



Transitional care: Concept analysis using Rodgers' evolutionary approach



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ABSTRACT

Background: The process of moving patients from a hospital to a home or another care setting, also called transitional care, can lead to unwanted complications and negative outcomes. The term "transitional care" involves a wide range of conditions and services to ensure the continuity of care and prevention of unwanted consequences in vulnerable individuals, who are affected by any changes in care settings or caregivers.

Objectives: The purpose of this concept analysis is to clarify the concept of transitional care by considering its application in different studies and its changes over time.

Design: A concept analysis.

Data sources: Literature from 2008 to 2018 were sought using Medline, PubMed, Google Scholar and Cochrane databases with terms "transitional care", "transitional care" OR "care transitions", "transitional care" AND "nursing", "transitional care" AND "discharge planning".

Review methods: Rodgers' evolutionary concept analysis method was used to clarify the antecedents, attributes and consequences.

Results: The 46 eligible articles were fully studied and findings were categorized into antecedents, attributes and consequences. Transitional care antecedents were classified into three categories: patient/family/caregivers related factors, factors related to *hospital system (inpatient care)*, and social factors. The defining attributes include patient-oriented transitional care, transitional care with a hospital-based approach and transitional care with a community-based approach. Consequences categorized into patient-related consequences, family/caregiver-related consequences, and hospital-related consequences.

Conclusion: The results of the analysis of the transitional care concept have shown that this concept is not limited to care provided by nurses at discharge, and that its proper implementation requires considering many factors including the status of patients and their families, different members of the healthcare team, and environmental and social conditions and facilities. A proper understanding of transitional care not only specifies the role of care providers, but also creates a basis for designing an evidence based care program.

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What is already known about the topic?

- Health care systems continue to shift from inpatient to outpatient care.
- Transitional care is increasingly recognized as a useful delivery model for care.
- Despite the widespread use of transitional care, this concept still has a lack of clarity.

What this paper adds

- Distinguishing between the defining attributes of the transitional care concept and its irrelevant attributes, can help develop a more accurate process for the operationalizing of variables that are involved in transitional care.
- By specifying the antecedents, attributes and consequences of transitional care provides a framework for transitional care as a systematic model.
- Proper design of transitional care requires a comprehensive assessment of patient/caregivers, health care systems and community services.

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1. Introduction

Nowadays, healthcare systems are trying to keep the costs down while providing quality care and improving patient outcomes. At the same time, hospitals are under considerable pressure to cut long hospital stays and prompt care transition to another care setting. To this end, they seek innovative and evidence-based methods for service provision (Feigle, 2011; Hines et al., 2010). The process of moving patients from a hospital to home or another care setting, also called "transitional care", may lead to unwanted complications and negative outcomes (Donald et al., 2015; Long, 2012).

In traditional systems, the patient-nurse relationship would end after discharge. Given the changing needs, healthcare systems and nursing care should be coordinated with the new needs and try to bridge the gap between the patients and the care continuity

(Ye et al., 2016). Transitional care involves a broad range of conditions and services to ensure continuity of care and prevent negative effects in vulnerable individuals who are affected by any changes in care settings or caregivers (Meleis, 2010). Transitional care was initially used as a multidisciplinary model to empower parents with vulnerable low-birth-weight neonates who had early discharge and received part of hospital care at home and then gradually used in other vulnerable groups (Meleis, 2010). Since then, many transitional care methods and definitions have been developed by healthcare systems for different populations.

As the use of transitional care has increased, the range of methods and elements used in transitional care has also been widespread and changed. Bradway and Naylor defined transitional care as a successful model with a broad spectrum of services with a focus on providing safe and appropriate care for patients during a move from a care setting to another, typically by an advanced practice nurse (Bradway et al., 2011; Naylor and Keating, 2008a,2008b). Coleman emphasized the issues of coordination and continuity of care in transitional care (Coleman and Boulton, 2003). Stauffer defined it as a pre-post and post-discharge interventions by advanced practice nurse (Stauffer et al., 2011) and some researchers introduce it as a multi-disciplinary care intervention (Low et al., 2015). Also, a literature review showed that in many texts, some terms and concepts such as "continuity of care", "discharge planning" and "care coordination" have been used interchangeably or practically overlapped.

