5-2005

Bedroom Design and Decoration: A Context for Investigating Developmental Theory in Adolescence

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BEDROOM DESIGN AND DECORATION: A CONTEXT FOR INVESTIGATING DEVELOPMENTAL THEORY IN ADOLESCENCE

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Family, Consumer, and Human Development

ABSTRACT

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by

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Utah State University, 2005

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Most developmental theories propose reasons for behavior and changes in behavior due to influences from genetic and environmental factors. A behavioral change that occurs during development, from infancy to adulthood, is the increasing number of choices that are made. The purpose of this study was to investigate developmental theory as it relates to adolescent choice (influences, interactions, activity, preference, and acceptance) in the environment most readily controlled by adolescents, their bedrooms.

Two hundred thirty-four eighth- and ninth-grade students responded to the *Adolescent Development and Environments Research Survey*. The survey assessed gender, grade, pubertal status, negative/positive passive and active genotype-environment effects, height and weight, and bedroom design and decoration influence, preference, activity, and acceptance (dislike-like).

Results confirmed relations among gender and bedroom design preferences and activity. Girls' bedrooms contained a greater variety of items than did boys' bedrooms.

Additionally, girls were overall more active in procuring items for their bedrooms than were boys. Grade differences (within gender) were identified for boys and girls for preferences, but not activity. Regarding pubertal status, Lo and Hi pubertal status girls differed in preferences, and the use of their own money to procure bedroom items. Lo and Hi pubertal status boys differed both in preferences and in bedroom location change. Perceived influences on adolescent bedroom design were associated with preferences for related items (e.g., the "Classes at school" influence category correlated positively with "Bookcase"). Regarding bedroom design acceptance, adolescents were less likely to like their bedroom designs if they had ignored their parents' opinions about their bedroom design and instead furnished their bedrooms the way they wanted to. Girls who had no masculine items in their bedrooms were likely to have parents who gave the final word about bedroom design. Adolescents' friends influenced their frequency of bedroom design. With regard to obtaining bedroom items, girls and boys differed in the number and type of influences they reported. Previous studies of gender, age (grade), and pubertal status support these findings. Further, these findings support developmental theory suppositions as related to biosocial influences, negative/positive passive gene-environment effects, and opportunity structures.

(191 pages)

ACKNOWLEDGMENTS

This project was partially funded by an Agricultural Experiment Station grant and a Presidential Fellowship. In addition, there have been many people who have assisted in my development and consequently this project for whom I owe my appreciation. The following paragraphs mention some of these people.

I am especially appreciative of my family for their contributions to this project and my degree attainment. Elaine, thank you for permitting me to observe your adolescent bedroom design preferences and activity, and for the ideas for parent-adolescent survey questions that were inspired by our discussions. Clark, thank you for helping me to truly appreciate individual differences and how these influence our interests and choices. Tim, thank you for encouraging me to pursue a Ph.D., and for giving me the support necessary to do so. I am also appreciative of my dog Ted, for keeping me company at my computer desk.

Also thanks to my dad and sister who cheered me on during the course of this project, and to my mom who encouraged me until she succumbed to the grip of ALS. Her influence lived on through the design elements of the survey.

To my friend of 33 years, Sherry Bingham, thank you for great telephone conversations about genotype-environment correlations, and the challenges and rewards that life brings. To Laura Sawyer, thank you for listening and being a supportive friend during this process, and for fun times that were good distractions.

Much appreciation to the adolescents who participated in the pilot study, and to the principal (Teri Cutler), staff, and student participants at South Cache 8/9 Center who

made this research possible. The contributions of Teresa Bodrero, Karen Cole, and Tara Smith who helped with various aspects of this project are also appreciated.

In addition, I would like to thank my professors at the University of Missouri-Columbia and Utah State University, with special thanks to my committee members, Troy Beckert, Tom Lee, Brent Miller, and Tom Peterson, for your research suggestions and editing of this document. To my advisor Randy Jones, for your dedication to my degree completion and professional development, I am especially grateful.

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INTRODUCTION

"Identification of biosocial interactions is the scientific antidote to both biological determinism and environmental determinism."
-J. Richard Udry, 2000

"By invoking the idea of genotype—environment effects, we hope to emphasize a probabilistic connection between genotypes and their environments."
-Sandra Scarr and Kathleen McCartney, 1983

During the period from infancy to adolescence, children increasingly make choices about what they attend to in their environments (Scarr & McCartney, 1983). Toddlers choose to play with different kinds of toys; preschool, elementary aged children, and adolescents select friends and then interact differently with them based on the quality of the relationship, their age and gender.

The number, type, importance, and non-normativity of choices increase across much of the life span. Choices made by individuals include habitat, with home environments being the most important (Rapoport, 1985). The idea of choice implies the active nature of humans. Rapoport explains that much environment-behavior research has viewed people as passive, where the environment acts on them, rather than people actively making choices about their environments. Scarr and McCartney (1983) referred to this active effect as niche-picking and niche-building. According to Rapoport, choice allows for congruence between the person and their environment, thereby creating a supportive environment. Rapoport suggests that these choices are reflected in a person's life-style, and life-style can be matched to an environmental quality profile. Moreover, a life-style profile, a reflection of an individual's attitudes and values, is more important than cohort membership, class, age, race, ethnicity or income in identifying a match

between a person and an environmental quality profile. One way of identifying how people achieve congruence with a quality environment profile is to provide them with a broad variety of home environments and to observe (actually or by simulation) the choices that they make (Rapoport). Additionally, Rapoport suggests that the essential aspects of a quality environment profile can be identified by both ranking of variables and by the process by which the variables are ranked.

Rapoport (1985) acknowledges that choices can be distorted and limited by constraints; however, some choice exists even when constraints are high (e.g., constraints and choice experienced by "squatters," p. 258). Further, choice of environments is influenced by pull factors, the acquisition of environmental qualities that are desirable, and push factors, avoidance of negative environmental factors (Rapoport). With regard to the current study, pull factors may be the adolescents' personalization of one's bedroom with desirable items, while a push factor may be conforming to parental design choices by inclusion of undesirable items. To study home environment choices, the what, when, where, why, and how questions can be asked (Rapoport). Further, Rapoport asked the following questions:

1. What characteristics of people, as members of a species and of various groups or as individuals, influence (or, in design, should influence) how built environments are shaped?

2. What are the effects of the built environment on human behavior, well-being, mood, and so forth?

3. A corollary question: What mechanisms link people and environments in this mutual interaction? (p. 257)

Investigating the mechanisms or processes by which adolescents make choices is important because these choices often have important implications for adolescent

outcomes. Adolescents make personal, social, and environmental choices. Personal choices include clothing, hairstyle, diet, exercise, drug and alcohol use, academic achievement, and so forth. Social choices include friendship selection, participation in particular activities, and so forth. Examples of environmental choice include locations where adolescents study and hang out, how adolescents decorate their bedrooms, and so forth. Some choices are primarily unique to adolescence, these include: choice of [nutritious] foods in the school cafeteria (Shannon, Story, Fulkerson, & French, 2002), academic course selection (Shamai, 1996), immigrant identity choices (Goodenow & Espin, 1993), interfaith dating (Marshall & Markstrom-Adams, 1995), and choice of consultant for abortion decisions (Finken & Jacobs, 1996).

As discussed by Bronfenbrenner and Ceci (1994), and Werner, Altman, and Oxley (1985), proximal processes and transactions involve the person, the environment, and time. Such is the case of an adolescent who participates in a "party" at a home where a friend's parents are absent and where drugs, alcohol, and sex abound. Implications for these behaviors vary according to the time spent participating in them. Although researchers have studied processes by which adolescents make personal and social choices, the study of environment niche-picking and niche-building processes is minimal.

In one qualitative investigation, the reasons why girls (16 years old) chose their bedrooms as a place to spend time were studied (James, 2001). Based on focus groups with these girls ($n = 16$), three themes were identified: Situational body image factors (concern for emotional and physical behaviors in public), physical factors (safety or security, and wish for type of activity--passive or active), and control factors (who and when others can enter, avoiding parents and their demands, and the actual bedroom

space). With regard to the actual bedroom space, the girls could choose the music, memorabilia, and messiness. James stated that the transitory aspects of adolescence were represented by the combination of memorabilia in the girls' rooms, representing their identities, both past and present. For example,

> Vanessa had modern posters of pop stars on her walls, which contrasted sharply with the frilly white bedspread, teddy bears, Mickey Mouse, and junior netball trophy of her past. She had a framed photograph of herself and a partner at a school dance, alongside photographs from her childhood. (James, 2001, p. 80)

Based on the three identified themes, James expressed a concern as to whether or not girls' choice of the bedroom was a real choice for leisure activity as opposed to a site of least resistance.

Girls may be limited in their niche-picking behaviors, as compared to boys, as a result of fewer opportunity structures provided by parents and society. This limitation may lead to an increase in niche-building behavior in the bedroom. "Sasha said, I really, really, really like my bedroom....I renovated [it] and it's just full of all the things that I like....I really like the look of my room and I like being in it" (James, 2001, p. 80).

With regard to gendered behaviors, researchers have often focused on how social factors influence these behaviors, without also addressing the biological factors that influence them (Udry, 2000). A good example of this socialization of gender perspective can be seen in the Rheingold and Cook (1975) study of children's bedroom contents. These authors concluded that gender differences in types of toys located in the boy's and girl's rooms (age range: 1 month to nearly six years old) were a function of parental provisions. Although they addressed the possible role of the children's influence on their parents' purchases, they mostly dismissed this concept due to the lack of any toys in a

given class (e.g., no girls had specified types of vehicles, such as buses and front-end loaders; no boys had toys in the "doll houses" category (p. 462), and the large number of toys that were observed in a particular class (e.g., lots of vehicles in the boy's rooms, lots of domestic equipment in the girls' rooms). The authors did make an important conclusion, however, that the children could only influence their parents' purchases if they were given the opportunity to do so. This relates to the notion that genetic potentials are actualized when opportunity structures are provided (Bronfenbrenner & Ceci, 1994); and to the important influence of extra familial opportunities on the genotype-environment (G-E) active effect (Scarr & McCartney, 1983). Opportunity structures, or the absence of them, were likely a strong influence in this sample of children under six years of age. However, the extent to which parental socialization factors were the primary operating influences remains in question. In actuality, when the older children in this sample were asked to make suggestions for holiday or birthday gifts, did the majority of the girls request "vehicles" and the boys request "tea sets" that they did not subsequently receive? Or is it more likely that both social and biological factors contribute to the contents in children's bedrooms? These findings naturally lead to the question, Does selection (niche-picking and niche-building) of one's environment increase from childhood to adolescence as a result of an increase in the "active effect," a consequence of G-E effect processes, that also permits the expression of individual differences, as Scarr and McCartney suggest?

