

Adolescents' Concerns as They Transition Through High School

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As adolescents enter and exit high school, they face numerous changes that reflect the process of transitioning from childhood to adulthood. Concerns written by 216 adolescents who were part of a larger longitudinal study were analyzed for manifest content. Twenty-one categories of concerns were identified. The categories endorsed most frequently were education, relationships, expectations, and the future. Three of these differed significantly between the participant's first and fourth years in high school. These concerns reflect both developmental and situational transitions congruent with transition theory and have implications for nursing practice, research, and further theory development. **Key words:** *adolescent, concerns, development, high school, stress, transition*

Adolescence is a period in the lifespan marked by multiple transitions. Not only is this the period in which biological changes transform a child into a mature adult, it is also a period of transition in cognitive skills, emotional development, social roles, and personal identity.¹ These multiple transitions are inherently stressful, challenging the individual's ability to solve problems and cope.² Adaptive coping during transition means learning to manage rather than master life stressors.³ But what are the specific concerns that adoles-

cents face during this period of multiple transitions? How do their concerns differ as the adolescents enter and exit high school? And how do adolescents' concerns reflect their transitions?

We have an extensive nursing and public health literature that addresses the timing and appropriateness of the transition of adolescents from pediatric to adult health care services, particularly in situations such as diabetes,^{4,5} cystic fibrosis,⁶ and other chronic illnesses.^{7,8} Other extant literature addresses policy issues related to such transitions.⁹ We also have limited literature about the adolescent's transition to foster care,¹⁰ but we know very little about adolescents' self-reported concerns as they transition through public high school. Such information is needed to inform school-based nursing interventions to promote optimal health in the majority of American adolescents. In one of the few studies where researchers asked adolescents directly to list all the topics about which they worried, findings did not include an analysis of the content of these lists. Rather, topics were rated by seriousness and correlated with sleep deprivation.¹¹

The purpose of this mixed method analysis is to describe the concerns of adolescents at 2 critical transitions: entering and exiting high school. We posed 4 research questions:

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1. What are the self-reported concerns of adolescents at each grade level of high school?
2. How do adolescents' concerns differ between their first (entrance) and last (exit) years of high school?
3. How do adolescents' concerns reflect types and patterns of transitions described by the middle-range theory of Meleis and colleagues¹² as adolescents *enter* high school (year 1)?
4. How do adolescents' concerns reflect types and patterns of transitions described by the middle-range theory of Meleis and colleagues¹² as adolescents *exit* high school (year 4)?

BACKGROUND

Adolescence is generally conceptualized as 3 somewhat arbitrary phases corresponding to chronological age. Early adolescence refers to individuals aged 10 to 13 years, who are in grades 5 to 8. Middle adolescence refers to those aged 14 to 17 years, who are generally in grades 9 to 11; late adolescence refers to individuals aged 17 to 21 years and who are generally in their final year of high school, grade 12, and the first few years of college or post-secondary school employment.¹³ The adolescent faces change in biological, cognitive, and psychosocial development in each of these 3 phases. The number and complexity of changes or transitions characteristic of adolescence constitute concerns or worries with which adolescents must cope before the transition processes are complete.

Biological development

Adolescence is characterized biologically by accelerated growth prompted by several hormonal changes that result in sexual maturation, adult height, and adult body proportions.¹⁴ Sexual maturation begins with puberty in early adolescence and ends in late adolescence, rendering the emerging adult capable of sexual reproduction. Adult height

and body proportions are the result of accelerated growth in muscle and bones, an increase in body fat among females and a decrease among males, and pelvic remodeling in females that facilitates subsequent childbirth.¹⁴

Puberty lasts approximately 4 years, with a range of 1.5 to 8 years.¹⁴ Among females, breast development, known as *thelarche*, typically starts at age 10 and occurs earlier for African Americans. *Menarche*, the onset of menstruation, occurs approximately 2 years following the onset of *thelarche*. Among males, the first physical indicator of puberty is an increase in testicular volume accompanied by the presence of pubic hair. Whereas females experience a growth spurt in height during early adolescence, males experience this rapid growth in height during middle adolescence, indicating an approximate 2-year lag in this aspect of physical development.¹⁴ This biological development represents a major transition in the lifespan as the growing child's body reaches adult proportions and puberty renders the child sexually mature. This spectacular transition in body form and function is a major source of stress for some adolescents.^{15,16}

Adolescent physicians have noted that biological development may lead adolescents to express concerns about such topics as body image and acne.¹⁷ Early pubertal development, for example, has been implicated in increased anxiety among early maturing females.¹⁸ Some adolescents, particularly females, have concerns about their physical development that affect their perceptions of attractiveness and their dating behavior.¹⁹ Researchers have reported that approximately 10% of adolescent females experience body image concerns that may lead to serious psychosocial problems including anorexia and suicidal behavior.²⁰ In a study of more than 4000 adolescents attending public schools, Neumark-Sztainer and colleagues²¹ found strong associations between expressed concerns about body image and unhealthy weight control behaviors such as excessive dieting and use of laxatives among both males and females.