Inaccurate naming and misuse of concepts can be an obstacle to optimal and desirable care which, in turn, affects the care implementation and evaluation. A proper understanding of transitional care not only specifies the role of care providers, but also creates a basis for designing a more structured care program. According to Rodgers and Knafel (2000), a concept develops with time and changes under the influence of underlying factors such as culture, social groups, disciplines, time periods, and common theories. However a concept should be contained a set of necessary and sufficient features that constitute the essence of it and that do not change over time and enable it to be distinguished from other concepts (Rodgers and Knafel, 2000). In conclusion, definitions may vary depending on time and context, and concept analysis can be a basis for further studies (Bookey-Bassett et al., 2017; Tofthagen and Fagerström, 2010).

This study used the Rodgers' evolutionary approach aiming at clarifying the concept of transitional care by considering its application in different studies and its changes over time. To this end, literature review, along with data collection and analysis, was done and the extracted codes and themes were used to determine the attributes, antecedents, and consequences of the concept of transitional care (Corbett et al., 2010).

2. Method

Concept analysis contributes to identification of common meanings used in a discipline and creation of a basis for education, practice, and theory development (Foronda, 2008). Concept analysis is an analytical process used for the identification of key attributes, applications, similarities, and differences of a concept as compared to other concepts and terms. Concept analysis increases the clarity of a concept by specifying its key and distinct elements (Walker and Avant, 2005). This paper uses the Rodgers' evolutionary concept analysis method (Rodgers and Knafel, 2000) and reviewed literature on transitional care with emphasis on the role of time and context in understanding the concept of transitional care (Table 1).

2.1. Sources of data

The databases searched for relevant articles included Medline, PubMed, Cochrane and Google Scholar. The databases were searched using the "AND" and "OR" operators in the titles and abstracts, and search keywords and MeSH terms of "transitional care", "transitional care" OR "care transitions", "transitional care" AND "nursing" AND "discharge planning". The references of the found articles were also searched for relevant studies. The inclusion criteria were English research articles containing information about the concept of transitional care published in the past 10 years between 2008 and October, 2018. The aim to select a 10-year period was to search the most recent studies.

First, titles and abstracts of approximately 426 articles were reviewed, out of which 176 documents were determined relevant and further assessed for inclusion. The inclusion criteria were full-text English articles in which transitional care was carried out by a nurse or nurses were a part of the transitional care team. The exclusion criteria were studies that used the concept of transitional care as the process of evolutionary transitional periods (changing care during the transition from one stage of growth to another, for example, changes in care during the transition from adolescence to adulthood), studies published in non-peer reviewed journals, studies that used the concept of transitional care other than the health care field, and studies used the concept of transitional care as a none hospital-based discharge planning. Finally, a total of 46 articles were selected and analyzed. Fig. 1 shows the data selection process.

2.2. Data analysis process

Each article was coded based on attributes, antecedents, consequences, contextual basis, relevant and/or alternate terminology, and practical and theoretical definitions. The coding procedure was performed using the Rodgers' evolutionary method. First, the articles were studied to acquire an initial impression and the essence of this concept. They were then reviewed once again for systematic data collection and ensuring the coding validity. As

Table 1
Steps in Rodgers' Evolutionary Concept Analysis (Rodgers and Knafel, 2000).

1. Specifying a concept and its alternate terminologies
2. Determination and selection of the appropriate scope for data collection
3. Collection of data related to
 - a) Concept attributes
 - b) Conceptual basis including sociocultural, interdisciplinary, and temporal variables
4. Data analysis based on concept attributes
5. Provision of examples that fit the concept, if needed
6. Determination of hypotheses and applications for further evolution of the concept