Problem Statement/Research Objectives

The goals of this study were to understand the active and passive processes of G-E effects on adolescents' niche-building behaviors. Specifically studied were sections from the Scarr and McCartney (1983) genotype—environment effects model. Paths studied in this model included the direct path from child genotype to child phenotype (maturation), and the connecting path from child phenotype to child environment selection. The questions that were addressed, related to this "active" connected path included: Does gender influence adolescent environment niche-building? Does age influence adolescent environment niche-building? Does pubertal status influence adolescent environment niche-building? And, does pubertal timing influence adolescent environment niche-building? Additionally studied was the "passive" path from parent genotype to child environment. The questions related to this pathway were how biological parents influence adolescents' environments, and how positive and negative passive G-E effects influence adolescent environment niche-building. Also, the social influences on adolescent environment niche-building were assessed (e.g., friends, media), with the assumption that these are chosen by the phenotype as a result of his or her genotype. The concept of niche-building was conceptualized as "preferences" and "activity" in the adolescent environment.

The adolescent bedroom environment was chosen because it is the physical environment over which adolescents usually have the most control, it reflects a normative environment, and little research has been done in this area. Specifically, the "preferences" and "activity" of adolescent bedroom design were studied. The term

"design" is often used in this dissertation to represent both the concepts of design and decoration.

Research Questions

Using the developmental theoretical model of genotype—environment (G-E) effects, as proposed by Scarr and McCartney (1983), research questions were related to G-E influence and the bedroom design preferences and activity of adolescents. According to Scarr and McCartney, biological parents provide both the genes and the environments for their children, resulting in a G-E "passive effect." With regard to the "active effect," humans are said to move from passive to active during the childhood to adolescent period in their selection of environments, specifically referred to as niche-picking and niche-building (Scarr & McCartney). Gender (sex), as an additional genotypic contributor, which was not discussed by Scarr and McCartney, was studied in accordance with the biosocial perspective of Udry (2000). The research questions are as follows:

1. Are biological (genotype) influences related to the bedroom design *preferences* of adolescents?
    a) Is gender related to bedroom design *preferences*?
    b) Is age related to bedroom design *preferences*?
    c) Is pubertal status (within gender) related to bedroom design *preferences*?
    d) Is pubertal timing (within gender) related to bedroom design *preferences*?
    e) Is biological parent influence (genotype) and are social influences (genotype driven) related to adolescent bedroom design *preferences*?

f) Is there a relationship between girls' *preferences* for fewer feminine items (and more masculine items) and the negative passive G-E effect?

g) Which preference selections predict current bedroom design acceptance *(dislike-like)*?

2. Are biological (genotype) influences related to the bedroom design *activity* of adolescents?

a) Is gender related to bedroom design *activity*?

b) Is age related to bedroom design *activity*?

c) Is pubertal status (within gender) related to bedroom design *activity*?

d) Is pubertal timing (within gender) related to bedroom design *activity*?

e) Is there a relationship between passive G-E effects and adolescent bedroom design *activity*?

3. Is there a relationship between passive G-E effects and current bedroom design acceptance *(dislike-like)*?

4. Which combined biological and social influences (G-E effects) on adolescents are most predictive of low and high *activity* as reflected in the design of adolescents' bedrooms?

LITERATURE REVIEW

Theories

Behavioral Genetics

The genotype—environment effects developmental theory proposed by Scarr and McCartney (1983) guided this study. According to Scarr and McCartney, the theory provides a framework for understanding developmental processes by answering how the combined effects of genotypes and environments affect human development and variations in development. With regard to development, Scarr (1992) suggested that at any specific age, developmental changes exceed individual differences in importance for many behaviors. Scarr and McCartney proposed this theory based on previous work of Plomin, DeFries, and Loehlin (1977) who described passive, active, and reactive genotype-environment (G-E) correlations.

According to Scarr and McCartney (1983), the passive G-E effect occurs because parents provide both genes and the environment for the developing child. Further, the genotype and environment are generally positively correlated, but may also be negatively correlated. For example, parents who are musically inclined may provide their children with an environment rich in music, including musical instruments. The positive passive effect would be observed when their child becomes proficient at an instrument at a relatively early age. In contrast, if their child has a difficult time learning to play an instrument, despite being provided with competent instruction, the negative passive effect would be experienced.

Scarr and McCartney (1983) also suggested that an indirect correlation results between the environments selected by the child and the child's biological relatives. Likewise, from birth to adolescence, the proportional influence of passive to active G-E effects change so that active effects become more influential. This change occurs as a result of individuals increasingly choosing the environments they attend to and learn from, as well as opportunities for extra familial experiences. The active effect selection of environments is referred to as niche-picking and niche-building, and is driven by genotype qualities such as personality, intelligence, and motivation with the intent of selecting environments that are stimulating and compatible; the genes of the individual influence maturational development, and this development then leads to environmental choices and effects. Further, Scarr and McCartney considered the active G-E effect to be "…the most powerful connection between people and their environments and the most direct expression of the genotype in experience" (p. 428). These researchers also suggested that the selection of activities and relationships by individuals reflect the active G-E effect.

Bioecological Model

As previously mentioned, the goal of the G-E effects theory is to understand the processes of development (Scarr & McCartney, 1983). Scarr and McCartney provide a framework for understanding these G-E processes, but details of the processes are not explained. Another theory is useful for extending the Scarr and McCartney theory. The bioecological model of development, proposed by Bronfenbrenner and Ceci (1994), suggests that proximal processes lead to development:

> Especially in its early phases, and to a great extent throughout the life course, human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to henceforth as *proximal processes*. Examples of enduring patterns of these processes are found in parent-child and child-child activities, group or solitary play, reading, learning new skills, problem solving, performing complex tasks, and acquiring new knowledge and know-how. (p. 572)

Note that Bronfenbrenner and Ceci (1994) refer to the individual as "active." Additionally, they suggest that it is the active nature of the genotype combined with bi-directional interactions with the environment over time that leads to "…selective patterns of attention, action, and response" (p. 572). Moreover, the immediate settings can be fashioned by the capacities of the child (Bronfenbrenner & Ceci).

Previously mentioned was the Scarr and McCartney (1983) idea that the active G-E effect was influenced by extra familial opportunities. According to Bronfenbrenner and Ceci (1994), proximal processes, and specifically opportunity structures, allow for the realization of genetic potentials. Further, the actualization of genetic potential will be influenced to the extent that the immediate environment offers persons, symbols, and objects (Bronfenbrenner & Ceci). The provision of resources, responsive parents, and environmental stability (minimum changes, lack of conflict) are important for this actualization to occur; however, proximal processes can occur without the involvement of other persons, with symbols, objects, toys, and other stimuli as the focus of the interaction. Further, it is important to recognize that parents do and do not influence the kinds of proximal processes in which their children participate (Bronfenbrenner & Ceci).

Biosocial Theory

Although different in their approach, the theories of Bronfenbrenner and Ceci (1994) and those of Scarr and McCartney (1983) both recognize the combined influences of nature and nurture on development. These combined influences are also fundamental to the biosocial perspective. Biosocial theory includes the concept of epigenesis, meaning that genotypes develop into different phenotypes depending on the environment in which development occurs (Troost & Filsinger, 1993). A biosocial perspective is utilized by Udry in his studies of gendered behavior. According to Udry (2000), the women in his study who experienced the greatest prenatal androgenization (second trimester) were predisposed to masculine gendered behavior at subsequent ages; these women were also less likely to be responsive to feminine socialization. The importance of this research to the current investigation is that gendered behaviors and reinforcement of them are evident, in choices made by children and adolescents, and opportunity structures provided by parents. Udry explains, "A biosocial macro theory is simple: Humans form their social structures around gender because males and females have different and biologically influenced behavioral predispositions. Gendered social structure is a universal accommodation to this biological fact" (p. 454). Gendered behaviors in the context of bedroom design will be studied in this investigation. Based on Udry's findings, it is expected that girls will have a wider range of "have" and "want" bedroom contents than boys (e.g., sports equipment and dolls) due to the differential influences of androgens on female behavior. Assuming that a wider range of items are observed among girls, a question can be asked: Does society's awareness of this range of

selected items among girls permit for greater tolerance and result in reinforcement of this wider range, and/or are attempts made to reinforce feminine socialization, as explained below?

When Udry's (2000) findings are viewed in the context of Scarr and McCartney's G-E effects theory (1983) some interesting ideas arise. Included in the G-E effects theory is the negative or positive passive G-E effect. To reiterate, according to Scarr and McCartney, positive passive G-E effects are expected because children get genes and environments from their parents; however negative passive G-E effects also occur. Udry determined that the women who were less feminine as children had parents who attempted "remedial socialization" (p. 450); statistical models indicated that these attempts were in vain and women actually became less feminine as a result. Further, feminine socialization only effectively influenced those women who were predisposed to femininity (Udry). Based on Scarr and McCartney's theory and Udry's findings, a question arises for this investigation: Is there a relationship between the group of girls who have fewer traditionally feminine items in their bedrooms (and the inclusion of more masculine items) and greater negative than positive passive G-E effects? In other words, are parents of less feminine daughters attempting to create feminine passive environments for these daughters, and consequently conflict or lack of agreement occurs as daughters attempt to reject this influence? Or, have these parents, like much of society, accepted a wider range of behaviors (including bedroom design) among females? The women in Udry's study were born between 1960 and 1963; opportunity structures for women have changed since the 1960's. For sons, negative passive G-E effects would generally be expected to occur for other reasons than the inclusion of feminine items in

their bedrooms. The reason for this expectation is that, according to Udry, the majority of males experience prenatal environments that are significantly higher in androgens than the levels experienced by females. This exposure makes males less sensitive than females to feminine socialization efforts (Udry).

Transactional Perspective

Consistent with the proximal process concept presented by Bronfenbrenner and Ceci (1994), Werner et al. (1985) described the home as a transactional unity. This means that person, environment, and time unite leading to an integrated perspective of the home environment (Werner et al.). The importance of including the perspective of Werner et al. is that the environmental setting is specific to the home, including appropriation, attachment, identity, affordances, and social relationships and rules.

Child and Adolescent Choices

Friendship Selection-Gender, Age, and Grade Influences

According to Berndt, Hawkins, and Hoyle (1986), boys and girls in fourth and eighth grades maintained stable friendships across a school year. However, these researchers indicated that interpersonal interactions differed in these stable friendships. Specifically, when friends were given a paired activity, the fourth graders were more competitive while the eighth graders were more cooperative with their partners. Across both grades, however, the closer the friendship of the partner, the more the child shared during the activity. In addition, a significant gender difference was observed across

grades, with boys less likely than girls to achieve equality in the paired activity. Phillipsen (1999) documented friendship interactions that are consistent with the findings of Berndt et al. Age differences in the friendship quality variable "social interactions" were observed between middle childhood (ages 8-10) and early-adolescent (ages 11-13) students, with the older students exhibiting more self-disclosing and coordinated behaviors in the friendship dyads. Likewise, gender differences were found with girl/girl dyads reporting more support than boy/boy dyads. In another study, Furman and Buhrmester (1992) identified age and gender differences for type of supportive personal relationships (mother, father, sibling, grandparent, teacher, same-sex friend, and romantic friend) between 4th, 7th, and 10th graders, and college students. Specifically, fourth graders perceived their parents as most supportive; seventh graders considered both parents and same-sex friends as highly supportive; and tenth graders identified same-sex friends as the most supportive, with mothers and romantic friends listed as next supportive. For the college students in the sample, gender differences were observed, with women choosing four groups as most supportive: romantic friends, siblings, same-sex friends, and mothers, while men chose romantic friends as the most supportive.