Cognitive development

Although the human brain changes little in size from childhood to adolescence, there is a marked change in cognitive control and task performance during this developmental transition.²² Although gray matter of the brain peaks at about age 14 and undergoes selective pruning throughout adolescence, white matter continues to grow and develop pathways throughout this period.²³ Cognitive development continues through the mid-20s, particularly as the frontal lobe develops. This lobe is the center of executive function, reasoning, planning, and impulse control, all of which contribute to an adolescent's increasing ability to make rational decisions.^{24,25} In addition to developing increasing competence in cognitive skills throughout the 3 phases of adolescence, young adolescents face special challenges as they begin the elaborate process of developing competence in new and demanding social situations.²⁶

Psychosocial development

Healthy human development occurs within a social context of interaction.²⁷ As the infant differentiates from the mother, he or she begins to develop a sense of self or identity critical to further development during adolescence. In early adolescence, the rapid physical changes that mark the onset of puberty are associated with several psychosocial changes as well. This period is one of transition from dependence on parents to increasing independence. This shift in dependence/independence is reflected in a concurrent transition to dependence on peers and is accompanied by emotional lability.¹³ Peers begin to influence the adolescent's preferences and personal identity in a variety of ways, as in his or her selection of music genres.²⁸

In middle adolescence, the struggle for independence from parents becomes more pronounced as the young person becomes more intensely involved with peers. The importance of peers is hallmarked by confor-

mity in terms of dress, music, and preferred forms of entertainment.¹³ From early to middle adolescence, emotional experience becomes more differentiated, as the adolescent becomes aware of conflicting feelings and individual emotional cycles.²⁹

In late adolescence, the final struggle for independence and identity development becomes complete, or nearly so. Whereas the early and middle adolescent may have been preoccupied with physical characteristics and body image, by late adolescence most adolescents have transitioned through pubertal development and are less concerned about their bodies. Their own moral and sexual values and interests begin to replace those of their peers, and most have developed a sense of perspective that allows them to delay gratification and set limits on their own behavior.¹³ Earlier relationships centered on parents are gradually replaced by romantic relationships with peers, often reflecting the type and quality of parent-child relationships.³⁰

Although identity formation is a "dynamic and life-long process," it is highly visible during adolescence as the individual copes with changing social relationships and makes important decisions about the future.³¹ Identity development is apparent from the early adolescent's daydreaming, need for more privacy, lack of impulse control, and testing of authority.¹³ The middle adolescent is no stranger to intense feelings and can experience a sense of omnipotence and immortality that may be associated with increases in health-risk behaviors such as driving and drinking. Late adolescents' own moral and sexual values and interests begin to replace those of their peers^{13,31} as their sense of self and personal identity become affirmed. In a study of identity formation in late adolescence, Beyers and Goossens³² found that parents continue to be a salient source of socialization for adolescents throughout late adolescence.

Identity development is a concern for many adolescents, particularly those who are gay, lesbian, bisexual, transgendered, or questioning. Bullying and victimization are not

uncommon and lead some of these adolescents to express concerns about safety at school and about feeling suicidal.³³ According to adolescent health experts, this period of psychosocial development may be accompanied by concerns about conflicts with parents, peer relationships, academic pressures, expectations of parents, and making plans for future education and career.¹⁷

As adolescents develop biologically, cognitively, and psychosocially, they must learn to cope with life events and situations that are often stressful. Lazarus³⁴ expanded the conceptualization of stress and coping to include emotion. He noted that stressors are unique and can represent various threats, challenges, demands, and opportunities for those who experience them. Lazarus further suggested that narrative analysis should replace more traditional quantitative approaches to the study of stress, coping, and adaptation.

In summary, adolescents, in the second decade of life, experience salient changes in the biological, cognitive, and psychosocial domains. The outcome of responding to such changes is a noticeable set of transitions from the body, mind, social interactions, and psyche of childhood to those of approaching adulthood. Although we know a great deal about these transitions, we know little about the concerns or worries that accompany them. We have clinical literature about adolescents who experience extreme responses to physical changes, such as eating disorders, and about those who experience enormous stress related to sexual identity, but we know much less about nonclinical samples of adolescents and the concerns they express in daily living.

Conceptual framework

Meleis and colleagues¹² have identified adolescence as a distinct, developmental lifespan transition. Major components of this complex framework include types and patterns of transitions.¹² The types of transitions that apply to adolescents in particular are developmental (ie, biopsychosocial growth and

change) and situational (eg, changes in place of residence, schools, relationships). The patterns of transitions that apply to adolescents can be single (eg, changing schools), multiple (eg, changing schools plus pubertal development), sequential (eg, onset of puberty plus sexual maturation followed by pregnancy), and simultaneous (eg, moving to new residence, changing schools, and onset of puberty). These constructs from the middle-range theory of transition guide the present study. Other components of the transition model presented by Meleis and colleagues,¹² such as properties, conditions, and patterns of responses, are also relevant to the study of adolescent transitions; however, they are beyond the scope of this analysis.