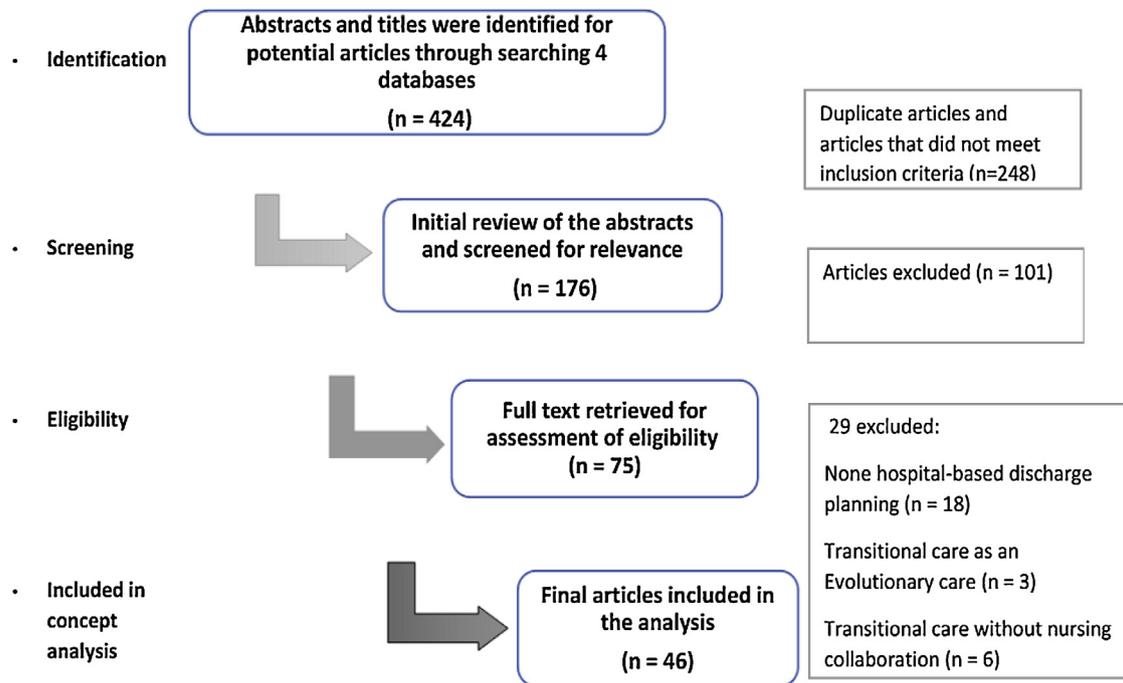


Fig. 1. Flow chart of article selection process.

the next step, the extracted data was classified into an Excel spreadsheet and the thematic analysis was used to specify attributes, antecedents, and consequences. Using charts and matrices, the classes were studied separately to identify key and synthesized themes, and then the findings were categorized into antecedents, consequences, and results.

3. Results

The concept analysis should lead to the identification of common understanding and application of the concept (Henderson et al., 2018). Therefore, transitional care definitions proposed by different researchers should contain common attributes to promote the use of concept in different populations and cultures. This part represents the results in the form of attributes, antecedents, and consequences. Fig. 2 describes the relationship between antecedents, attributes, and consequences.

3.1. Antecedents

Antecedents consist of events or incidents that are essential for a concept and precede its occurrence (Walker and Avant, 2005). This study categorized transitional care antecedents into three groups, namely, factors related to the patient and their family and caregivers, factors associated with hospital system (inpatient care), and social factors (social support, ambulatory care facilities).

3.1.1. Antecedents related to patient, patient's family, and caregivers

The individual factors are among the most important ones related to the patients and patients' family. The cultural and socioeconomic factors greatly affect lifestyle, values, priorities, and accessibility to healthcare facilities and services (Fermann et al., 2017; Ko et al., 2017; Naylor and Keating, 2008a, 2008b; Rennke and Ranji, 2015). Health knowledge is the second factor frequently mentioned in different texts (Bradway et al., 2011; Fermann et al., 2017; Gentles et al., 2015; Ko et al., 2017; Naylor and Berlinger, 2016; Naylor and Keating, 2008a, 2008b; Rennke and Ranji, 2015; Sonneveld et al., 2013). Knowledge and

awareness can effectively promote health outcomes and increase the chance of adherence to treatment regimens and self-care (Jankowska-Polańska et al., 2016; Mühlhauser and Lenz, 2008; Stamp et al., 2014). As a result, the assessment of the patients and their caregivers' knowledge are among important factors in designing and implementing a care plan. Another important factor in developing a transitional care program, which is related to the antecedents of patients and their families, is the health expectations, skills, and habits of the patients and their caregivers, along with the patients' health status (Hines et al., 2010; Ko et al., 2017; Li et al., 2016; Sonneveld et al., 2013; Gentles et al., 2015; Rennke and Ranji, 2015).