Children and adolescents also make choices as to whom they dislike. Relationships of mutual dislike, referred to as mutual antipathies, occur as do choices of mutual liking for friendships, although at a lower frequency. Age and gender differences exert influence on mutual antipathies, as they do on friendships. With regard to age, Abecassis, Hartup, Haselager, Scholte, and Van Lieshout (2002) reported that fewer adolescents (mean age 14 years, 10 months) than children (mean age 11 years, 0 months) participated in same-sex antipathies, while age differences were not observed for mixed-

sex pairs. An age x gender interaction effect was observed for the same-sex antipathies; in the child group, boys were more frequently involved than were girls, while the reverse was true for adolescents. Further, gender differences were not observed for mixed-sex antipathies. Abecassis et al. also reported that those children and adolescents who were involved in mutual antipathies experienced negative social adjustment, thus making them "developmentally at risk."

Peer Selection—The Influence of Pubertal Timing and Opportunity Structures

Additionally, "at risk" behaviors have been documented for early-maturing adolescents and have been linked to their peer choices. Caspi, Lynam, Moffitt, and Silva (1993) studied the influences of pubertal timing and opportunity structures on girls' behaviors. Pubertal timing was indicated by age at menarche; the girls who experienced menarche at or before 12 years and 5 months of age were classified as early-maturing. The early-maturing girls, without troubled behavior histories, who attended mixed-sex schools, were more likely to have participated in delinquent behavior, and they knew more antisocial peers than early-maturing girls who attended same-sex schools (Caspi et al.). The researchers determined that "boys" and "puberty" (p. 26) were two essential factors contributing to this antisocial behavior. Likewise, Cota-Robles, Neiss, and Rowe (2002) theorized that differential peer access might contribute to involvement in aberrant nonviolent and violent behaviors that were reported among early-maturing boys of all ethnicities in their study. The study used preexisting data collected from boys (ages 11-17) who were participants in the National Longitudinal Study of Adolescent Health (AddHealth). Additionally, the data that was used was from boys in three ethnic groups,

African American, Mexican American, and Anglo American. According to Cota-Robles et al., the study sought to measure the relationship between pubertal status and delinquent behaviors. Pubertal status was determined by self-report of voice depth, facial hair, and underarm hair. The researchers indicated that pubertal status, age, and ethnicity were significant contributors to the regression equations of effects of pubertal timing on both nonviolent and violent delinquency behaviors. Specifically, age was a negative contributor to the violent delinquency equation, and a positive contributor to the nonviolent delinquency equation; as age increased, violence decreased. In addition, Cota-Robles et al. reported that modest effect sizes for pubertal timing were documented.

Toy Choice—Gender and Age Influences

A biosocial gender perspective with regard to toy-choice was suggested by Servin, Bohlin, and Berlin (1999) in their study of play sessions of one, three, and five year olds. Servin et al. documented significant two-way interactions for Toy-category x Sex, and Toy-category x Age. Specifically, the Toy-category x Sex interaction, and accompanying Toy-category *t* tests revealed that boys played more with masculine toys and girls played more with feminine toys. However, among children in the older age groups, different Toy-categories were chosen, hence the significant Toy-category x Age interaction. Additionally, a three-way interaction for Toy-category x Sex x Age was not significant, but a trend was observed for both three and five year old boys and girls to choose masculine toys. Thus, the researchers concluded that in addition to biological factors influencing toy-choice, both boys and girls were being socialized into the Swedish culture that supports women in the workplace, thus rewarding traditional male roles.

Environmental Preferences—Age, Gender, and Opportunity Structure Influences

A limited number of studies of children and adolescents and their environmental preferences have been conducted. Hart (1979) studied children's preferences for outdoor places in their town of Inavale, located in the New England section of the United States. The eighty-six children who participated were between the ages of four and eleven. Data collection included interviews of the children and parents, observations, investigator-children's diaries, children's creation of individual landscape paper models, etc. With regard to the current investigation, the following findings of Hart's study are notable. "Children spend a large amount of time building places [outdoors] for themselves" (p. 335). With regard to these buildings, girls focused on the interior elements, while boys' efforts were directed toward the structure. Additionally, the parental range of distances away from home that were allowed "with permission and with other children" were significantly different for girls vs. boys, and for younger (grades 1-3) vs. older (grades 4-6) children, with boys and older children granted more freedom. Specifically, among the grade 4-6 children, boys were allowed to travel over twice the distance away from home, as were the girls. Not surprising then were Hart's findings that documented gender and age differences in the distances the children actually traveled from home; boys more than girls, and older children (ages 10-12) more than younger children (ages 5-9) traveled significantly greater distances from home. The next finding of Hart's study important to the current research was that children could recall the physical aspects of their familiar places with immense detail; this was especially true for color. Finally, although Hart's study was designed for the purpose of understanding children and their away-from-home-

place-preferences, places in the home (mostly own bedrooms) were also selected, predominately by girls. Based on this finding, Hart called for future studies to examine children's indoor environments, also. Likewise, a suggestion to study indoor environments in addition to outdoor environments was made by Lynch (1977), who summarized reports of adolescent environments in Argentina, Australia, Poland, and Mexico. Specifically, adolescents from three areas in Cracow, Poland listed their own home as among their "top" favorite places. Consistent with the gender related findings of Hart, girls selected their own home as their favorite place at over twice the frequency as did boys. Boys' most frequently selected favorite place were green areas, such as a meadow, sports field, or park. However, both boys and girls in this sample more frequently selected their own home over a friend's home as their favorite place. Lynch specifically mentioned the need to obtain information on the furniture and the importance of the adolescent's bedroom. This suggestion was further supported by Australian adolescents' reports of their favorite places:

> When asked where they like best to be, where they feel most at ease, where it is best to meet friends and to be alone, the Melbourne children answer consistently: their own room, at home, or even better, at the homes of friends. (pp. 48-49)

The reason that three adolescents from Melbourne named their own bedroom as their best place is that they could uninterruptedly engage in a hobby.

Clearly, the home is an important place for adolescents, and the adolescent bedroom is an important location within the home. To obtain information about home environments, present and future, Ladd (1972) conducted interviews with adolescent boys from families who were classified as having low socioeconomic statuses. Like the other studies reported here, boys in this sample reported that having their own bedroom

was very important; however, only 38% of the boys had their own bedrooms. The importance ascribed to this location was a place where one could experience solitude. Aloneness was often achieved in bedrooms, theirs or someone else's, because the door could be closed.

With regard to specific aspects of home environments, the boys in Ladd's (1972) study identified important features of their homes, "The inadequacies and troubling aspects of the respondents' present housing influenced what they thought would be desirable in their future housing" (p. 114). In their present housing the boys listed among their "disliked" things: small rooms, lack of heat, roofs that leaked, and roaches and rats; among their "liked" interior aspects: coolness in the summer, furniture, cleanliness, privacy, new paint, and freedom. According to Ladd, descriptions of present and future interiors were detailed. Present interior descriptions included television, furniture, room size, drapes, pattern of wallpaper, wall colors, carpets, and linoleum types. "The extent to which they were aware of the relative appearance and condition of their housing became more evident when they described the kind of housing they would like in the future" (p. 111). One participant, Andy, described the indoor design of his future house,

> Inside it would be wall-to-wall carpeting. And maple wood paneling and fireplaces in the bedrooms. They'd have all wood floors with shellac on them, clean wallpaper, white, a nice white kitchen, white bathroom and the porch would be white in the back. (p. 112)

Andy also talked about the house being split-level, having three bedrooms, and maybe there would be a swimming pool in the backyard. When asked by the interviewer if he knew someone with this kind of house, Andy replied that his uncle's house looked like

this. Andy's descriptions were based on pictures of his uncle's house; Andy had never visited there.

Andy's ability to describe, in detail, his future home was based on his experience of observing photographs of his uncle's home. Opportunity structures (and lack of) appear to play a role in adolescents' proposed environments. Jason Malloy, as an adolescent boy, provided another example of how opportunity structures influence wished-for environments. According to Thomas, Gibson, and Adekunle (1996), Jason was studying A-levels in philosophy, art, and history of art with plans of becoming an architect. Other information about Jason was that he lived in a care home, and that his father exposed him to architecture. The following are quotes from Jason with regard to his dream home:

> My dream home is large, palatial. I have planned it around the idea of space, volume and proportion. I have built up a picture over time....The bedroom tends to be a more feminine area with more passive colours. I would like to keep to that principle, but where the rooms are typically associated with masculinity they would be muted—more harmonized. For my bedroom I would design a parquet floor and sink the bed into the floor. White walls, no window, with a glass door above floor level, 60 cm above the skirting board. My favorite room would be a massive white room with large walls, a glass ceiling and gravel on the floor. It would just be empty or full of sculptures....Living in care is a stressful experience. It can feel claustrophobic and suffocating....What I like about the idea of building my own home is that I could customize it to my own preference. No one else is going to understand my feelings and preferences as much as I do. If I got bored with the house I'd built, I think I could recreate it, or redesign it. It's a never-ending possibility, really. The place where you live makes a difference to your life—it is your life. (Thomas et al., p. 38)

Hart's (1979) study, and the interviews of Ladd (1972) and Thomas et al. (1996) document children and adolescents' abilities to provide significant details of their current and proposed environments, and demonstrate how opportunity structures influence these choices.

Similar to other studies presented here, the children in Csikszentmihalyi and Rochberg-Halton's (1981) study overwhelmingly selected their own bedrooms as the place in the home where they felt "most at home" (p. 136). Unique to this investigation of the home environment was the focus on the importance of its contents (e.g., beds, visual art, pets, sports equipment, stuffed animals, photos, TV) to children, parents, and grandparents. Of particular significance to the current investigation was that it was in their own bedrooms where nearly fifty percent of the special objects named by children (ages 8-14) were located; checklists and interviews were used to obtain data. In another study of home contents, Altman, Nelson, and Lett (1972) asked new male U.S. Navy recruits to identify items in their homes of origin, including those found in their own bedroom, and their brothers', sisters', and parents' bedrooms. Important findings of this study are, brothers' bedrooms more frequently than sisters' bedrooms included desks, tape and record players, radios, and TVs. Sisters' rooms were reported to have unique items, including vanity dressing tables, sofas, and sewing machines. Additionally, demographic information from this study included the number of family members, the number of bedrooms in the home, and bedroom occupancy status (shared or unshared). Specifically, 49% of the families had either 4 or 5 members, and 16% had 6 members. The number of bedrooms in the homes mostly ranged between two and four. Bedroom occupancy data revealed that 62% of the participants had their own bedrooms, and 31% of them shared a bedroom with a brother. Further, 60% of the sisters had bedrooms of their own. As a study limitation, the researchers noted that the task of drawing two-dimensional items on a representative floor plan, might have limited descriptions of "wall

hangings" (Altman et al., p. 44). The Csikszentmihalyi et al. (1981) and Altman et al. studies illustrate the importance of using straightforward measures for data collection.

