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A Scoping Review of Transitions, Stress, and Adaptation Among Emerging Adults

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Abstract

This scoping review examined research on transitions among emerging adults, 18- to 30-year-olds, to identify designs, populations, frameworks, transition types, and transition outcomes. A librarian conducted the search, yielding 2067 articles. Using predefined criteria, teams screened abstracts and reviewed articles, with 82% to 100% interrater agreement. Data from the final 160 articles were placed in evidence tables and summarized. Most frequently, the studies had exploratory-descriptive designs (69%), nondiagnosed samples (58%), no theoretical frameworks (58%), developmental transitions (34%), and health-related behavior outcomes (34%). This transition research is in an early stage of knowledge development and would benefit from further theory development.

TRANSITIONS ARE AN important nursing phenomenon,¹ and a critical transitional time is the relatively new developmental period of emerging adulthood for those typically from 18 to 25 years of age and even up to 30 years of age.² Transitions from one relatively stable state to another¹ are proposed to be stressful,³ requiring adaptation,¹ with the potential to impact health.³ Adaptation to a transition is indicated by mastery of behaviors associated with roles as well as well-being.¹ However, as emerging adulthood is a relatively new research area, there is a need to examine the growing body of empirical evidence, especially identifying variables of interest that exemplify adaptive behaviors, roles, and well-being for this age group. Scientific interest in emerging adulthood transitions is evident. For example, Arnett⁴ proposed this new developmental stage; the Research Network on Transitions to Adulthood and Public Policy published a landmark book, titled *On the Frontier of Adulthood*⁵; the Society for Study of Emerging Adulthood was founded along with the inception of its journal and biennial conference; and the Institute of Medicine⁶ published *Investing in the Health and Well-being of Young Adults*. Given the relatively newness of this area, there is a need for those in health care practice and research to understand the breadth of research in the area of transitions, stress, and adaptation among emerging adults. Scoping reviews are a means for examining breadth rather than depth of evidence in a research area.⁷ This type of review can provide conceptual clarity,⁸ boundaries of examination,⁷ and directions for future research.^{7,8} Thus, a scoping review was conducted to examine the type and range of research on transitions, stress, and adaptation among emerging adults to identify designs, populations, frameworks, transition types, and transition outcomes.

Statement of Significance

What is known or assumed to be true?

Transitions are critical for emerging adults who are known to experience many changes. Transitions are considered stressful, require adaptation, and have implications for the health and well-being of emerging adults. Emerging adulthood, the developmental period prior to adulthood, is currently receiving considerable research attention. Greater understanding of the range and type of research in the area of transitions, stress, and adaptation among emerging adults would be helpful to nurses working with this age group.

What this article adds?

We found this area of research in the early stage of knowledge development; predominately exploratory-descriptive research designs were used with a lack of theoretical frameworks and appropriate ages reflective of this developmental period. We provide a view of the breadth of research on transitions, stress, and adaptation among emerging adults, illuminating the growing body of science. There were multiple indicators of adaptation to transitions such as involvement in health-compromising behaviors, stressful responses, and health status and symptoms, as well as general and specific ways of adaptation. We found that Meleis' typology of transitions useful in categorizing the many changes experienced by emerging adults. Finally, we found support for using Meleis' transition framework to provide direction for future theoretical and empirical work.

BACKGROUND

This scoping review is guided by classic writings on transitions by Meleis¹ and Bridges⁹ and on emerging adults.^{2,5,6} The transition passage is initiated by an external event,^{3,9} labeled by some as transitional events¹⁰ or experiences.¹¹ The types of transitions in this scoping review were guided by developmental, situational, and health-illness types of transitions identified by Schumacher and Meleis,¹² augmented by emerging adulthood literature. In addition, transitions can be considered to be normative or nonnormative and planned or unexpected.³ Finally, transitions can co-occur,¹² which is especially salient for emerging adults who are known to experience several transitions at the same time.¹³ It is important to identify the range of transition types in research conducted with emerging adults.