3.1.2. Antecedents related to hospital system (inpatient care)

The financial resources and accessibility to healthcare services are among factors to be considered in designing any program (Arbaje et al., 2014; Li et al., 2016; Rennke and Ranji, 2015; Sonneveld et al., 2013). Since cost reduction is an expected outcome of transitional care programs, available resources are considered among the most important factors. Given that a transitional care program requires multidisciplinary collaboration and coordination, considering an effective management and leadership, organizational culture and regulations, and structural flexibility are essential in developing and implementing a program (Coffey et al., 2017; Li et al., 2016; Naylor and Berlinger, 2016; Naylor, 2012; Naylor et al., 2011). The most important factors in optimal transitional care include nursing therapies, along with playing the role of coordinating, preventing, promoting and managing care and creating good relationships with patients and their families (Coffey et al., 2017; Gentles et al., 2015; Naylor and Berlinger, 2016; Naylor and Keating, 2008a, 2008b; Naylor et al., 2013b; Rennke and Ranji, 2015; Schumacher and Meleis, 1994; Voss et al., 2011; Wee et al., 2014; Williams et al., 2010). In addition to providing patients and their families with accurate information and training, nurses are responsible for identifying the needs of patients and encouraging them to continue the treatment (Arbaje et al., 2014). This can be facilitated by employing information technologies capacities and web-based systems in

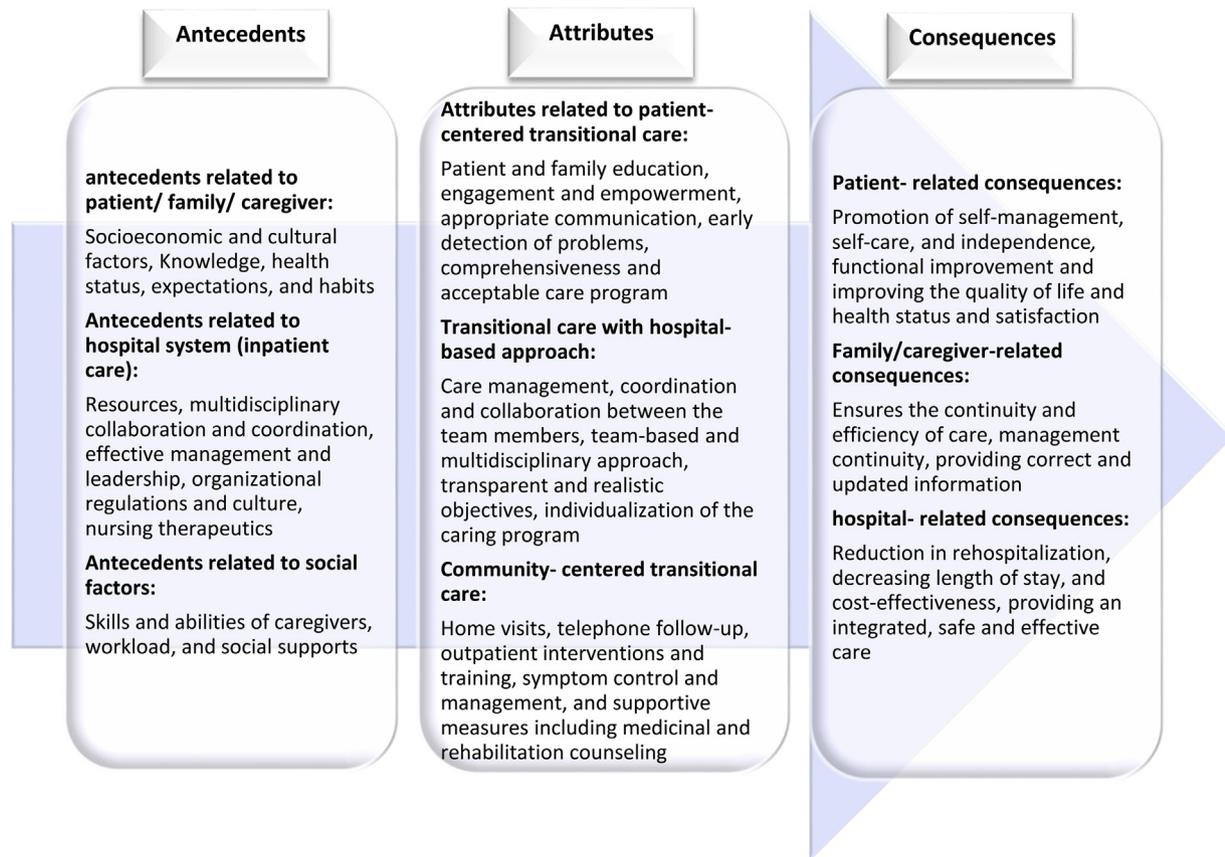


Fig. 2. Theoretical model of transitional care.

an information exchange process (Cipriano et al., 2013; Zamora et al., 2012).