METHOD

The analysis reported here is one part of a larger parallel, mixed method longitudinal study of the trajectory of health behaviors in middle adolescence. This design included the 2-stage analysis (qualitative followed by quantitative) of written text reported here.³⁵ The mixed method design was ideal for understanding developmental change from the unique perspective of the adolescents.

Participants were first recruited for the study when they were in grades 4 to 6 in 3 public independent school districts in central Texas. The study was reviewed and approved by a full institutional review board. In each year of the study parents provided written consent, and their children provided written assent. The participants completed surveys annually until they graduated from high school. Only high school data are included in this report. From a total of 1934 initially recruited for the larger study, the sample for the present analysis consisted of 216 adolescents who provided written comments each of the 4 years they attended high school. This sample comprised 142 females and 72 males (2 had missing gender data), 45% were Hispanic (15 had missing ethnicity data).

Every year when the participants were in high school, we collected data using a number of valid instruments to measure theoretical variables as part of the larger study of health behaviors. For the present report, we analyzed the participants' text data written into the FLACS (Frydenberg and Lewis Adolescent Coping Scale), originally developed in Australia for children between the ages of 12 and 18 years.^{36,37} The instructions for completing the FLACS contained a space for the participants to respond to the following prompt: "Students have a number of concerns or worries about things such as school, work, family, friends, the world, and the like. Which is the main concern for you in terms of your life? Please describe your main concern, very briefly, in the space below. My main concern is _____."³⁶ The adolescent participants' responses for each of the 4 years of high school constituted the units of analysis.

Data analysis

All responses were analyzed using content analysis techniques described by Graneheim and Lundman.³⁸ The first step was for all 4 authors to read the complete transcript of each participant's responses several times. Two authors independently coded these responses using open coding, retaining the respondents' own words. All 4 authors then met to establish a codebook and all responses were coded as a group for year 1 data and by 3 authors for year 4 data. The 2 middle years were coded independently by at least 3 of the 4 authors. The entire group discussed all coding until consensus was reached. After initial coding, the 4 authors met to establish more abstract categories. Codes were placed in categories and counted to conclude the manifest content analysis to answer the first and second research questions.

Following the coding and categorizing, the categories were examined vis-à-vis the 2 major constructs of the transition model described earlier in the Conceptual Framework section: types and patterns of transition. Categories

were placed in the subtypes of developmental and situational types of transition, and the patterns of single, multiple, sequential, simultaneous, related, and unrelated patterns of transition. Categories were not treated as mutually exclusive and could be placed in both types (ie, developmental and situational) and in more than one pattern (eg, both multiple and sequential).

Next, the categories were quantitized on the basis of frequency. Quantitizing is the conversion of qualitative narrative data into numerical data amenable to statistical analysis.³⁵ We assigned a frequency number to each narrative comment, then summed the frequency of comments in each category. The top 4 categories were then statistically analyzed for change in frequency across developmental time period. McNemar χ^2 statistics were calculated to determine statistical significance of change. We used SPSS 19.0, SPSS, International Business Machines Corp., Armonk, New York, which does not provide a value for the McNemar χ^2 statistic; it provides only a *P* value, which we set a priori at .05.

Finally, the qualitative content analysis and the quantitative χ^2 analysis of change over time were integrated for interpretation. This was the final stage of the mixed method analysis, where findings from each of the stages were considered to make final interpretations. In this stage, the degree of change was considered in light of the narrative content to make final interpretations.

FINDINGS

To answer the first research question, we identified 21 categories that reflected the adolescent participants' main concerns as they progressed through high school. These categories, codes, and exemplars for each year of high school are presented in Table 1. Some participants provided multiple concerns, and some concerns fit more than one category. For example, in the first year, one participant wrote, "Doing good in school and not getting involved with the wrong people" (coded as *school* and categorized as *education*; coded

Table 1. Categories, Codes, and Verbatim Exemplars of Adolescents' Concerns During High School Transitions