Literature Summary

Theories and research findings have documented the genetic-biological influences of gender, age, and pubertal status, and the social influence of opportunity structures on child and adolescent choices. The adolescent bedroom provides a unique context for theory testing with regard to genetic-biological and social influences on adolescent environmental selection and activity.

Additional studies of children and adolescents and their bedroom designs appear warranted. Few, if any, researchers have investigated the complete "have" and "want" bedroom design preferences of adolescents, and apparently none have studied adolescents' and their parents' involvement in the actual bedroom design process.

METHODS

Sample

Phase I

In Phase I, an informed consent form and accompanying brief questionnaire was given to all students ($N = 972$) at a center school composed of eighth and ninth graders (enrolled in regular education classes and in attendance) (see Appendix A). The brief questionnaire (four questions) was used as a screening device to identify students who met the following criteria: the student lived with both biological parents in the *same* house, and had his or her *own* bedroom; in addition, one question was used to identify students' grade, and another question, the students' gender. The brief questionnaire was completed in less than 5 minutes. The informed consent forms and brief questionnaires were returned to the student participants' sixth hour teachers; participants received a piece of candy for doing so. The student participants who completed and returned the informed consent forms and brief questionnaires ($N = 447$) represented an overall response rate of 45.9% for Phase I. The adolescents who met the housing criterion and who had their own bedroom were then eligible to participate in Phase II ($N = 285$). Of the students who did not meet the Phase I criteria ($N = 162$), 42.6% did not live with both of their biological parents in the same house, 45.7% did not have a bedroom of their own, and 11.7% did not meet either criterion. Negligible differences between the percentages for these criteria for gender and grade subgroups were noted, with the exception that eighth graders did not meet either criteria more often than ninth graders.

Phase II

All of the students who were identified in Phase I as meeting the screening criteria in the brief questionnaire were invited to participate in Phase II ($N = 285$: 151 girls and 134 boys; 123 eighth graders and 162 ninth graders). The majority completed and returned the surveys ($N = 234$ students: 129 girls and 105 boys; 103 eighth graders and 131 ninth graders). The overall response rate was 82.1%; 85.4% for girls, and 78.4% for boys. By grade, the response rates were 83.7% for eighth and 80.9% for ninth. The mean number of people residing in the home was 5.58, $SD = 1.33$, while the mean number of bedrooms was 4.90, $SD = 1.37$. Of the Phase II participants, 30.3% changed the location of their bedrooms in the past year, while 69.2% had not changed bedroom locations. The mean number of hours per week spent awake and asleep in the bedrooms were 13.55 and 56.34, respectively. The mean hours spent awake in the bedrooms differed by gender; girls spent a mean of 16.36 hours awake in their bedrooms, while the mean for boys was 10.04 hours. The mean number of hours spent asleep did not vary by gender.

Measurement

Phase II Questionnaire

An extensive questionnaire was given to the participants to gather demographic data, and data on adolescent-parent relationship/communication with regard to the adolescent bedroom, adolescent bedroom design, and adolescent physical development (see Appendixes B, C, and D). Separate questionnaires were developed for boys and

girls, with the only difference between the two versions being two of the five questions that were asked pertaining to pubertal development. The specific measures used in the extensive questionnaire are described below, with examples provided from each measure.

Demographic Information

In addition to questions pertaining to grade in school, gender, and age, the following questions were asked for the purpose of obtaining descriptive information on the participants' home environments: "How many people (including yourself) live in your home?"; "During the past year have you changed the location of your bedroom?"; "Where is your bedroom located?"; "How many bedrooms are there in your home?"; and "During your typical 7 day week, the number of hours that you spend awake and asleep in your bedroom are (hours spent each week awake in your bedroom; and hours spent each week asleep in your bedroom)."

Positive/Negative Passive, and Active Genotype-Environment Effects Measure (PAG-EE)

To obtain data on biological and social (G-E) sources of influence on bedroom furnishing/arranging/decorating, and adolescents' actual active role in bedroom design, the PAG-EE measure (Taylor, 2003) was used. The PAG-EE is composed of 3 sections of questions (55 items). The first section includes 13 questions related to *adolescent selected sources of influence on bedroom design.* The overall theme for the section is: "How often do the following people and things influence how you furnish/arrange/decorate your bedroom?" Some examples include: "Your mother," "Your friends," "The media (Examples: TV, movies, music, newspaper or magazine

ads)," "Your religion," and "Your activities outside of class (Examples: sports, Boy or Girl Scouts, music lessons)." In the second section, the 11 survey items include those related to *adolescent activity in bedroom design resource procurement*, for example: "How often do you ask your father for money so that you can purchase things for your bedroom?" "How often do you ask your mother to purchase decorations or small items for your bedroom?" "How often do you use your own money (allowance, money you've earned, gift money, etc.) to purchase things for your bedroom?" and "How often do you make things specifically for your bedroom?" The third section assesses *positive/negative passive genotype-environment effects in the bedroom design context*, examples from the 31 questions include: "How often do you and your mother work together to furnish/arrange/decorate your bedroom?" "How often do you and your father agree about how your bedroom should be furnished/arranged/decorated?" "If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your mother find a solution that you both are satisfied with?" "How often do you make your own decisions about how to furnish/arrange/decorate your bedroom?" "How often does your father give you the freedom to choose how your bedroom is furnished/arranged/decorated?" "How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?" "How often do you and your father disagree or argue about the cleanliness/neatness of your bedroom?" and "How often does your mother give you the privacy you want in your bedroom?" Participants provided responses about both mothers and fathers for each type of question in the survey using a

Six-point Likert scale: (Never, Almost never, Sometimes, Most of the time, Almost always, and Always, plus a "Does not apply to you" response).

Adolescent's Design Activity in the Bedroom Environment

Information was obtained from the participants with regard to their past bedroom design activity (previous year), past and present desired bedroom design changes and additions, wall space coverage, current bedroom acceptance (dislike-like), and bedroom design preferences. The questions that were used to operationalize these constructs are explained below.

Past bedroom design activity. With regard to past bedroom design activity, two questions were asked. One question assessed the adolescent's frequency of furnishing/arranging/decorating his or her bedroom in the past year (Five response options: Almost daily, Once a week, Once a month, 3-6 times only during the entire year, Almost never). The other item requested a written description of what changes and additions had been made to the bedroom in the past year.

Wall space coverage, current bedroom acceptance, changes and additions, and Adolescent Bedroom Design Checklist (ABDC). Wall space coverage was assessed using the question, "How much of the wall space in your bedroom is covered with things? (Five response options: None of your bedroom wall space has things on it, Your bedroom wall space has a few things on it, About half of your bedroom wall space has things on it, Most of your bedroom wall space has things on it, and Your bedroom wall space is completely covered with things)." The degree of acceptance (dislike-like) for current bedroom design was assessed so that comparisons could be made to the selections on the

Adolescent Bedroom Design Checklist (ABDC, Taylor & Jones, 2003) (explained below) and to the positive/negative passive G-E effect. The following question was asked, "Circle one of the numbers (1-9) below that represents overall how much you dislike-like the way your bedroom is now furnished/arranged/decorated." Response options for this question included nine "smiley faces" and accompanying Likert verbal descriptions from the 9-point hedonic scale (Dislike Extremely, Dislike Very Much, Dislike Moderately, Dislike Slightly, Neither Like nor Dislike, Like Slightly, Like Moderately, Like Very Much, and Like Extremely; Jones, Peryam, & Thurstone, 1955; Peryam & Pilgrim, 1957). A 7-point version of the 9-point hedonic scale and "smiley faces" was successfully used in obtaining temporal hedonic responses from adults (Taylor & Pangborn, 1990). Likewise, among children (5-10 years old), both the hedonic scale and a face scale have been documented to effectively discriminate among samples. Specifically, Kroll (1990) determined that the 9-point versions of these scales were either equivalent with or superior to the 7-point versions of these scales in this group of children. Additionally, the 9-point hedonic scale has been useful for evaluating dislike-like for a wide variety of consumer products, and the validity and reliability of the scale have been documented (Stone & Sidel, 1993).

The next question requested written descriptions of a current desired bedroom change and a current desired bedroom addition, as a comparison to the past year's bedroom changes and additions descriptions, "If you could change one thing about your bedroom it would be (briefly describe the change)" and "If you could add one thing to your bedroom it would be (briefly describe the addition)." Then, using the ABDC, a multi-category checklist of bedroom design items, each adolescent designed a bedroom

of his or her choice. The ABDC includes bedroom items with side-by-side spaces where adolescents check one of the following four responses, "Have in my bedroom and satisfied with it," "Have in my bedroom, but would like more or to replace with a different one," "Don't have but would like to have in my bedroom," and "Don't have and don't want to have in my bedroom." The ABDC categories include: *Furniture, Electronics, Remodeling,* (each having 12 items and "other") *and Decorations* (55 items and "other"). After the participants designed their bedrooms, they chose and listed 10 items, from the checklist items that they would *most like* to include in their bedrooms.

Finally, two questions were asked, the first one to determine how similar/dissimilar their hypothetically designed bedroom was to their current bedroom, (Five point Likert scale: Not at all like your bedroom, Almost nothing like your bedroom, Somewhat like your bedroom, Almost the same as your bedroom, and The same as your bedroom). The second of the final two questions was asked only of those participants who designated their designed bedroom as different than like their current bedroom. This question was asked to determine the reason behind the difference (choice from eight responses and "Other"), for example, "Your parent(s) designed your bedroom when you were younger and you haven't changed it," and "You have thought about how your bedroom looks, but you've been too busy doing other things."

Height and Weight Self-Report

Adolescents were asked to self-report height in feet and inches, and weight in pounds. Inflation and underreporting of height and weight data may occur, especially among early-maturing girls who do not like how much they weigh, and if very tall, their

height, also. For boys, who mature one and a half years on average behind girls (Petersen, Crockett, Richards, & Boxer, 1988), inflated estimates of both height and weight may occur; except in the case of boys who are obese, underreporting may occur. Thus, accuracy of the self-reports may be in question with regard to height and weight, as some participants will underreport while others will over report values. This is not a major concern, however, because the data were treated in aggregate form and not used on an individual basis.

Pubertal Status

A modified version of The Pubertal Development Scale (PDS) (Petersen et al., 1988) was used. The PDS is a measure of pubertal status; it includes five questions for both genders, three of which are the same for boys and girls: growth spurt in height, skin change, and pubic hair. The two other items for boys are voice change and facial hair growth; while the two additional items for girls are breast development and menarche. A four-point Likert scale (No development, Development has barely begun, Development is definitely underway, or Development is already completed) accompanies each of the questions with the exception of a dichotomous response option (Premenarcheal or Postmenarcheal) for girls with regard to menarche. The PDS was modified for this investigation for the purpose of increasing the clarity of the questions for self-report survey use. The need for modification was evident because the original PDS assessment uses an interview format that allows researchers to answer questions and provide clarification as needed. In this investigation, for example, instead of "growth spurt in height," "growth spurt in height (growing a lot in height quickly)" was used, and instead

of "skin change," "skin change (pimples or zits)" was used. Girls responded to the question, "Have had one or more menstrual periods? (No/Yes)" to obtain information about menarche.