3.1.3. Antecedents related to social factors

Changes in the provision of health care have provided a good opportunity to play the role of nurses at different levels of healthcare. Among the objectives of transitional care is to cut long hospital stays and prompt care transition from inpatient settings to home or another care setting. In order to be a major player in shaping these changes, the nurses should be aware of the variables that derive this changes and mandate the competencies such as knowledge, skills, and attitudes (Salmond and Echevarria, 2017). As a result, the skills and abilities of caregivers, along with the process, workload and social supports should be investigated (Davis et al., 2012; Hines et al., 2010; Li et al., 2016; Rennke and Ranji, 2015).

3.2. Attributes

Specifying the key attributes of a concept is an important step in its clarification and refinement, which results in a deep understanding of the concept and its differentiation from other concepts (Walker and Avant, 2005). Attributes are the constituent elements that shape a concept (Corbett et al., 2010). The attributes of transitional care are patient-centered transitional care, hospital-based transitional care, and community-centered transitional care.

3.2.1. Patient-centered transitional care

As its first attribute, transitional care is a patient- or family-oriented procedure. In fact, during a transition from one care setting to another, in addition to the setting change, caregivers and care levels also change, which in turn changes the patient's needs

(Bray-Hall, 2012). In the transitional care process, a major part of the caring process continues at home by the patient, family, and caregivers. As a result, the coordination and participation of the patients and their families, the proper communication with them, and their education is essential, which, in addition to their empowerment, contributes to early detection of their problems (Berry et al., 2011; Bettger et al., 2012; Coffey et al., 2017; Joint Commission, 2015; Feigle, 2011; Fermann et al., 2017; Gentles et al., 2015; Hines et al., 2010; Ko et al., 2017; Li et al., 2016; Low et al., 2015; Naylor and Berlinger, 2016; Naylor and Keating, 2008a, 2008b; Naylor, 2012; Naylor et al., 2013a, 2017; Rennke et al., 2013; Rennke and Ranji, 2015; Voss et al., 2011; Zhang et al., 2018). The acceptability and comprehensiveness of a care program are among the factors that encourage the participation of patients and their families (Berry et al., 2011; Zhao and Wong, 2009).

3.2.2. Hospital-based transitional care (inpatient care)

Transitional care has the potential to bridging the gap between hospitalisations and outpatient care. The aim of hospital-based transitional care is to pave the way for the transition of patients from inpatient to outpatient settings and reduce unnecessary readmissions and adverse effects (Rennke and Ranji, 2015). The healthcare team members are in a position that enables them to identify the culture, beliefs, healthcare patterns, and health behaviors of the patients through precise examinations and planning of the interventions according to the patients' needs and skills. Every patient has unique conditions, such as medical history, diagnosis, and prognosis, and thus the transitional care program should accordingly be customized (Naylor and Keating, 2008a, 2008b). Care management, coordination, and collaboration between the team members, along with team-based and multidisciplinary design of care programs are among the key

aspects of the healthcare systems for transitional care frequently mentioned in relevant articles (Arbaje et al., 2014; Berry et al., 2011; Bettger et al., 2012; Bradway et al., 2011; Coffey et al., 2017; Davis et al., 2012; Ecklund and Bloss, 2015; Feigle, 2011; Gentles et al., 2015; Hines et al., 2010; Ko et al., 2017; Li et al., 2016; Lovelace et al., 2016; Low et al., 2015; Naylor and Berlinger, 2016; Naylor and Keating, 2008a, 2008b; Naylor, 2012; Naylor et al., 2013a; Ornstein et al., 2011; Rennke and Ranji, 2015; Verhaegh et al., 2014; Voss et al., 2011; Wee et al., 2014; Williams et al., 2010; Zhao and Wong, 2009). A complete investigation into the needs and self-management skills, transparent and realistic development of objectives and consequences, and individualization of the caring process are among the quality improvement strategies (Berry et al., 2011; Feigle, 2011; Hines et al., 2010; Ko et al., 2017; Long, 2012; Lovelace et al., 2016; Low et al., 2015; Mora et al., 2017; Naylor, 2012; Naylor et al., 2013a; Rennke and Ranji, 2015; Voss et al., 2011; Wee et al., 2014; Zhao and Wong, 2009).