Emerging adult developmental transitions

For emerging adults, a major type of transition in this review is developmental,^{12,14} which is considered to be normative.^{14,15} This transition is related to growth as well as development, commonly within the individual but also within relationships.¹² Proposed and described by Arnett,⁴ emerging adulthood is a newly recognized developmental period and is described as the period between being a dependent child and an independent adult.¹⁶ This maturational process is taking a longer amount of time than in the past^{2,17} associated with longer periods of education, living with the family of origin, and delayed childbearing.¹⁸ According to Arnett,² emerging adults are focused on exploring their identity, and achievement of adulthood in contemporary times is viewed as autonomy with interdependence, intimacy in a long-term relationship, and an ending of involvement in risk-taking behaviors.¹⁹

Emerging adult situational transitions

Situational transitions, changes in physical location or relationships,¹ are common during emerging adulthood. This time period is known for many changes such as graduating from high school,^{17,20} enrolling in college and entering the workforce,²¹ moving in and out of parental homes,²² completing their education, beginning their career, establishing independent households, forming intimate relationships, and starting families.^{16,17} These events may be normative/planned or not. For example, graduating from high school has long been considered a rite of passage for those in the United States.²³ However, another may be unplanned such as a family move with

a job transfer. For emerging adults, transitions occur with great variability¹⁹ and milestones are not sequentially ordered as they were in the past.¹⁷ In addition to these, those with chronic conditions or special needs are involved in situational transitions in health care settings as they are expected to move from pediatric to adult health care providers.²⁴

Emerging adult health-illness transitions

Another transition is the health-illness transition,¹² requiring a response to a diagnosis or treatment of a health-related condition.¹ Although this age group is relatively healthy,⁶ some emerging adults are experiencing health-illness transitions. Specific health-illness data for this age group are not available; however, some statistics provide a picture of those diagnosed with select conditions. For example, among 20- to 39-year-olds, approximately 60 000 are diagnosed with cancer each year²⁵; among 20- to 24-year-olds, 7.6% have a current diagnosis of asthma²⁶; among adolescents younger than 20 years (an indication of those who will age into emerging adulthood), 167 000 have type 1 diabetes and greater than 18 000 have type 2 diabetes²⁷; and among 18- to 24-year-olds, 23% are obese, 23% are involved in substance abuse, and 9% have a major depressive episode.²⁸

Emerging adult transition outcome indicators

Transition outcome indicators are guided by general writings on transitions by Meleis,¹ augmented by more specifics in emerging adult literature. The transition process is an internal psychological process⁹ that is disruptive,³ implying an immediate response (a proximal outcome) such as distress, anxiety, and depression, to name a few.³ Transitions require adaptation,¹ implying a more distal outcome. Indicators of adaptation are generally noted to be identity, mastery of role behaviors, and subjective well-being by Meleis,¹ with more specific outcomes suggested in emerging adulthood literature. Much of the literature is focused on outcomes reflective of maladaptation. For example, emerging adults are noted to be involved in behaviors that place their health at risk such as alcohol use, hard drugs, marijuana, and cigarette smoking,⁶ as well as their lack of health-promoting health behaviors such as low levels of exercise and healthy eating.⁶ These health-related behaviors may be associated with leading causes of death, again maladaptive outcome indicators. For example, among 18- to 24-year-olds, 61.2 of 100 000 deaths were due to injuries and 19.0 of 100 000 deaths were due specifically to motor vehicle injuries.²⁸ Indication of poor adaptation could also be dropping out of school, unemployment, homelessness, being on public assistance, and early fertility.²⁹ In addition, the developmental characteristics of emerging adulthood and achievement of criteria for adulthood noted earlier in the discussion of the developmental stage of emerging adulthood could likely be indicators of adaptation outcomes.