Category	Codes	Verbatim Exemplars ^a
Education	Grades	Making good grades (F1); School and keeping my grades up (F2)
	Passing tests	My main concern is passing all the exit exams this year (F3)
	Finishing high school	Graduating when I'm supposed to (M2)
	Making top 10%	If I will make the top 10% in school (F3)
	Choosing a college	Going to my ideal college (M3)
	Getting accepted at college	Will I get into a good college? (M3)
	Going to college	Getting into college and college itself (F4) Where will I go to college and what for? (M4)
Relationships	Parents	My parents don't like my interests (F1) Ill feelings toward my father (M1); My mother (real mom) embarrasses me (M1) The tension between parents over custody of me (F2)
	Parents	One . . . parent needs a job. My other parent changed jobs that do not pay well (M3) The relationship between my parents and my boyfriend (F4)
	Siblings	Helping my sister in school (M1) That my sisters and I may not be able to attend good colleges (F2)
	Siblings	My little brother smoking and doing drugs (F3);
	Friends	Friend issues (F1) Friends becoming more distant, starting to do more things without me . . . (F2)
Relationships	Girlfriend	Is my boyfriend my true love? Are we meant to be? (F3) Not having a best friend (F4); Welfare of a friend (M4) Not to lose my girlfriend (M1); Lack of a girlfriend (M2) That I would lose my girlfriend (M3); My future girlfriend (M4)
	Boyfriend	Problems with my boyfriend (F1); Will I marry my boyfriend? (F2) That my boyfriend in college will find someone else (F3)
Expectations	Parents	Living up to what my dad wants (F1); My parents are too strict (F2) Difficulty pleasing my parents (F4)
	Others	That I will fail at something and let people down (F2) Letting people down (F3)
	One's own	Making good grades is very important to me. This is not because my parents put pressure on me, it is because I have high standards (F1) I won't be as independent as I should (F4)
	Ambiguous Future	That I'm not good enough (F1) Tomorrow is never promised (F1); My main concern is my future (F2)

(continues)

Table 1. (Continued)

Category	Codes	Verbatim Exemplars ^a
Emotions	Scared/terrified	What to do after high school (M3); My future girlfriend (M4) That my life is too stressful (M1) College! Scared of: not being able to get in, having to deal w/everyday stuff like bills . . . scared of not finishing my homework on time (M2) Humanity is now lacking the human part and I'm terrified of what kind of world my world my children will grow up in (F3)
Life	Life	Scared that I'm a failure (M4) To be successful and live a good life (F1); Am I going anywhere in life? (F2)
Identity	Self-identity	Having a great life. (M3); Having a happy life (F4) My identity (F1); My self (M1); What is purpose in life? (F2) Working until I am happy with myself, ie, weight, clothes, face, hair, job, attitude, grades (F3) Being gay in today's society (F4)
Extracurricular Activities	Football Soccer	Football training (M1); Football (M3) Not letting down my soccer team (M1); Playing high school soccer (M3)
Extracurricular Activities	Soccer	Being a good soccer player to get a scholarship [sic] for college (F4)
Activities	Sports	That I won't succeed in sports (M 2); Not doing well in rodeos (F3)
	Volleyball	Volleyball season/coach/stress (F3)
	Dance	Liking dance again (F3)
Health/Safety	Self	To have a good and healthy pregnancy and baby! (F1); My continuous injuries (M1) Not getting enough sleep (F2) I've been diagnosed with clinical depression and my medication helps me feel better . . . (F3)
	Others	My mom's sickness (F1); My mom's health (M1) My little brother smoking and doing drugs (F3)
Finances	Money	Not being able to go to college for money reasons (F1) How do I make enough money without working hard? (M2) Work/money (How can I get it?) (M3)
	Debts	Money, expenses, college, and debts (F1)
	Money for gas	Cost of gasoline (M1) Money for a car, gas, and insurance (F3)
Finances	How to pay bills	How to take care of my son and bills (F2) Where to go and how to pay for college (F4)
	Money for family	How am I going to support my kid? (F4)
	Paying for college	Scholarship/money for college (F3) How I'm going to graduate from school and pay for college (M3)
No Concerns	No concerns	None right now (smiley face) (F1) I don't have any (concerns) (M3); I do not have a concern (F4)

(continues)

Table 1. (Continued)

Category	Codes	Verbatim Exemplars ^a
Physical attributes	Body/ appearance	My body (mostly my weight) (F1); My body image (F2)
		People not accepting me because of the way I look (F3)
		My appearance (M4)
	Weight	My weight (F3)
Global/world		The world: I worry about the war and the economy and what it will be like in the future (M1)
		Is global warming a real happening? (F2); . . . the earth changing (M3)
		The world (F4)
Work	Job	Getting a job (M1); . . . I am having trouble finding a part-time job (M2)
		Getting a job in the evening to help family (F3)
		To get a job and help my family (F4)
Death	Self	What is going to happen when I die. What is it like to be dead? (F1)
		What if I go through with suicide how would my family and friends react to my death? (F1)
	Others	Family members passing away (M1)
		That I don't know what I would do if one of my family members died (F1)
		That I will lose my mother (M2)
		. . . that someone that I love a lot will end up dying [sic] (F3)
		Losing my dad (M4)
Career	Career	Good paying future career (M1)
		My career (M2)
		Not finding a career (F3)
		Choosing the right career path (M4); Becoming a fireman (M4)
Career	Military	Joining the national guard and being deployed (F3)
		Will I go to college or join the military? (M3)
Religion/spirituality	Spiritual	My schoolwork and spiritual life (F1); Celestial exaltation (M3)
	Religion/God	My religion (M1); That I won't stay close to God (F2); My religion (M2)
		To make good grades, graduate . . . while staying focused on God (F4)
Parenting	Pregnancy	Get a girl pregnant before time (M1)
		To have a good and healthy pregnancy and baby! (F1); About my being pregnant (F2)
	Baby	I have a baby on the way and I am worried if I will be a good father and be able to take care of my baby (M2). How my life will be after I have my baby (F3); My baby and school (F4)