Reliability and validity estimates for the PDS have been documented. Reliability of the PDS was reported between .68 and .83, having a median alpha coefficient of .77 (Petersen et al., 1988). Thus, according to Petersen et al., the adolescents gave consistent responses across the five pubertal indicator categories.

The alpha coefficients for this study were similar to those previously reported by Peterson et al. (1988). For boys, the alpha coefficient was .80, .77 for eighth-grade boys and .81 for ninth-grade boys. The alpha coefficient for girls was .61, .55 and .61, for eighth-grade girls and ninth-grade girls, respectively. Although the alpha coefficients for girls were slightly lower than the corresponding values for boys, they were deemed adequate for the purposes of this study.

Validity of the PDS has been established in several ways, using correlation analyses with: physician reports (.61-.67), Sexual Maturation Scale self-reports using pictures or drawings as references (.72-.80), interviewer ratings (.41-.79), and the age when most rapid growth occurs -.40 to -.66 for boys, and -.46 to -.65 for girls (Petersen et al., 1988). Further, Peterson et al. explained that in the case of "age when most rapid growth occurs," the negative correlations include early-maturing adolescents who, when younger, experienced their most rapid growth. These validity assessments lead Petersen et al. to conclude that the PDS is a valid measure of pubertal status.

With regard to this study, validity of the PDS was determined by correlating age with the pubertal index. The correlation coefficients were: $r = .33$ ($p < .001$) for girls,

and $r = .26$ ($p < .01$) for boys. These values indicate that the PDS functioned as expected in this age-restricted sample.

Pilot Testing of Extensive Questionnaire

Several adolescents pilot tested the extensive questionnaire. Questions that were deemed confusing were modified to increase clarity. The primary change, however, was that the pubertal items were moved from the front to the back of the questionnaire. This was done to minimize the effect of the sensitive nature of these items on the participants' willingness to complete the questionnaire. The time necessary to complete the questionnaire was documented, and was reported to be approximately 60 minutes.

Research Design

Due to the exploratory nature of this study, a cross-sectional design was used to collect data from adolescents representing groups based on age, grade, gender, and pubertal status at one point in time. The limitation of a cross-sectional design is that change in individuals over time cannot be determined. The independent variables were genotype-biological influences (gender, age, pubertal status, pubertal timing, height to weight ratio, parents), social influences, positive/negative passive G-E effects, and bedroom design preferences. Dependent variables were bedroom design preferences, bedroom design activity, and bedroom design acceptance (dislike-like).

Procedures

Approval for this study was obtained from the Institutional Review Board for the Protection of Human Subjects at Utah State University, the participating school district, and the participating eighth and ninth grade center. As previously mentioned, parent consent/student assent forms were sent home with the brief questionnaire for Phase I of the study. The consent forms indicated, that with permission by parent and by student, the student would participate in Phase I of the investigation (brief questionnaire), and if selected by the investigators, would also participate in Phase II of the investigation (extensive questionnaire). A 1-week period was given for the return of the consent forms and brief questionnaires. During this time period the school held parent-teacher conferences. While students and parents attended the evening conferences, the researcher sat at an information table near the PTA information table, with a sign identifying the research study, and additional consent forms-brief questionnaires. As parents and students walked by the information table, the researcher asked them if they had heard about the study, invited them to participate if they were not aware of the study, and answered questions regarding the study.

Following selection of participants for the Phase II portion of the study, the extensive questionnaires and directions for their completion were taken to the schools where the sixth hour teachers distributed them to the eligible students. To insure that boys received "boy" questionnaires and girls received "girl" questionnaires, individual class lists with student participants' names, gender, and year in school were attached to the appropriate questionnaires. An explanation sheet regarding Phase II, and pre-labeled

tickets for a lottery type drawing (name and grade) were included with each of the teachers' class lists-questionnaire packets (Appendix E). The participants were given 1 week to complete the questionnaires. Near the end of the 1-week period, a school-wide announcement was made to remind participants to complete their surveys and return them the next day. Participants returned their extensive questionnaires in manila envelopes to their sixth hour teachers. Upon return of the extensive questionnaires, the sixth hour teachers gave the participants pre-labeled tickets. The participants took their tickets to the front office where they placed the tickets in one of four specially designed and designated boxes: eighth-grade girls, eighth-grade boys, ninth-grade girls, and ninth-grade boys. The participants' names were entered in a drawing for a $100 gift certificate. The school secretary made the anonymous selections from each of the four boxes, while the researcher observed. Four $100 gift certificates were awarded, one per gender-grade combination.

Data Analyses

The psychometric soundness of the PAG-EE measure had not been established prior to this investigation. For this reason, exploratory factor analyses were conducted to establish the construct validity of the measure. In addition, exploratory factor analyses were used to analyze data collected from the ABDC. Using exploratory factor analyses the number of factors that were important for explaining the theoretical concepts of the measures was identified. The specific items that best explained each factor were identified, and a name was assigned to each factor (scale) based on the meaning of the items. Face validity of the measures was determined by the extent to which the scales

represented the constructs that were measured. To assess the reliability of the PAG-EE and the ABDC, Cronbach alpha coefficients were computed on the scales. The Cronbach alpha coefficient indicates how well the items within a scale "hang together," that is, to what degree participants responded to these items in similar ways. The larger the Cronbach alpha value (between 0-1), the more likely it is that the items measure the construct consistently.

RESULTS

Findings from this study of adolescent bedroom preference, activity, and design are presented in this chapter. Specifically, this chapter is divided into three main sections of results: Validity and Reliability of the PAG-EE ("Passive" and "Get") scales, Preferences, and Activity.

Validity and Reliability of the PAG-EE ("Passive" and "Get") Scales

"Passive" Scales

Several research questions were based on data from the "Passive" and "Get" scales. For that reason, exploratory factor analyses were used to establish the construct validity of the PAG-EE. The two sections of the PAG-EE that were evaluated were: *positive/negative passive genotype-environment effects in the bedroom design context* ("Passive" scale), and *adolescent activity in bedroom design resource procurement* ("Get" scale).

For the *positive/negative passive genotype-environment effects in the bedroom design context,* eight factors were identified among the 31 questionnaire items. The eight factors were labeled: Resolution, Free Choice, Intrusion, Ignore, Solution, No Choice, Argue, and Work Together. The eight subscales yielded alpha coefficients ranging from .74 to .91. The correlations between specific factors indicate that the measure behaved as expected. For example, constructs that were convergent included, free choice with resolution, $r = .54$; resolution with solution, $r = .47$; intrusion with no choice, $r = .32$; and ignore with no choice, $r = .20$.

Free Choice and Resolution

It would be expected that adolescents who: (1) were given the freedom to choose how their bedrooms were designed and decorated, (2) made their own decisions regarding these matters, and (3) had privacy in their bedrooms, would feel as though their parents: (1) agreed with them about their bedroom design and decoration, (2) found solutions with them in these matters, and (3) listened to them. A shared variance of 29% indicates the strong convergent nature of these scales.

Resolution and Solution

Likewise, the resolution and solution scales (22% shared variance) converged. The resolution items were indicative of resolutions between adolescents and their parents regarding how the bedroom was furnished/arranged/decorated. The solution items reflected solutions between adolescents and their parents with regard to bedroom cleanliness/neatness. So, it makes sense that the skills necessary for adolescents and parents to find solutions and make resolutions would be common whether the issue was bedroom design and decoration, or cleanliness/neatness.

Intrusion and No Choice

The Intrusion scale included items indicative of fathers making design and decoration changes to their adolescents' bedrooms without permission, and both fathers and mothers making these changes that the adolescent then disliked. Interestingly, the item for mothers making design and decoration changes to their adolescents' bedrooms without permission was not included in this scale. As previously discussed, the no choice

scale represents parents having the final word regarding the adolescent bedroom design and decoration. Thus, questions that address parents who were perceived as intrusive and parents who were perceived as having the final word, share 10% common variance.

Ignore and No Choice

A small (4%), but statistically significant portion of the variance was shared between ignore and no choice. The no choice items described parents having the final word regarding bedroom design and decoration. Related to the no choice items, the Ignore items pertain to adolescents who designed and decorated their bedrooms the way they wanted to, following their decisions to ignore their parents' opinions regarding bedroom design and decoration.

Argue and Solution, r = -.24

Divergent validity of the measure was evident in the relationship between argue and solution. Both of these scales only included items related to bedroom cleanliness/neatness. The shared variance for these scales was six percent, indicating that sometimes when arguments occurred about bedroom cleanliness/neatness, adolescents and parents were not able to arrange a solution that they were both satisfied with.

Appendix F lists the survey items that were included in each of the factors (scales). The Cronbach alpha coefficients indicate the degree to which the items in each of the scales consistently measure the same thing. The Cronbach alpha coefficients for this section of the PAG-EE ranged from .74-.91, indicating that reliability was quite high for all eight scales.

Table 1

Pearson Correlation Coefficients (r) Among the Eight PAG-EE Positive/Negative Passive Genotype-environment Effects Scales[a]

		Resolution	Free choice	Intrusion	Ignore	Solution	No choice	Argue	Work together
Resolution	(6)[b]	.91	.54	-.02	.04	.47	.19	-.09	.22
Free choice	(5)		.83	.00	.06	.35	.06	-.07	.10
Intrusion	(3)			.76	.27	.10	.32	.19	.03
Ignore	(2)				.88	-.02	.20	.18	-.26
Solution	(2)					.88	.15	-.24	.15
No choice	(2)						.87	-.01	.10
Argue	(2)							.74	.02
Work tog.	(6)								.89

Note. range for n = (231-234).
[a]Diagonal numbers are Cronbach alpha coefficients
[b]n of items

"Get" Scales

The factor analysis of the *adolescent activity in bedroom design resource procurement* ("*get*") section of the PAG-EE resulted in four factors. The four factors were: (1) asking Mother/Father for money for bedroom items, and asking Mother/Father to purchase small items for the bedroom (4 items); (2) asking Mother/Father to purchase large items for the bedroom (2 items); (3) seeking out things for the bedroom, and making things for the bedroom (3 items); and (4) Using own money to purchase items for the bedroom (1 item). Table 2 contains Pearson correlation coefficients (r), and Cronbach alpha coefficients for the four "get" scales. All of the Pearson correlation coefficients were positive, thus the measure performed as expected for the "get" scales.

