience and childhood trauma history: Main and moderating effects on postpartum maternal mental health and functioning. *J Affect Disord* 2015;174:562-8.