(continues)

Table 1. (Continued)

Category	Codes	Verbatim Exemplars ^a
Sex/sexuality	Sex/sexual	Sexual conduct (F1); To have sex or not (F3) After I graduate high school, what am I going to do: "Sexual intercourse?" (F4)
	Being gay	My mom accepting me for being gay (F2); Being gay in today's society (F4)
Unspecified		Everything (M1); I do not have one main concern (F2)
Freedom	Freedom	If I'll ever get freedom/get to live my own life (F1) ... freedom to make my own decisions and learn from my mistakes (F2)
		Freedom (F3); Moving out (M4)

^aF, female; M, male; 1, 2, 3, and 4, years 1, 2, 3, and 4.

as *people* and categorized as *relationships*). The response, "not letting down my soccer team," was categorized as *expectations* and *extracurricular activities*.

To answer the second research question about differences in concerns between entering and exiting high school, we tallied the frequency of coded responses for each category and computed percentages. These findings are presented in Table 2. All but 2 categories were present in each of the 4 years of high school. In the second year, there were no data coded or categorized as *no concerns*, and in the fourth year, there were no data coded or categorized as *unspecified*. In year 1, fewer participants identified their main concerns as *education*, *future*, *career*, *work*, *parenting*, and *freedom*. In contrast, more participants identified their main concerns as *relationships*, *expectations*, *emotions*, *life*, *identity*, *extracurricular activities*, *health/safety*, *no concerns*, *physical attributes*, *world*, *death*, *unspecified*. The number of responses in categories of *sex/sexuality* and *religion/spirituality* remained the same in year 4 as in year 1.

We calculated McNemar χ^2 to determine statistical significance of change in only the top 4 categories (*education*, *relationships*, *expectations*, and *future*). The remaining categories had much smaller frequencies, so this statistic could not be used. Three of the 4 categories were significantly different for year 1

versus year 4: *education* ($P = .013$), indicating more concern in year 4 than in year 1; *relationships* ($P < .001$), indicating less concern in year 4 than in year 1; and *future* ($P = .004$), indicating more concern in year 4 than in year 1. There was no statistically significant difference for *expectations* ($P = .427$).

Closer examination revealed that concerns about college, which was categorized as *education*, changed dramatically from year 1 to year 4; in year 1, only 16 participants mentioned college as a main concern, whereas 75 participants mentioned college in year 4. The quality of response was quite different as well. For example, in year 1, 2 males simply wrote "College," and a female wrote "Going to college." In year 4, responses were more detailed. For example, one female wrote, "What do I need to do to get into college?" and another female wrote, "If I will get into a good college and receive scholarships to help pay for my education." There was a shift in the focus about *parenting* from year 1 to year 4. In year 1, one female's main concern was, "To have a good and healthy pregnancy and baby!" whereas in year 4, one female's main concern was, "How am I going to support my kid?" and one male's main concern was, "I have a baby now and need to start to work." Parenting concerns related to having a child and associated responsibilities emerged in years 3 and 4. The adolescents were concerned with pragmatic issues such as

Table 2. Categories of Adolescents Concerns as They Progress Through High School

Category	Frequency (%)			
	Year 1	Year 2	Year 3	Year 4
Education	89 (41.2)	110(50.7)	89 (41.0)	112(51.9)
Relationships	70 (32.4)	57 (26.3)	42(19.4)	28(13)
Expectations	39(18.1)	45 (20.7)	11 (5.1)	32(14.8)
Future	30(13.9)	33 (15.2)	33 (15.2)	55 (25.5)
Emotions	20 (9.3)	17(7.8)	06 (2.8)	16(7.4)
Life	11(5.1)	03 (1.4)	13 (6.0)	09 (4.1)
Identity	10(4.6)	09 (4.1)	05 (2.3)	08 (3.7)
Extracurricular activities	09 (4.1)	07 (3.2)	08 (3.7)	04(1.8)
Health/safety	09 (4.1)	02 (.92)	01 (.46)	03 (1.4)
Finances	08 (3.7)	11(5.1)	21 (9.7)	18(8.3)
No concerns	07 (3.2)	01 (.46)	05 (2.3)	01 (.46)
Physical attributes	06 (2.8)	07 (3.2)	06 (2.8)	04(1.8)
World	06 (2.8)	05 (2.3)	05 (2.3)	04(1.8)
Work	05 (2.3)	05 (2.3)	09 (4.1)	09 (4.1)
Death	05 (2.3)	03 (1.4)	01 (.46)	03 (1.4)
Career	04(1.8)	08 (3.7)	06 (2.8)	11(5.1)
Religion/spirituality	03 (1.4)	02 (.92)	01 (.46)	03 (1.4)
Parenting	02 (.92)	04(1.8)	04(1.8)	11(5.1)
Sex/sexuality	02 (.92)	01 (.46)	02 (.92)	02 (.92)
Unspecified	02 (.92)	02 (.92)	02 (.92)	00
Freedom	01 (.46)	01 (.46)	01 (.46)	04(1.8)