The developmental period of emerging adulthood is currently being paid considerable attention. It is important to understand this transitional time, which is assumed to be stressful, requiring adaptation, and potentially impacting current and future health. However, as it is a new area of research, it is not clear how transitions, stress, and adaptation are operationalized, the designs and populations in the studies, and the guiding theoretical frameworks used. Thus, a scoping review was conducted to examine the range and type of research on transitions, stress, and adaptation among emerging adults. In research articles on transitions, stress, and adaptation with emerging adults, we asked what:

- Type of designs were used;
- Populations were studied;
- Theoretical frameworks guided the studies;
- Types of transitions were examined;
- Immediate stress responses to transitions were studied; and
- Outcome indicators of adaptation to the transition process were studied?

METHODS

Because this is a relatively new research area, a scoping review, frequently conducted to map an area of research,³⁰ was conducted. According to Arksey and O'Malley,³⁰ scoping reviews involve the following: identifying the research questions and relevant studies; recording the data; and finally collating, summarizing, and reporting results. A scoping review is often without evaluation of the quality of the research, which may lead to subsequent more focused systematic reviews.³⁰

Literature search and screening

Identification of relevant studies was guided by the search and screen process outlined in the PRISMA statement³¹ and delineated in the Figure. The literature search was conducted by a medical librarian at a university during the spring of 2015 for the past 10 and updated in spring 2016. Search engines were PubMed, CINAHL, Cochrane, EMBASE, Social Services Abstracts, Sociological Abstracts, and PsycINFO. The concepts chosen were guided by the main concepts of transitions, stress, and adaptation and the population of focus, emerging adults in the United States. To guide the search, a librarian, in consultation with the lead authors, developed concept tables of key words, summarized as follows: transitions, adjustment, adaptation, coping, development, life event, transitional events such as leaving home and cohabitation, stress including stressful life events, emerging and young adult, and United States (including any mention of specific location within the United States). The searches yielded a total of 2067 articles. After duplicates (n = 281) were removed, there were 1786 articles.

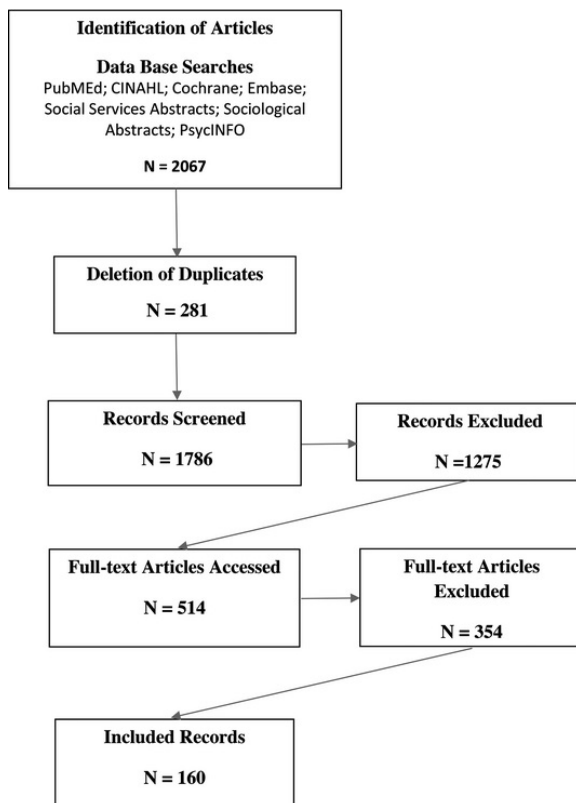


Figure Search, screen, and exclusion/inclusion process.

Eligibility criteria for screening of titles/abstracts and review of complete articles were predefined by the lead authors. The articles included focused on the emerging adult age group (>18 or <30 years of age) as well as transitions, stress, and adaptation; involved the US population; were written in English; published in refereed

journal; and conducted research. We defined emerging adulthood as 18 to 30 years of age because this age group begins around 18 years of age and may extend through the 20s to around 30 years of age.^{2,6} However, if a study was focused upon this age predominately, although they included some participants older than 30 years and some younger than 18 years, the decision was made to include the study. For example, some studies focused upon changes between adolescence to emerging adulthood and some studies focused on retrospective examination of this emerging adulthood when participants were older than 30 years.