Table 2

Pearson Correlation Coefficients (r) Among the Four PAG-EE Adolescent Activity in Bedroom Design Resource Procurement ("Get") Scales[a]

	Ask M/F for money, and to purchase small items	Ask M/F to purchase large items	Seek out and make things	Use own money
Ask M/F for money, and to purchase small items	.85	.54	.36	.13
Ask M/F to purchase large items		.88	.36	.10
Seek out and make things			.58	.28
Use own money				[b]

Note. range for n = (232-234)
[a]Diagonal numbers are Cronbach alpha coefficients
[b]Single item indicator

The Cronbach alpha coefficients for the "get" scales ranged from .58-.88. Thus, the values indicate moderate to high reliability of the scales (Use own money included only one item, thus a Cronbach alpha value is not reported for this factor).

Biological (Genotype) Influences and Bedroom Design Preferences

The data from each section of the Adolescent Bedroom Design Checklist (ABDC) were analyzed using stepwise discriminant analyses for the following criterion (grouping) variables: gender, grade, and puberty. The ABDC sections included: *Furniture, Electronics, Remodeling, Wallpaper, Wallpaper border, Bedspread, Window coverings,*

Flooring, and *Decorations*. The overall research question that was asked was, "Are biological (genotype) influences related to the bedroom design *preferences* of adolescents?" To compare preferences for items in the bedrooms to those things that were not desired in the bedrooms, the ABDC items were coded so that the first three categories were assigned the number one, while the fourth category was assigned the number zero. Thus, the category, "Don't Have and Don't Want to Have" was assigned zero, while "Have in my bedroom and satisfied with it," "Have in my bedroom, but would like more or to replace with a different one," and "Don't have but would like to have in my bedroom" had the number one assigned to them.

Gender and Preferences

The research question related to gender and preferences was, "Is gender related to bedroom design *preferences*?"

Furniture

The following two *furniture* items were identified in a stepwise discriminant analysis as important for identifying gender: make-up table with mirror, and sofa (couch) and chair set. For the make-up table with mirror (first variable entered), boys' and girls' preferences were 0 and 70%, respectively. The second variable was sofa (couch) and chair set with preferences of 69 and 50 for boys and girls, respectively. These two variables explained 52% of the variance in the *Furniture* x Gender analysis.

Electronics

Four *electronic* items were important for designating gender preferences. The items were entered into the equation in the following order: electronic games, boys 80% and girls 53%; telephone, boys 69% and girls 88%; sewing machine, boys 1% and girls 20%; and refrigerator, boys 50% and girls 41%.

Remodeling

The item, own bathroom attached to your bedroom, was the only *remodeling* item that was useful to separate preferences by gender. A higher percentage was reported for girls (84%) than for boys (72%). However, the variance explained by this item was very low (2.25%).

Wallpaper

In the following order, floral (flowers), stars and moons, and athletic (favorite sports team or favorite sporting equipment) types of *wallpaper* were of importance to the gender analysis. For girls, the floral, and stars and moons *wallpapers* were noted at substantially higher levels (20% and 37%) than they were for boys (1% and 16%). The preference percentages for athletic were closer for gender, however, boys checked this type of *wallpaper* approximately 1.5 times more often (38%) than did girls (24%).

Border of Wallpaper

As reported above, the three *wallpaper* types that were important for designating gender preferences, were also important for *Wallpaper border* x Gender analysis; these were floral, athletic, and stars and moons (listed in order of entry). Also, the relative

differences for gender preferences within these items were similar for *wallpaper* and *wallpaper border*: floral 0% and 31%, athletic 35% and 23%, and stars and moons 12% and 38%, for boys and girls, respectively.

Bedspread

As for the case for *wallpaper* and *wallpaper border* findings, floral (flowers), and stars and moons designs were entered (first and second) for preferences of bedspread types according to gender. The percentages for girls were 40 and 31, compared to 0% and 1% for boys, for floral, and stars and moons, respectively.

Window Coverings

Girls may have been thinking of their bedrooms according to themes, as suggested by the design choices of floral, and stars and moons for *wallpaper*, *wallpaper border*, and *bedspread*. Likewise, the single window covering item that was identified in the discriminant analysis for gender was curtains or drapes that match the bedspread. The preference percentages for boys and girls were 33 and 71, respectively.

Flooring

The theme concept was also evident for *Flooring* x Gender, with a rug that coordinates with bedroom design (any size but not wall-to-wall carpet). The preference percentage for girls was greater than twice the value for boys, 49 and 21, respectively. The second and final variable entered was wood. The percentages for this item for girls and boys were 30 and 14, respectively; again, the boys' preference percentage was less than half of the girls' preference percentage.

Decorations

All of the *decoration* items were entered into a stepwise discriminant analysis to identify the important variables for gender preference designation (see Table 3). Of the 55 items entered, the following nine were identified by the discriminant analysis in the order listed (most to least important): jewelry (earrings, necklaces, etc.), make-up and/or hair accessories, dolls (baby, Barbie, porcelain, etc.), things for building or that you have built (models of things, structures, etc.), posters of female movie stars or models, pictures of your brother(s) and/or sister(s), toys (please describe), candles and candleholders, and chess set or other board games (non-electronic). These nine items combined to explain 81% of the variance in *Decorations* x Gender preferences.

Table 3

Percentages for Preferences Coded as "Have and Want:" Decorations x Gender

Decoration item	% Boys	% Girls
Jewelry (earrings, necklaces, etc.)	16	97
Make-up and/or hair accessories	0	77
Dolls (baby, Barbie, porcelain, etc.)	0	59
Things for building or that you have built (models of things, structures, etc.)	74	41
Posters of female movie stars or models	32	29
Pictures of your brother(s) and/or sister(s)	47	90
Toys	52	38
Candles and candleholders	16	66
Chess set/Board games (non-electronic)	46	26

Most Important Items to Differentiate Gender Across ABDC Sections

The items that were identified as most important from each of the ABDC sections were entered together into a final stepwise discriminant analysis where gender was employed as the criterion variable once again. Based on this analysis, the following 10 items were selected in order of importance (Table 4): jewelry, dolls, make-up table with mirror, things for building or that you have built, sofa (couch) and chair set, posters of female movie stars or models, pictures of your brother(s) and/or sister(s), toys, make-up and/or hair accessories, and own bathroom attached to your bedroom. Of the 10 items, 7 were from the *decoration* section, 2 were *furniture* items, and 1 was a *remodeling* item. The canonical correlation for these items with gender was .92. The preference percentages by gender for these items are listed in Table 4.

The *furniture* and *decoration* sections of the ABDC were the most important sections for designating preferences by gender. The *furniture* items included: make-up table with mirror, and sofa (couch) and chair set. Large differences were noted between the genders for these two items, with girls preferring the former, and boys preferring the later. Sizeable differences in preference were also evident for six of the seven *decoration* items. Girls indicated greater preferences than did boys for the following three items: jewelry (earrings, necklaces, etc.), dolls (baby, Barbie, porcelain, etc.), and pictures of your brother(s) and/or sister(s). In contrast, one item, things for building or that you have built (models of things, structures, etc.) was preferred at twice the level for boys as for girls. Finally, the *decoration* item, posters of female movie stars

or models, was preferred by both boys and girls, it added something unique to the analysis that was not accounted for by the other items.

Thus, the discriminant analyses provide substantial support for concluding that bedroom design preferences are related to gender. Further, girls had significantly more kinds of items in their bedrooms than did boys.

Frequency analyses were conducted to compare the "have" bedroom items ("Have in my bedroom and satisfied with it," and "Have in my bedroom, but would like more or to replace with a different one") and percentages of these, for girls and boys. A minimum value of 60% was used as the criteria for selection of items to include in the lists for girls and boys (Tables 5-7).

Table 4

Percentages for Preferences Coded as "Have and Want:" Most Important Items Across ABDC x Gender

ABDC section	Item	% Boys	% Girls
Decoration	Jewelry (earrings, necklaces, etc.)	16	98
Decoration	Dolls (baby, Barbie, porcelain, etc.)	0	63
Furniture	Make-up table with mirror	0	66
Decoration	Things for building or that you have built (models of things, structures, etc.)	77	37
Furniture	Sofa (couch) and chair set	70	43
Decoration	Posters of female movie stars or models	32	26
Decoration	Pictures of your brother(s) and/or sister(s)	50	90
Decoration	Toys	49	38
Decoration	Make-up and/or hair accessories	0	76
Remodeling	Own bathroom attached to your bedroom	77	84

Table 5

Frequencies (>/ = 60%) of "Have" Bedroom Items for Both Girls and Boys

ABDC Section	Item	% Girls	%Boys
Electronics	Alarm clock	96.9 (127)[a]	93.3 (105)
Decorations	Table lamp and/or ceiling lights	92.2 (128)	80.0 (103)
Electronics	CD player	91.5 (125)	85.7 (101)
Furniture	Mattress for a bed	86.8 (119)	83.8 (102)
Decorations	Religious pictures and/or other religious items	82.2 (128)	61.9 (105)
"	Awards, certificates, trophies	81.0 (128)	82.9 (104)
"	Souvenirs	79.8 (128)	63.8 (105)
Remodeling	Enough heating and/or air-conditioning	78.3 (126)	76.2 (103)
Decorations	Books that you like to read	78.3 (128)	73.3 (105)
"	Piggy bank or other money holder	73.6 (128)	68.6 (104)
Wall and/or ceiling paint	Wall and/or ceiling paint	69.0 (120)	61.9 (99)
Electronics	Stereo	67.4 (128)	72.4 (104)

[a] *n* values in parentheses

Many of the "have" bedroom items (Table 5) for both girls and boys are as would be expected (e.g., mattress for a bed, enough heating and/or air-conditioning, table lamp and/or ceiling lights, and alarm clock). Items that fit the (>/ = 60%) criteria, and would not be necessarily expected, included religious pictures and/or other religious items, and souvenirs; girls had both of these items at substantially higher percentages than did boys. Interestingly, the percentages were very similar for both girls and boys for the item, awards, certificates, and trophies. Refer to Table 5 for the complete list of girls and boys "have" items.

The frequencies of "have" bedroom items (Tables 6 and 7) where one gender had greater than or equal to 60%, and the other gender had less than 60% were quite distinct both in the number and kind of items. Specifically, the boys' "have" list included only two items, whereas the girls' "have" list included eight items. Further, traditional masculine and feminine items constituted the respective boy and girl lists. For example,

the boys' "have" list (Table 6) included athletic or sporting equipment, and things for building or that you have built. There was a moderate percentage difference for boys and girls for athletic or sporting equipment, 67.6% and 58.9%, respectively. However, boys "had" things for building or that you have built at nearly twice the rate as did girls. In contrast, the girls' "have" list (Table 7) included jewelry, and make-up and/or hair accessories at more than ten fold the percentages as compared to boys. Further, a rate of almost 2:1 was reported for stuffed animals (cloth) for girls and boys, respectively. Girls also "had" pictures (pictures of your friends, pictures of yourself that show who you are, and pictures of your brother(s) and/or sister(s)) at much greater frequencies than did boys. Moderately higher percentages were reported for girls as compared to boys for artistic things that you have made, and magazines that you like to read.