continuing their educational pursuits and meeting the expenses related to caring for a child, as well as with obscure issues such as whether they could fulfill the role of being a good parent.

To answer the third and fourth research questions, categories of main concerns were placed under the types and patterns of transitions reflected by the participants' main concerns as they entered and exited high school. Types are depicted in Table 3 with exemplar quotes for each category, from year 1 and from year 4. The developmental type of transition included 8 categories of main concerns that reflected psychosocial transitions: *relationships*, *future*, *emotions*, *parenting*, *freedom*, *identity*, *sex/sexuality*, and *physical attributes*. The situational type of transition included 10 categories of main concerns: *education*, *expectations*, *life*, *extracurricular activities*, *health/safety*, *world*, *work*, *death*, *career*, and *religion/spirituality*. The cate-

gories of *no concerns* and *unspecified* were not situated within this typology, but reflected the responses provided by participants.

The categories of main concerns were also classified as patterns of transition identified in the middle-range theory. Verbatim exemplars of these patterns found in data from year 1 and year 4 are presented in Table 4. A single transition at the entry into high school is depicted by participants' single concerns about education, reflected in their single words *education*, *grades*, and *school*. Projections for the time after high school revealed that some participants were focused solely on their educational goals, as was reflected in their responses of "My grades" and "My major in college." This sharper focus was reflected in the larger number ($n = 40$) who identified multiple transitions as they entered high school in year 1 than the number ($n = 27$) who identified multiple transitions as they exited high

Table 3. Types of Transition and Categories of Adolescents' Type Main Concerns Category

Type	Main Concerns Category	Verbatim Exemplars ^a
Developmental	Relationships	I wish people, like my parents, would understand me more (F1) Dealing with the immature people I'm friends with (F4)
	Future	Will I get my [driver's] permit? (F1); Turning 18 years old and moving out (F 4)
	Emotions	Being under too much pressure (M1) ... anxiety over future choices that may concern parents (F4)
	Identity	How people see me as a person (F1); Becoming a young father (M4)
	Parenting	Helping my brother care for his child when she comes (M1) Financing for my son (F4)
	Freedom	If I'll ever get freedom, get to live my own life... (F1) Having the freedom to go out where I want (M4)
	Sex/sexuality	Get a girl pregnant before time (M1) Being gay in today's society (F4)
	Physical attributes	When will I get bigger, faster, & stronger? (M1) My looks, including my weight (F4)
Situational	Education	Making good grades is very important to me (F1) ... I have too much [school] work to do that don't know if I'll graduate in time (M4)
	Expectations	Not letting down my soccer team (M1) Unsure if I am fully prepared for college (F4)
	Life	Don't want to fail school and not do well in life (M1) My concern is that I won't accomplish anything in life (M4)
	Extracurricular activities	Make ODP state soccer team (F1); Not winning our playoff game (F4)
	Health/safety	To lose weight (F1); My family and friends' happiness and health (F4)
	World	... the world because I am in it that's why (M1); The world (F4)
	Work	... to get a summer job so I can afford to go on my band trip (F1) Finding a college, graduating, then getting a job (M4)
	Death/suicide	Death and dying too early, especially friends and family (F1) That someone that I love like a family member ... would end up dying [sic] (F4)
	Career	Whether or not I will get to college and be an engineer (M1) What I'm going to be as an adult (career-wise) (M 4)
	Religion/spirituality	Getting to the Celestial Kingdom (M1); Religion (F4)

^aF, female; M, male; 1 and 4, years 1 and 4.