We included articles that focused upon transitions, defined as change from one state to another.¹ Because relevant transitions for this age group may be developmental, situational, and/or health-illness changes,³ we included any of these types. In addition, because transitions are proposed to have distress responses and require adaptation, we included articles that focused on stress or distress, whether it was physical, mental, emotional, or psychosocial response to a demand. The stress may be measured as perceived, cumulative number of major life events or biomarkers indicative of stress. We also included articles focused upon adaptation defined as the process of adjustment to a transition/change or a biopsychosocial outcome indicative of a varying degree of adjustment. Because the focus was examining the breadth of empirical evidence, articles excluded were theoretical articles (including concept analysis), opinions, and case studies. As we wanted to know more about evidence in the United States, we excluded articles from non-English and non-US populations. Finally, because we wanted peer-reviewed articles, we also excluded dissertations and articles from predatory publishing sources.

The screening/review process was conducted by teams. Two-person teams first screened title/abstracts and then read complete articles for the same predefined eligibility criteria discussed earlier. Teams discussed disagreements until there was a resolution. Teams kept a record of their decisions at every point of the screening process. Although the screening process was guided by predefining criteria, a discussion of issues and clarification of criteria occurred at regular meetings of the full team. Examples of reasons for deletion were as follows: they were abstracts or posters and not complete articles; they were nonresearch articles such as opinions; they were not peer reviewed, the samples were not human; the sample was not in the United States; they were evaluation of a program or a tool; the age was not for emerging adults but was for children, adolescents, or older adults; and there was no focus on stress or adaptation outcome indicators. The lack of focus on a transition sometimes occurred. Several study samples were recruited from colleges and on the surface appeared to be examining either the emerging adult transition or the situational transition to college. However, college population was sometimes a convenience sample and a focus on a transition was not evident in the study, so these were deleted.

The screening of titles/abstract and the review of complete articles resulted in 160 articles in final sample. After screening title and abstracts, 1275 were excluded; after screening complete articles, 354 were excluded. Initial agreement between the pairs of reviewers ranged from 82% to 97%, whereas interrater agreement for complete article review ranged from 84% to 100%. Evidence tables to answer the research questions were completed for the 160 final data set of articles by team members. Evidence tables provided information on research designs, populations, theoretical frameworks, types of transitions, stress responses, and outcome indicators of adaptation for the studies. The lead authors tabulated the data with a priori categories for research designs, typology of transitions, and typical age group for emerging adulthood or not. However, because other categories such as adaptation outcome indicators were not well defined a priori in the literature, the data guided the categorization for the remaining research questions. The lead authors came to consensus on the categories. A reference list of the final 160 articles may be requested from the first author.

RESULTS

Study designs

The designs for the research articles in the final sample were organized as to whether they were exploratory-descriptive, predictive, or involved manipulation of an independent variable (Table 1). The most frequent design ($n = 112$; 69%) was exploratory-descriptive, either describing what is known about concepts/variables or exploring relationship among them. Within this general category, 81 were quantitative, 21 studies qualitative, and 10 mixed methods. Next, there were 37 (23%) predictive designs, examining how independent variables predicted dependent variables. Finally, there were 13 (8%) studies that manipulated an independent variable, often testing an intervention. Only 4 (2%) studies were experimental randomized controlled designs. There were 51 longitudinal study approaches. Although most of the longitudinal approaches were predictive, some were descriptive, describing how a variable changed over time. As some studies were both descriptive and predictive, the final number of studies in the design categories was 162. Several studies ($N = 30$) were secondary analysis and used existing databases such as the National Longitudinal Study of Adolescent to Adult Health, the National Epidemiologic Survey on Alcohol and Related Conditions, the longitudinal Family and Community Health Study, and the Family Transitions Project study, to name a few.