3.2.3. Community-centered transitional care

Given the emphasis of transitional care on providing out-of-hospital care services and reduction of hospital stay, many articles have introduced it as a community-centered care. Today, the scope of nursing activities for coordination and participation in social health services has received a growing emphasis. Different aspects of community-centered transitional care, such as telephone follow-up, home visits, education, outpatient interventions, symptom control and management, and supportive measures including medicinal and rehabilitation counseling has been addressed in different articles (Arbaje et al., 2014; Bettger et al., 2012; Coffey et al., 2017; Eslami and Tran, 2014; Feigle, 2011; Fermann et al., 2017; Gentles et al., 2015; Hines et al., 2010; Long, 2012; Mora et al., 2017; Naylor, 2012; Naylor et al., 2011, 2013a; Ornstein et al., 2011; Rennke and Ranji, 2015; Verhaegh et al., 2014; Voss et al., 2011; Williams et al., 2010; Zhao and Wong, 2009).

3.3. Consequences

Consequences include incidents and events that occur as the results and outcomes of a concept (Walker and Avant, 2005). This study categorized the consequences into patient-related consequences, family/caregiver-related consequences, and hospital-related consequences.

3.3.1. Patient-related consequences

Investigation into the patient-related consequences showed that the transitional care can promote self-management, self-care, and independence of patients through continuity and coordination of care, focusing on needs, and empowerment of the patient and caregivers (Berry et al., 2011; Bettger et al., 2012; Ecklund and Bloss, 2015; Ko et al., 2017; Zhang et al., 2018; Zhao and Wong, 2009). Moreover, transitional care improves the quality of life and health and increases patient's satisfaction (Allen et al., 2014; Coffey et al., 2017; Li et al., 2016; Naylor, 2012; Naylor et al., 2011, 2013a; Wee et al., 2014; Zhang et al., 2018; Zhao and Wong, 2009).

3.3.2. Family/caregiver-related consequences

The family and caregivers have an essential role in providing post-discharge care. Transitional care ensures the continuity and effectiveness of care through supporting families and engaging them in care design and implementation (Naylor et al., 2011, 2013a). Establishing a mutual trust between the patients, their families, and caregivers about care continuity, ensuring the fulfillment of the needs, providing correct and updated information, and prioritizing needs are among transitional care consequences mentioned in the articles (Haggerty et al., 2003; Naylor and Berlinger, 2016).

3.3.3. Hospital-related consequences

Resource limitations have made the cost-effectiveness of care programs as an important and effective factor in decision making. In fact, the cost-effectiveness analysis has turned into an index for prioritization plans in the healthcare system (Weinstein and Stason, 1977). According to studies, the most important hospital-related consequences include reduction in rehospitalisation rates, decreasing length of stay, and cost-effectiveness (Allen et al., 2014; Berry et al., 2011; Bettger et al., 2012; Coffey et al., 2017; Feigle, 2011; Fermann et al., 2017; Gentles et al., 2015; Hines et al., 2010; Li et al., 2016; Lovelace et al., 2016; Low et al., 2015; Mora et al., 2017; Naylor, 2012; Naylor et al., 2011, 2013a; Verhaegh et al., 2014; Voss et al., 2011; Wee et al., 2014; Williams et al., 2010; Zhang et al., 2018; Davis et al., 2012). Transitional care can play a significant role in enhancing the hospital-related consequences through the continuity of integrated, safe and effective care (Davis et al., 2012; Feigle, 2011; Rennke et al., 2013).

4. Discussion

This study aimed at providing a clearer description of the transitional care concept by specifying different dimensions of transitional care and distinguishing it from similar concepts and terminologies. A review of literature on transitional care has shown that this concept includes different elements and consequences based on time, conditions, and care providers and receivers. As a result, Rodgers' evolutionary concept analysis was used for a broad literature review and analysis to provide a clear description of the transitional care concept and identify relevant precedents, attributes and consequences. The results of the analysis of the transitional care concept showed that this concept is not limited to the patient care provided by nurses at discharge, and that its proper implementation requires considering many factors including the status of patients and their families, participation of different health care members team, and environmental and social conditions and facilities. The literature review showed that although transitional care design and implementation are practically associated with many barriers and challenges, they are suggested as valuable methods with the above mentioned consequences.