Table 6

Frequencies (>/= 60%) of "Have" Bedroom Items for Boys; Girls <60%

ABDC Section	Item	%Boys	% Girls
Decorations	Athletic or sporting equipment	67.6 (128)[a]	58.9 (104)
"	Things for building or that you have built	61.9 (128)	33.3 (102)

[a] *n* in parentheses

Table 7

Frequencies (>/ = 60%) of "Have" Bedroom Items for Girls; Boys < 60%

ABDC Section	Item	% Girls	% Boys
Decorations	Jewelry	92.2 (126)[a]	9.5 (102)
"	Stuffed animals (cloth)	85.3 (128)	45.7 (104)
"	Pictures of your friends	82.9 (128)	23.8 (103)
"	Make-up and/or hair accessories	72.9 (128)	1.9 (105)
"	Pictures of yourself that show who you are	69.8 (127)	37.1 (105)
"	Pictures of your brother(s) and/or sister(s)	66.7 (128)	22.9 (104)
"	Artistic things that you have made	63.6 (127)	51.4 (103)
"	Magazines that you like to read	60.5 (127)	49.5 (105)

[a] *n* values in parentheses

Grade and Preferences

In the original set of research questions, the "age" of the participants was considered an important independent variable for study. However, following an examination of the data, it was noted that there was little variation in age within this sample. For this reason, the data were analyzed by grade rather than by age. Thus, the research question addressing grade and preferences is, "Is grade related to bedroom design *preferences*?" The grade data will be presented by gender.

Eighth- Versus Ninth-Grade Girls

Furniture, electronics, remodeling, window coverings, and flooring. For girls, individual discriminant analyses were run for *furniture, electronics, remodeling, window coverings, and flooring*. For each of these ABDC sections, no variables were identified as discriminating between eighth- and ninth-grade girls.

Wallpaper, and border of wallpaper. The stars and moons type of *wallpaper* and *border of wallpaper* was identified in the discriminant analyses as the distinguishing item for eighth- and ninth-grade girls. The percentages were almost identical for the two ABDC categories, with *wallpaper*, .51 and .28, and *border of wallpaper*, .54 and .27, for eighth- and ninth-grade girls, respectively.

Bedspread. Two *bedspread* styles, athletic, and old fashioned, differentiated between the eighth- and ninth-grade girls. The eighth graders indicated higher preferences for both *bedspread* styles as compared to the ninth-grade girls: athletic .38 and .14, and old fashioned .23 and .0.

Decorations. A discriminant analysis for *decorations* identified the following five items to distinguish eighth- and ninth-grade girls, respectively: lava lamp or spinning disco ball lamp (.91 and .62), wallclock (.70 and .39), globe or maps (.28 and .12), paintings, drawings, sculptures made by other people (.63 and .71), and items that reflect your ethnic and/or cultural identity (.70 and .44). These items are listed in order of importance.

Most important items to differentiate eighth- and ninth-grade girls across ABDC sections. The list of most important items across ABDC sections for differentiating eighth- and ninth-grade girls, is identical to the list of items identified in the *decorations* category; the importance for the items was the same with the exception of an order reversal for paintings, drawings, sculptures made by other people, and items that reflect your ethnic and/or cultural identity. These results illustrate the importance of the *decorations* category for this subsample of Grade x Girls.

Eighth- Versus Ninth-Grade Boys

Furniture. The following *furniture* item was identified in the discriminant analysis for differentiating eighth- and ninth-grade boys: canopy bed. The percentages for canopy bed were (.0 and .27) for eighth- and ninth-grade boys, respectively.

Electronics. Refrigerator and sewing machine were the two *electronics* items that distinguished eighth- and ninth-grade boys. Eighth grade boys more than ninth grade boys indicated preferences for refrigerators for their bedrooms, .64 and .37, respectively. The values for sewing machine were low for boys in both grades, .13 and .0, for eighth and ninth graders, respectively.

Remodeling. Only one item, secure lock to your bedroom door, was entered into the discriminant analyses for *remodeling* for eighth- and ninth-grade boys. The percentages were high for boys in both eighth- and ninth-grades, .91 and .75, respectively.

Border of wallpaper. The cartoon or Disney type of *border of wallpaper* was selected in the discriminant analyses as the distinguishing item for ninth-grade boys. Low percentages were reported for the eighth- and ninth-grade boys, .0 and .13, respectively. The canonical correlation was also low (.20).

Window coverings. The single *window coverings* item, mini-blinds, differentiated eighth- and ninth-grade boys. Ninth graders had lower preferences for this item than did eighth graders, .30 and .51, respectively.

Wallpaper, bedspread, and flooring. Individual discriminant analyses were run for *wallpaper, bedspread,* and *flooring*, for eighth- and ninth-grade boys. For each of

these ABDC sections, no variables were identified as discriminating between the two groups.

Decorations. A discriminant analysis for *decorations* identified the following three items to distinguish eighth- and ninth-grade boys, respectively: pictures of your brother(s) sand /or sister(s) (.28 and .64), signs on the outside of your door for other people to read (.73 and .40), and full-length mirror (.50 and .30). These items are listed in order of importance. The canonical correlation for the decorations analysis was .53.

Most important items to differentiate eighth- and ninth-grade boys across ABDC sections. For the discriminant analysis that included all of the important items across the ABDC sections, the canonical correlation was .47. The list of items selected as most important across ABDC sections, for differentiating eighth- and ninth-grade boys, includes two of the three items identified in the *decorations* category. In order of importance, the following "most important ABDC items" for eighth- and ninth-grade boys, respectively, were: pictures of your brother(s) and /or sister(s) (.34 and .65), signs on the outside of your door for other people to read (.73 and .47), and mini-blinds (.50 and .31).

Summary for Eighth- and Ninth-Grade Boys and Girls

Within gender discriminant analyses resulted in differentiating eighth graders from ninth graders. Further, different ABDC sections, and items within the sections were important for girls and boys. This was especially true for boys, who had differences in preference percentages between eighth and ninth graders for a wider range of section items than did girls. For example, differences in preferences for eighth- and ninth-grade

boys included functional and personal items such as: refrigerator, secure lock to your bedroom door, mini-blinds, signs on the outside of your door for other people to read, and full-length mirror. For all of these items, higher percentages were identified for eighth-grade boys as compared to ninth-grade boys. Likewise, for girls, most of the percentages for preferred section items were higher for eighth graders when compared to ninth graders. In contrast to boys, girls' preferences were more "decorative" as opposed to personal and functional; these items included *wallpaper*, *wallpaper border*, *bedspreads*, and *decorations*. However, for both boys and girls, the *decorations* section of the ABDC was the most important category. The discriminant analyses, for the most important items for distinguishing eighth and ninth graders, identified *decorations* for two of the three items for boys, and all five items for girls (Table 8). Also common for both boys and girls was that the *flooring* section was not helpful for separating eighth graders from ninth graders.

The grade of the participant (within gender) was identified as an important variable related to preferences for bedroom items. Generally, for both boys and girls, eighth graders had higher preference percentages than did ninth graders for the ABDC section items identified in the discriminant analyses.

Puberty and Preferences

Within gender discriminant analyses were conducted to determine the relationship between pubertal status and design preferences. Originally, the plan was to study pubertal timing in addition to pubertal status. However, due to the similarities between

Table 8

Percentages for Preferences Coded as "Have and Want:" Most Important Items Across ABDC x Grade (Within Gender)

Gender	ABDC Section	Item	Eighth-grade	Ninth-grade
Girls				
(N = 111)	*Decorations*	Lava lamp or spinning disco ball lamp	.87	.61
	"	Wallclock	.68	.39
	"	Globe or maps	.28	.0
	"	Items that reflect your ethnic and/or cultural identity	.66	.44
	"	Paintings, drawings, sculptures made by other people	.62	.69
Boys				
(N = 95)	*Decorations*	Pictures of your brother(s) and/or sister(s)	.34	.65
	"	Signs on the outside of your door for other people to read	.73	.47
	Window coverings	Mini-blinds	.50	.31

pubertal status and pubertal timing in this sample of eighth- and ninth-grade students, it was not useful to study both of these variables.

Pubertal Status and Girls

For the subsample of girls, data from four of the five items of the Pubertal Development Scale were summed to obtain pubertal status values. The reason that only four of the items were used was because the fifth PDS item for girls was about menarche, and this question elicited a dichotomous response. Consequently, this item was not included in the summed pubertal status values for girls. Using the sum of the four items, frequency distributions were examined to separate the girls into two distinct groups: the Lo pubertal status group (N = 72) had summed item values less than or equal to twelve,

while the summed value for the Hi pubertal status group was equal to or greater than thirteen ($N = 45$). Ninety-one percent of the sample of girls was represented in the two pubertal status groups.

Electronics, wallpaper, and decorations. The following category items were identified as important: internet access from *electronics*, animal style *wallpaper*, and from *decorations*, candles and candleholders, lava lamp/disco ball lamp. The Hi pubertal status girls had higher preference percentages than the girls with Lo pubertal status for candles and candleholders .79 and .56, and internet access .77 and .57, respectively. Whereas, the Lo pubertal status girls had higher preference percentages than the Hi pubertal status girls for animal style *wallpaper* .17 and .00, and lava/disco lamp .84 and .64, respectively. The canonical correlations for these analyses were: .35 (candles/candleholders and lava/disco lamp), .21 (internet access), and .22 (animal *wallpaper*).

Most important items across all ABDC categories for Lo and Hi pubertal status girls. Candles and candleholders (*decorations*) and (*wallpaper*) animal style were the two items that were most important from the ABDC categories for distinguishing the Lo and Hi pubertal status girls. For candles and candleholders, the Hi pubertal status girls had a preference percentage of .81, as compared to .51 for the Lo pubertal status girls. For animal *wallpaper*, the Lo pubertal status girls had a preference percentage of .16, as compared to .00 for the Hi pubertal status girls. The canonical correlation for this analysis was .38.

Pubertal Status and Boys

The data from the five items of the Pubertal Development Scale were summed for the subsample of boys. Frequency distributions were examined to separate as many of the boys as possible into two groups at the mid-point. Thus, the Lo pubertal status group ($N = 41$) had summed item values less than or equal to fourteen, while the summed value for the Hi pubertal status group ($N = 39$) was equal to or greater than fifteen. The Lo and High pubertal status groups represented 76% of the sample of boys.

Furniture, Electronics, Border of wallpaper, and Flooring. The following five items differentiated the boys in the Lo and Hi pubertal status groups: air-filled chair, and make-up table from *furniture*, refrigerator from *electronics*, old fashioned style *border of wallpaper*, and Low-pile carpet (wall-to-wall) from *flooring*. The Lo pubertal status boys had higher preference percentages as compared to the Hi pubertal status boys, respectively, for two items: air-filled chair (.44 and .23), and refrigerator (.57 and .37). For the three remaining items, the Hi pubertal status boys had higher percentages than the Lo pubertal status boys, respectively; low-pile carpet (.80 and .55), old fashioned *wallpaper border* (.14 and .0), and make-up table (.5 and .0). For each of the analyses described above, the canonical correlations was less than or equal to .31.

Most important items across all ABDC categories for Lo and Hi Pubertal status boys. A canonical correlation of .32 was calculated for the most important items discriminant analysis. The two items included were low-pile carpet (.58 and .80) and old fashioned *wallpaper border* (.02 and .15) for Lo and Hi pubertal status boys, respectively.