Table 1. Designs^a

Type of Design	n (%)
Exploratory-descriptive	112 (69)
Quantitative	81
Qualitative	21
Mixed methods	10
Predictive	37 (23)
Manipulation of independent variable	13 (8)
Total	162

^aSome articles had both descriptive and predictive designs, yielding a total that was greater than 160.

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Populations studied

We categorized studies as to whether or not they targeted emerging adults inclusively as well as the type of population such as a health-illness condition (Table 2). The target population was emerging adults, those in the 18- to 30-year-old age group, and the majority ($n = 104$; 65%) of study samples had participants in this designated age group. However, a considerable number of studies ($n = 56$; 35%) also included those younger

than 18 years and/or those older than 30 years in their samples. There were subpopulations within the criterion of emerging adults. Most of the targeted samples were of typical emerging adults without any identified health-illness condition (n = 93; 58%). The next most frequent targeted sample was those who had some type of physical health-illness condition (n = 29; 18%). Diagnoses of chronic condition examples were diabetes, cystic fibrosis, sickle cell anemia, and spina bifida. Other examples were conditions where the focus was on diagnosis, treatment, or survivorship of HIV infection or cancer. Mental health conditions had a considerable number (n = 10; 6%), targeting those with a substance abuse disorder and depressive symptoms, for example. The next most frequent targeted sample was new families (n = 7; 4%), with some being pregnant, some new mothers, and some high-risk fathers. The ones with fewer numbers were targeting those in the military (n = 6; 4%) or foster programs (n = 5; 3%), as well as those related to parental issues (n = 4; 3%), immigration (n = 2; 1%), sexual orientation (n = 2; 1%), and homelessness (n = 2; 1%).

Table 2. Types of Populations

Type of Population	n (%)
Nondiagnosed	93 (58)
Physical illness condition	29 (18)
Mental illness	10 (6)
New mothers and fathers	7 (4)
Military persons	6 (4)
Foster youth	5 (3)
Parental issues	4 (3)
Immigrants	2 (1)
Sexual orientation	2 (1)
Homeless	2 (1)
Total	160

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Theoretical frameworks for studies

It is important to note that there was a lack of theoretical frameworks or a wide variety of theories/frameworks to guide the conceptualization of the studies. Most frequently (n = 93; 58%), there was no stated theory or framework in the articles. Then articles most often noted stress/coping/adaptation (n = 31; 19%) and transition (n = 20; 13%) theories/frameworks. Some articles cited general theories/frameworks and others cited specific ones (Table 3). A few studies used more physiological theories such as biological pathways and allostatic load.

Most of the articles that had a transition theory or framework were guided by emerging adulthood or life span/life course framework.

Table 3. Theoretical Frameworks

Framework	n (%)	Examples
None stated	93 (58)	
Stress, coping, adaptation, and/or mastery	31 (19)	Allostatic load Biological pathways Lazarus and Folkman Minority stress theory Nicotine stress exposure Mastery Polyvagal self-regulation Posttraumatic growth Racial identity
Transitions	20 (13)	Emerging adulthood Life span or life course
Other	16 (10)	Attachment and/or separation/individuation Family systems theory Role theory Self-determination theory Social cognitive theory
Total	160	

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Types of transitions in studies

The transition typology was guided by categories identified by Schumacher and Meleis.¹² Each study was reviewed and categorized into one type from the typology: growth and developmental (n = 55; 34%), situational (n = 46; 29%), health-illness (n = 19; 12%), and co-occurring transitions (n = 40; 25%) (Table 4). Within the growth and developmental type, there were 2 subtypes: family roles (n = 8; 5%) and normative or nonnormative life events (n= 9; 6%). Examples of growth and developmental transitions include forming of intimate relationships, assuming more responsibility within the family, or for oneself, and becoming a father or mother. The most common situational transition within these reviewed studies was going to college as a context for alcohol and drug use, spirituality, and physical activity. Health-illness transition examples included coping and

managing new diagnoses and treatment such as HIV infection, cancer, and depression. Co-occurring transition type relates to 2 or more types that were happening at the same time or within a short proximity of time. Examples of co-occurring transitions might be going to college and managing a new diagnosis (situational + health-illness), experimenting with sexuality, and first-time cohabitation (growth and developmental + situational).