Table 4. Patterns of Transition and Categories of Adolescents' Main Concerns as They Enter and Exit High School

Patterns	Main Concern Categories	Verbatim Exemplars ^a
Single	Education	Education (F1); School, right now (F1); School grades (M1); School (M1) My grades (F4); My major in college (M4); Going to college (F4)
Multiple	Relationships, work, and physical attributes	Boyfriend, skin condition, work, family, friends (F1)
	Education, emotion, and work	The stress of school and getting a job (F4)
Sequential	Education, future	Getting good grades to go to the college of my choice (F1) Graduating and going to college (M4)
	Education, career	To finish high school and go to college then the Air Force (M1) My future and college life and career (F4)
Simultaneous	Education, relationships	Balancing school/friends (F1)
	Education, extracurricular	Doing well in school so I can do sports (F1)
	Emotions, education	Stress caused by school (F1)
	Parenting, work	I have a baby now and need to start to work (M4)
Related	Emotions, expectations	I am so afraid I'm going to fail in high school and not success [sic] to what my parents want me to (F1)
	Relationships, physical attributes	Being liked by my peers about my looks and personality (F4)
Unrelated	Education and religion/spirituality	My schoolwork and spiritual life (F1)

^aF, female; M, male; 1 and 4, years 1 and 4.

school in year 4. On entry, a female wrote, "Money, expenses, college, and debts," and a male wrote, "The world: I worry about the war and the economy and what it will be like in the future." On exit, a female wrote, "Getting out of high school and starting my life, and starting a family," indicating multiple transitions. Patterns of sequential transitions were reflected in year 1 responses from a male who wrote, "being able to get better in track so I can further my career," and from a female who wrote, "Getting good grades to go to the college of my choice." Patterns of si-

multaneous transitions were reflected in year 1 responses from a female who wrote, "Doing good in school and not getting involved with the wrong people." In year 4, a female wrote of simultaneous transitions as "My baby and school."

Most of the sequential and simultaneous patterns of transition were related. In year 1, a female wrote, "To be successful and live a good life," and another wrote, "Where will I go when I am finished with school." Both statements reflect related situational transitions. Only one of the sequential and

simultaneous patterns, in year 4, was deemed unrelated (see Table 3).

DISCUSSION

This analysis shows that as adolescents enter, progress through, and exit high school, they have many concerns that reflect developmental and situational transitions. Adolescent mental health experts have asserted that adolescents commonly experience mild and transient anxiety symptoms without significant functional impairment.³⁹ Other experts on adolescent health have noted that many of the concerns expressed by adolescents should be addressed as part of developmentally appropriate office visits during this phase of development.⁴⁰ In particular, they have emphasized discussing sexuality, relationships with parents and peers, identity, and future plans—concerns found in the present study.

Although none of our participants specifically mentioned being worried about their mental health, their expressed concerns about friendships, parental expectations, conflict with parents, and stress suggest that many of their concerns have implications for promoting their mental health. Only 1 participant mentioned thinking about suicide. This statement occurred in year 1 and was not mentioned again in the subsequent 3 years. Mental health problems including anxiety, depression, and suicidal thinking affect 10% to 20% of adolescents worldwide.⁴¹ Yet, it may be that participants who had major mental health problems did not choose to provide written comments about their main concerns in this study and, therefore, were not included in this analysis.

Our participants' concerns also reflected types and patterns of transition identified in the middle-range theory of Meleis and colleagues.¹² Foremost was their concern about education, which reflects the primary situation in which adolescents normally find themselves. Because this sample was part of a larger study where participants were initially recruited from 3 public school districts,

it is not surprising to find that the main concerns of nearly half of them centered on education—on both current schoolwork and future application to, acceptance by, and attendance at college. Although the largest percentage of participants (50.7%) focused on education in their second year of high school, significantly more were focused on this type of transition in year 4 than in year 1, which reflected an increased interest in transitioning out of high school and into college. The transition to high school is accompanied by greater amounts of homework and more difficult subjects. Such expectations are appropriate, considering current knowledge about continuous brain development during adolescence. The main concerns regarding schoolwork and grades among many of the participants in this study support Stuart's⁴² finding that adolescents' schoolwork is associated with stress.

Social relationships are paramount in the lives of adolescents as they transition from childhood to adulthood. The present sample clearly reflected this as an important concern, which manifested in a variety of ways in year 1 (eg, concern about "getting involved with the wrong people," or about "my grandparents, that they can be here on this earth for at least 10 more years"). Other relationships were also a source of concern for adolescents in the form of meeting others' expectations for them. For example, comments such as "making my parents satisfied" and "difficulty pleasing my parents" were not uncommon, supporting other studies that show how difficult it is for adolescents to transition from child to adult in a way that retains a positive, yet less dependent, relationship with their parents.¹³ The concern about relationships with parents was seen most frequently as participants entered high school. "That the relationship with my parents is slowly fading away," as one young woman wrote, reflects the change that adolescents experience as they differentiate from their parents and form their own identities and social relationships. This interpretation is corroborated by the statistically significant difference of fewer concerns about

relationships in year 4 than in year 1. Although the natural transition associated with identity formation may reflect stressful parent/guardian relationships, the data highlight the influential nature of these foundational relationships as adolescents transition into college and the work force in late adolescence. In a study of psychosocial risk factors among high school students in Canada, Stuart⁴² found that nearly half (45%) of the adolescents in her sample reported excessive amounts of stress related to their parents and schoolwork.