Patient-centered care was the first attribute considered in transitional care, such that the literature studies strongly emphasized on coordination and participation of the patients and their families to play the role of caring outside the hospital. As a result, education and providing information are the main aspects of this approach that can improve the acceptability and comprehensiveness of the care program. The second attribute was the hospital-based approach which, in the design stage, requires clarified goals, and realistic and individualized outcomes in relation to the patient's conditions. The community-centered care was the third attribute. Because a wide range of transitional care is provided outside the hospital and at community level (through home visits and telephone contacts, symptom control and management, and medical advice), community resource knowledge and evidence based practice is essential for the development of transitional care. Given the growing population of the elderly and the growing burden of chronic diseases, community-centered transitional care is a significant opportunity to promote health and reduce costs.

Although studies have shown that transitional care has been implemented in various methods and members of the health team in different times and contexts, and populations, and each of these studies has emphasized specific aspects and outcomes, they together can contribute to the development of the basis of transitional care framework. At the time of evaluating the outcomes, the absence of a specific transitional care mechanism has led to less attention to the essential characteristics of

transitional care and instead focuses on general healthcare system indicators such as hospital stay length, re-hospitalization rate and cost-efficiency. A specific, unique, and flexible framework for transitional care can turn it into a systematic method, which facilitates the process of decision making, implementation, and evaluation. The systematic care of this view is important, because some studies suggest that a higher accessibility to care services after the discharge can not necessarily lead to the reduction of rehospitalisation rates (Wee et al., 2014). In addition, some evidence show that re-hospitalisation rate does not necessarily reduce even with increasing the physicians and nurses follow-up and provision of care coordinating programs (Peikes et al., 2009; Weinberger et al., 1996). According to evidence, the application of transitional care models is a good opportunity for the healthcare systems to provide patients with cost-effective quality care (Wee et al., 2014). However, achievement of this method requires investment of managers, collaboration of healthcare team members, and support of nurses and managers (Naylor et al., 2013a).

This study proposes a new transitional care model and definition to facilitate the design, implementation, and evaluation of transitional care by reviewing literature on transitional care and analyzing its concept. Given the diversity and difference of transitional care methods and the lack of study on their key attributes and elements (Li et al., 2016), the results of this study can be a basis for future studies.

Some barriers to the transitional care associated with the patients and their families are the lack of cooperation between patients and their families, relational issues, discontinuity of care, care gap during the movement of patients, hospital-related barriers (lack of cooperation between health care team members, providing patients and their families with inadequate education, restrictive organizational regulations, organizational culture, uncertain role of caregivers, etc.), and such factors as the inaccurate assessment of each patient and their conditions (Li et al., 2016; Naylor and Berlinger, 2016; Naylor, 2012; Naylor et al., 2009).

5. Conclusion

In nursing, the use of middle range theories reduces the gap between theory and practice (Pearson et al., 2005), and this analysis helps to clarify the use of transitional care in education, practice and research. Since the concept of transitional care involves a wide dimension, determination of its framework, major elements, and definition is an important step to its clarification and a practical guidance for health care provider, and provides a basis for further research. Theory-based action helps to determination of roles and enhancement of cooperation and collaboration between the medical team members. Transitional care is an important concept for people involved in healthcare provision systems, specifically nurses. It is a systematic care process that involves the patients, their families, and multidisciplinary members of the healthcare team and aims at improving the consequences associated with patients, their families, caregivers and healthcare systems. In a transitional care, a coordinated, structured and comprehensive care is designed by considering the conditions of the patients and their families, the healthcare system structure, environmental conditions and social support to bridge the gap between hospital and out-of-hospital care. Fig. 2 shows the relationship between the antecedents, attributes, and the consequences of the transitional care concept.

The most significant limitation was the team-based nature of transitional care and the strict focus of the study on the field of nursing discipline, the researcher faced the challenge of selecting appropriate texts.

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Declaration of Competing Interest

No conflict of interest has been declared by the authors.

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