Table 4. Types of Transitions

Transition Type	n (%)
Developmental	55 (34)
Growth and development	38
Normative/nonnormative	9
Family roles	8
Situational	46 (29)
Health-illness	19 (12)
Co-occurring	40 (25)
Total	160

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Stress responses to transition

One of the research questions in the scoping review was, “What types of immediate stress responses were studied?” Stress could be an immediate response or proximal variable in the transition process. Results for this question were compiled and analyzed as all other scoping review questions. The results indicated that there were either not distinctive immediate stress responses documented in the majority of studies or the immediate stress response was not conceptualized separately from more distal adaptive outcomes to the transition process. Thus, one result of the scoping review was that the question on what types of immediate stress responses were studied could not be adequately answered. Stress, whether immediate proximal or adaptive distal outcome, was synthesized together and presented in the next section, “Health-related outcome indicators of adaptation to transitions.”

Health-related outcome indicators of adaptation to transitions

Outcome indicators of transitions were categorized in this review as health-related beliefs and behaviors, adaptation, emotional and psychological functioning, growth and development, physical health and functioning, and perceived quality of life (QOL) (Table 5). The most frequent category for indicators of transition outcomes was health-related beliefs and behaviors (n = 84; 34%) that included behaviors that could promote or compromise health. Some were health-related behaviors such as alcohol use or abuse (binge or problem drinking), marijuana use, substance use or abuse, cigarette smoking, risky sexual behaviors, eating behaviors,

and sleep behaviors. Others were health-related behaviors such as management of a chronic condition in relation to medication, whereas others were use of health services (clinic visits or hospitalizations). Some of the health-compromising behaviors were not directly health-related; however, they could increase one's health risk. Examples of this were involvement in antisocial behaviors such as school delinquency, carrying or using a weapon, robbery, and gang fighting. Other health-compromising behavior examples were associated with intimate partner violence, suicide ideation, and self-harm. Only one study discussed an outcome of transition in terms of a health-promoting lifestyle.

Table 5. Health Outcome Indicators of Adaptation to Transition^a

General Categories	n (%)	Examples
Health-related beliefs and behaviors	84 (34)	Alcohol use/abuse Antisocial behavior Cigarette smoking Condition-specific management Eating Health beliefs Healthy lifestyle Marijuana use Risky sexual behavior Self-harm or victimization Sleep Substance use/abuse Use of health services
Adaptation	54 (21)	Acceptance, adjustment, and/or coping Changing routines Stress management Reintegration Resilience Self-actualization Disclosure Relationships Social participation
Emotion and psychological functioning	43 (17)	Anxiety/depression Distress/stress Poor mental health Mental disorder Negative life events
Growth and development:	33 (13)	Adult roles Identity Independence Maturity Milestones Pubertal maturation
Physical health or functioning	19 (7.5)	Health status and symptoms Physiological indicators
Perceived quality of life	19 (7.5)	Loneliness Marital quality Quality of life or well-being Satisfaction with health care, life, or work Self-esteem or self-worth
Total	252	