We were surprised to find that so few participants' main concerns were related to physical attributes (appearance) and sex/sexuality. Concerns about sexual activity, getting pregnant, and one's own sexuality were included in the category of sex/sexuality. Two-thirds of this sample was female and the majority would have undergone pubertal changes before high school, which may explain the few concerns in this category.¹⁴ Most adolescents initiate sexual intercourse (sexual debut) between the ages of 16 and 18 years of age; however, 15% of adolescents make their sexual debut before the age of 16 years.⁴³ There is some evidence that this correlates with post-secondary educational pursuits. Interestingly, in this sample only 7 adolescents reported sex/sexuality as a main concern.

The majority of concerns regarding physical attributes were related to weight. This finding is similar to those of other researchers who found body weight and body image as major concerns of adolescents.^{13,20,21} With prevalence of overweight and obesity approaching 40% and 70% among adolescents⁴⁴ and adults,⁴⁵ respectively, excessive weight may not be considered a main concern but rather an accepted norm, especially among Hispanic/Latino adolescents, who have higher rates of overweight and obesity as well as a higher tolerance for larger body sizes than do European American adolescents.⁴⁴ Alternatively, adolescents at this critical stage of self-identity may use denial as a coping mechanism to assist with a difficult transition, particularly if physical appearance is less than

desirable, thus preventing a clear recognition of this as a main concern.

As in other studies, this analysis emphasized that adolescents face multiple transitions, some of which are sequential (eg, getting good grades and going to college) and others simultaneous (eg, doing well in school and making time for extracurricular activities). Meleis and colleagues¹² assert that nurses should focus on all the patterns of transitions experienced by an individual and consider how sequential and simultaneous ones might overlap.

Although the participants in this study were middle and older adolescents, our findings regarding their concerns are similar to some of the recent findings of Ryan-Wenger and colleagues,⁴⁶ who studied stressors in children aged 7 to 12 years. Among the 10 most frequently reported stressors in their study were concerns cited by participants in ours: taking tests, doing homework, getting bad grades, worrying about a member of the family, and relating to parents and siblings.

Limitations

This study was limited by the convenience sample from a single geographic area of the United States. Data were collected as part of a larger study with different aims; thus, other information was not included that might have enhanced the findings and provided a more complete reflection of the transition framework. Data were also self-reported and may reflect the bias of the particular participants. More females than males in the target population provided data, thus limiting interpretation and generalization. Nonetheless, the findings remained close to the words of the adolescent participants and have important implications for nursing practice and further theory development.

IMPLICATIONS FOR NURSING

Findings from this analysis have several implications for nurses in various types of

practice. The 21 categories of concerns identified indicate that adolescents have numerous types of concerns during their high school experience. Examining the concerns of adolescents and creating theoretical constructs from coded concerns provide a strong scientific basis for intervention to help adolescents cope with transitions. Nurses working across diverse health care settings have unique opportunities to identify and explore the concerns of adolescents during this transformational period. For example, nurses and other professionals in the school setting should evaluate multiple aspects of an adolescent's developmental and situational experiences. By developing relationships early and maintaining relationships with students as they matriculate through school, positive support systems that are readily available to adolescents become well established. These and other resources can serve to guide and reinforce the consideration of appropriate options to help adolescents navigate the challenges encountered during this crucial period of development.

Health-related behaviors and decision-making processes learned at a young age are more likely to be sustained over time and have greater impact than attempted changes in established negative or health-risk behaviors of adults. By utilizing developmental age-appropriate interventions within the context of transitional experiences, nurses can influence learning and the adoption of lifelong healthy behaviors. Promoting healthy transi-

tions for adolescents during the high school years is foundational for a successful transition to adulthood. Thus, identifying indicators of successful and poor transitioning is critical for developmentally and situationally appropriate interventions.

Our analysis demonstrates that the middle-range transition theory of Meleis and colleagues¹² can provide an appropriate theoretical fit for organizing and describing the concerns reported by such a large sample of adolescents as they transition through high school. This transitions framework will, therefore, be beneficial in further construction and refinement of situation-specific theory for adolescents experiencing developmental and situational transitions. Future research is warranted to obtain fuller descriptions of adolescent concerns to explore the properties and conditions of adolescent transition experiences, which will in turn contribute to further development of this middle-range theory.

CONCLUSION

As adolescents enter, progress through, and exit high school, they experience many concerns primarily about their education, relationships, expectations, and future. These concerns reflect both developmental and situational transitions that have many implications for nursing practice, research, and theory development. Furthermore, these findings are consistent with the middle-range theory of transition by Meleis and colleagues.¹²

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