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Adaptation (n = 54; 21%) was the next most frequent category and was either by the individual or within relationships. Examples of general individual adaptation were related to illnesses, bereavement, academics, and psychological acceptance, adjustment, and/or coping. Sometimes, there were specific examples of adaptation such as changing routines, reintegration, resilience, self-actualization, and stress management. Examples of adaptation within relationships were in association with health care professionals, parents, and parent-infants, as well as disclosure to others and social participation. The next most frequent was emotional and psychological functioning (n = 43; 17%), with outcome variables such as stress, distress, depression, and/or anxiety. Growth and development outcome indicators were reported in 33 (13%) studies. An example of a growth-related indicator was pubertal maturation, whereas examples of developmental indicators were self-identity, achievement of adult or parental roles, and achievement or milestones related to education, employment, leaving home, marriage/cohabitation, and parenthood. Physical health and functioning were measured as outcomes in 19 (7.5%) studies. Some reflected health status and symptoms with measures of physical functioning, general health, blood pressure, pulmonary function, health problems, respiratory symptoms, sexually transmitted diseases, and body mass index. Others reflected physiological indicators with measures of cytokines, lipid, glucose, and hemoglobin A1c values, and electrocardiographic results. Perceived QOL was an outcome for 19 studies (7.5%). Examples of QOL were satisfaction with health care, well-being, self-esteem, or self-worth, as well as general and condition-specific QOL.

DISCUSSION

The results of this scoping review suggest that this area of research is in the early stage of knowledge development. First, most of the studies used exploratory-descriptive designs, which are commonly conducted when little is known about a phenomenon and the relationship among variables. Given that transitions reflect a process of adaptation to events and experiences, one could expect the predominate design to be longitudinal, examining change over time. However, this was not the case. The lack of longitudinal designs may also reflect an

early stage of knowledge development, as salient concepts and relations among them need to first be identified in exploratory-descriptive designs. As this area is in the early stages of knowledge development, it would be expected that only a few studies had intervention designs.

Another indication of an early stage of knowledge development is the lack of or wide variety of theories and theoretical frameworks used to guide the studies. Interestingly, given that one of the main concepts in the search was transitions, there were only a small number of transition frameworks that were identified. Some identified Arnett's² emerging adulthood, which focuses upon developmental and situational transitions, and others identified life course writings, proposing that changes occur in individuals and families over the life course.³² Given that transitions require adaptation, it is not surprising that a major categorization for theories or frameworks was adaptation.

The lack of frameworks could also be associated with disciplines that published the studies. Some disciplines such as nursing commonly identify concepts and propositions, when appropriate, that guide the research, whereas other disciplines may not. The lack of theories and frameworks and the wide variety of frameworks are a detriment to providing a coherent theory, whereby there is a shared understanding of transition. Furthermore, this lack of conceptual clarity does not lay the groundwork for developing the science of transition or applicable intervention research. The lack of transition research using consistent core theoretical concepts and their relationships also confuses the impact of stress in the process. Further research on stress as an immediate response is advocated. Clarity of the immediate stress response as a mediator between the transitional event and adaptive outcome or as a moderator in that relationship would be beneficial in moving the research area forward.

Another indication of the early stage of knowledge development is the age ranges of the samples. Some studies had sample participants within the 18- to 30-year-old group that is identified to be emerging adults.^{2,6} Although those younger than 18 years and older than 30 years are not commonly considered to be emerging adults, some studies' samples included those younger than 18 years and older than 30 years. It is acknowledged that 18 to 30 years of age is arbitrary and there can be individual differences in relation to when persons attain characteristics of this developmental period. In addition, it is acknowledged that there could have been reasons for sample age ranges younger than 18 years or older than 30 years; there may have been difficulty obtaining a sufficient sample for unique populations, with some chronic illness known to present in small populations. However, if this were an integrative review, the inconsistent age ranges could result in inaccurate findings for emerging adults within a study or demonstrate conflicting findings across studies for those with different age ranges.

The breadth of transition research in just one developmental age group lends support for the Schumacher and Meleis¹² typology. The typology provided a context for categorizing the many studies. This scoping review also provided insight into the complexity of the emerging adult population in that there were many co-occurring transitions identified by the researchers. This is consistent with Arnett's² emerging adulthood framework, which notes this developmental period as a time of instability. Thus, this age period is congruent with a developmental transition as noted by Schumacher and Meleis¹² as having many situation transitions such as enrolling in college.²¹ The number of health-illness transitions was small and was expected since most emerging adults are without diagnosed illnesses.

Multiple adaptation outcome indicators were identified, which were consistent with what is known about emerging adult population and consistent with outcome indicators identified by Meleis.¹ Many of the outcome indicators were health-related behaviors varying from alcohol use to abuse. Consistent with this, it is known that there are types of alcohol involvement by youth. For example, among youth in the general population, various types of individuals have long been described in terms of alcohol use such as "abstainers," "light drinkers," and "very heavy drinkers."³³ Substance use was another health-related behavior that may be associated with

development, specifically experimentation as part of identity maturation, according to Arnett.³⁴ Identity was also noted in the transition outcome category of growth and development. This is consistent with identity being a major area of development for emerging adults² and as an outcome indicator identified by Meleis.¹ Finally, a major transition outcome category was adaptation, in general, which is not surprising, as it is required following change.¹

Among emerging adults, stress is an integral concept to transitions. In our review, stress responses were not clearly delineated as an immediate response or an outcome in many of the reviewed studies. However, stress response was related to several of the transition outcome indicator categories. First, the transition outcome indicators of the emotional and psychological functioning outcomes of distress, stress, anxiety, depression are stress responses, noted to follow stressors.³⁵ Second, the category of health-related behaviors may be associated with stress; behaviors such as substance use, smoking, eating, and sleep behaviors have been noted to be consequences of stress.³⁵ Indeed, this age group is known for involvement in behaviors such as smoking cigarettes, problem drinking, and using drugs that have potential long-term health and well-being consequences for these youths.³³ Third, another consequence of stress is the physical and physiological adaptation indicators related to physical health such as blood pressure and cytokine levels; this is consistent with writings by Schneiderman and colleagues,³⁵ noting that stress hormones, cardiovascular disease, respiratory diseases, and exacerbation of chronic illnesses, for example, are health-related responses to stressors. We advocate further research to identify common proximal stress responses and their effects on adaptation. Such findings will contribute to furthering the development of a transition framework to guide research on transition, stress, and adaptation.

This scoping review's limitations need to be considered. First, some studies may not have been captured, although there was a concept map to capture research studies on transitions, stress, and adaptation among emerging adults in the United States. It is possible that terms used by authors in their publications may have not led to inclusion in the search database. Another possibility is that some researchers may have assumed transitional stress when one graduated from high school or moved out of parental homes, for example, but did not explicitly measure stress. Subjectivity in interpretation of screening criteria may have occurred. However, the lead authors developed screening criteria with definitions of concepts and delineation of inclusion/exclusion criteria; the screening occurred in pairs with an interrater agreement calculated; and the full team met to discuss issues and clarify inclusion/exclusion criteria. In addition, there was some subjectivity in categorizing findings. To address this, the lead authors used the writings of Schumacher and Meleis¹² to guide categorization of transition types. For other categorizations such as transition outcome indicators, the lead authors developed categories and discussed until consensus was reached. It needs to be acknowledged that the lead authors' previous work on transition frameworks and research^{10,11} could have been influential in these categorizations.

The results of this scoping review provide guidance for future conceptual work and research. Theory-guided research would provide a more coherent understanding of emerging adulthood transition, and Meleis¹ transition framework provides a valid guide. Concept analysis on transition-related stress and transition-related adaptation would add clarity in development of concepts for the emerging adulthood transition frameworks. The findings suggest areas for more in-depth integrative reviews to guide future research. For example, an integrative review could provide insight into emerging adults who have a chronic illness such as diabetes or into health-illness transitions such as surviving cancer. We also suggest that more longitudinal designs be conducted to rigorously study the transition process. Such longitudinal designs would allow for discriminating immediate responses from adaptation outcomes.

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