Summary for Lo and Hi Pubertal Status for Girls and Boys

Discriminant analyses differentiated Lo and Hi Pubertal Statuses for girls and for boys. Within the gender categories, four individual items, and two *most important items* were used to distinguish girls in the Lo and Hi pubertal status groups. For boys Lo and Hi pubertal status groups, five single items, and two *most important items* were identified. The canonical correlations for the *most important items* for girls and for boys were .38 and .32, respectively.

Social and Parent Influences on Bedroom Design Preferences

Data were analyzed for an additional research question regarding preferences, "Is biological parent influence (genotype) and are social influences (genotype driven) related to adolescent bedroom design preferences?" For each category of influence, ABDC items of preference were identified; these findings are reported in Appendix G. Highlights of these findings are reported in the next several paragraphs.

When "mom" was a source of influence 10 items were selected; the strongest correlation coefficient was for items that reflect your ethnic/cultural identity. For "dad," which was the category with the fewest number of items (5), the item with the strongest correlation coefficient was souvenirs.

When the three categories, Younger brother(s) and/or sister(s) [Younger siblings]; older brother(s) and/or sister(s) [Older siblings]; and Grandparent(s) were examined as sources of influence, several specific pictures of family members were included. In addition, for younger siblings as sources of influence, both floral *wallpaper* and floral

border of wallpaper were listed. For "grandparents" *wallpaper* and *wallpaper border* were also selected, in this case the specific design was old fashioned. "Younger siblings," "older siblings," and "grandparents" had 15, 23, and 8 ABDC items of preference associated with them, respectively.

The three categories discussed in the paragraph, above, all listed specific pictures of family members. In contrast, for the friends category, the only pictures of people listed were pictures of friends. In addition to pictures of friends, the friends category included a variety of other items, totaling 45.

For the girlfriend or boyfriend category, 21 ABDC items were identified. Many of these items point to the adolescents' desire for a self-contained bedroom, for example: sofa (couch) and chair set, table and chairs, internet access, refrigerator, telephone, door leading from your bedroom to the outside of the house, fireplace, own bathroom attached to your bedroom, wood flooring, and wall clock. Also interesting was that no positive correlation coefficients were associated with family pictures, however, a negative correlation coefficient for pictures of grandparent(s) emerged.

The older teens category (25 items) was related to positive correlational preferences for magazines that you like to read, posters of female movie stars or models, and posters of male movie stars or models. In contrast, a negative percentage for *bedspread*-cartoon/Disney was listed. The adolescents who identified older teens as sources of influence may be looking to "older or more mature" people for role models.

The influence category media had a relatively high number of ABDC items (47) associated with it as compared to the other influence categories. The three strongest correlation coefficients for the media category included, make-up table with mirror,

posters of male movie stars or models, and room decorations with brand-name labels. These three items also had the strongest correlation coefficients in the category with the most items (54), the popular culture (e.g., other people's bedroom designs). Other ABDC items listed in this category included, full-length mirror, candles and candleholders, jewelry (earrings, necklaces, etc.), make-up and/or hair accessories, pictures of your friends, and pictures of your cousin(s).

Your religion influence category included the ABDC item religious pictures and/or other religious items. This item had the strongest correlation coefficient among all the preference items in the influence categories, $r = .46$. Additional items strongly associated with the category of your religion included bookcase and books you like to read. However, several *electronics* items had negative correlation coefficients associated with them for this category. Likewise, the classes at school influence category had bookcase, books you like to read, and negative correlation coefficients for several *electronics* items. Also having a strong correlation coefficient in the classes at school category was posters/pictures of nature or science.

The category, your activities outside of class (e.g., sports, Boy or Girl Scouts, music lessons) had relations with the ABDC items that were different from the classes at school category. Preference items in the your activities outside of class category (23 items) were *border of wallpaper*-athletic, awards, certificates, trophies, and posters of female athletes.

In summary, adolescent bedroom design preferences are related to the influence categories. Preferences for ABDC items were both uniquely listed as preferences in influence categories, and were found in more than one influence category. "Expected"

relationships among sources of influence and preferences for select ABDC items were evident. For example, "your religion" correlated with religious pictures and/or other religious items; "classes at school" correlated with bookcase, books you like to read, and posters/pictures of nature or science; "activities outside of class" correlated with athletic-type items; and "grandparent(s)" correlated with old fashioned *wallpaper* and *wallpaper border*; and so forth. This is especially interesting given that the "influence" questions and the ABDC measure were not located in close proximity to one another within a relatively long survey.

Preferences For Masculine Bedroom Items Among Girls and the Negative "Passive" G-E Effect

As previously discussed, preferences for bedroom design items were strongly related to gender; girls had feminine items in their bedrooms, and boys had masculine items in their bedrooms. However, boys had almost exclusively masculine items in their bedrooms, while girls' bedrooms contained both feminine and masculine items. Related to these findings, the following question was asked, "Is there a relationship between girls' preferences for fewer feminine items (and more masculine items) and the negative passive G-E effect? Girls who had the following items in their bedrooms (the items were previously identified as important to boys) were compared with girls who did not have or want these items in their bedrooms: sofa (couch) and chair set, athletic or sporting equipment, and things for building or that you have built (models of things, structures, etc.). An ANOVA was used to compare four groups of girls based on the number of "masculine" items (zero, one, two, or three) they possessed for the following negative G-

E passive scales: Intrude, Ignore, No Choice, and Argue. The ANOVA identified a statistically significant difference ($p < .01$) for no choice, but not for the other G-E passive scales. For no choice, the girls with zero masculine items ($n = 19$) had a mean of 7.79, which was significantly different from the three other groups. The means for the three other groups were: 5.46, one masculine item ($n = 41$); 5.14, two masculine items ($n = 49$); and 5.15, three masculine items ($n = 20$).

Preference and Acceptance

The relationships between gender, grade, pubertal status and the 9-point hedonic scale (1-9) assessed dislike-like for how the bedroom was furnished/arranged/decorated. For gender, grade, and pubertal status, the degree of liking was quite high, ranging from 6.96 to 7.47 (like moderately to like very much) on the 9-point hedonic scale. The mean and standard deviation values for degree of liking for gender were: boys (7.39, 1.58), and girls (7.16, 1.80). For grade the corresponding values were: eighth graders (7.39, 1.55) and ninth graders (7.16, 1.81). For pubertal status within gender the mean and standard deviation values were: girls Lo and Hi pubertal status, respectively (6.96,1.70 and 7.11, 2.01); Boys Lo and Hi pubertal status (7.44, 1.61 and 7.47, 1.27). Statistically significant *t* values were not identified for gender, grade, and pubertal status, however.

In addition, preferences for ABDC items were related to the degree of acceptance (dislike-like) on the 9-point hedonic scale. The preference data used for this analysis included the following two categories, "Have in my bedroom and satisfied with it" and "Have in my bedroom, but would like more or to replace with a different one." Further, two groups were identified regarding acceptance, a Lo liking group ($n = 108$) (1-7 on the

9-point hedonic scale) and a Hi liking group (n = 126) (8-9 on the 9-point hedonic scale). A discriminant analysis identified 14 ABDC items (Table 9) that distinguished the Lo and Hi liking groups for preferences, chi-square (14, N = 120) = 95.4; $p < .001$. The canonical correlation equals .75.

The information presented in Table 9 included combined boys' and girls' preferences by Lo and Hi levels of acceptance. As previously discussed, discriminant analyses revealed the importance of gender differences for preferences, thus separate boy and girl discriminant analyses (Table 10) were also conducted for acceptance. Eight and six ABDC items discriminated the Lo and Hi liking groups for boys and girls, respectively. For boys, chi square (8, N = 58) = 42.4; $p < .001$, and the canonical

Table 9

Percentages for Preferences: Most Important "Have" Items Across ABDC x Acceptance Dislike-Like) on the 9-Point Hedonic Scale for Combined Boy and Girl Groups

ABDC Section	Item	Lo liking (1-7)	Hi liking (8-9)
Decorations	Make-up/hair accessories	.53	.20
Border of wallpaper	Floral (flowers)	.03	.17
Remodeling	Plenty of closet space	.43	.69
Flooring	Shag carpet (wall-to-wall)	.05	.22
Bedspread	Solid color (one color only)	.03	.16
Electronics	Microwave oven/toaster oven	.00	.02
Decorations	Souvenirs	.67	.78
"	Pictures of famous people in history	.22	.16
Remodeling	An interesting ceiling shape	.12	.27
Decorations	Camera and photo. supplies	.33	.34
Furniture	Air-filled chair	.18	.05
Decorations	Pictures of places where you've been	.47	.45
"	Globe or maps	.05	.14
"	License plates	.03	.13

correlation = .75. For girls, chi square (6, $N = 64$) = 52.4; $p < .001$, and the canonical correlation = .77.

Table 10

Percentages for Preferences: Most Important "Have" Items Across ABDC x Acceptance (Dislike-Like) on the 9-Point Hedonic Scale for Boys Versus Girls

Gender	ABDC Section	Item	Lo liking (1-7)	Hi liking (8-9)
Boys ($N = 58$)				
	Flooring	Shag carpet (wall-to-wall)	.00	.32
	Remodeling	Plenty of closet space	.40	.71
	Remodeling	An interesting ceiling shape	.00	.34
	Bedspread	Solid color	.00	.21
	Furniture	Air-filled chair	.10	.00
	Decorations	Magazines that you like to read	.35	.45
	"	Posters/pictures of nature or science	.35	.16
Girls ($N = 64$)				
	Border of wallpaper	Floral	.05	.44
	Decorations	Make-up and/or hair accessories	.82	.48
	Furniture	Table and chairs	.00	.08
	Decorations	Jewelry (earrings, necklaces, etc.)	1.00	.88
	Flooring	Rug that coordinates with bedroom design	.15	.36
	Wallpaper	Athletic (Favorite sports team or favorite sporting equip.)	.00	.08

Biological (Genotype) Influences and Bedroom Design Activity

The previous section addressed research questions about biological influences and bedroom design preferences. The next section will address the following question, Are biological (genotype) influences related to the bedroom design activity of adolescents?

Gender, Grade, Pubertal Status, and Bedroom Design Activity

Bedroom Design Frequency

The first survey question used to address bedroom design activity for gender, grade, and pubertal status was "During the past year, how often did you furnish/arrange/decorate your bedroom?" Respondents indicated their level of activity on a scale where 1 = Almost daily, 2 = Once a week, 3 = Once a month, 4 = 3-6 times only during the entire year, and 5 = Almost never. For comparisons between girls and boys, eighth and ninth graders, and pubertal status (within gender), *t* test analyses were conducted.

The mean responses and standard deviations for the bedroom design activity question for boys and for girls were 3.90, .85, and 3.69, .93, respectively, yielding a non-significant $t(1, 232) = 1.75$. Likewise, for eighth and ninth graders the $t(1, 232)$ was non-significant, and the means and standard deviations were 3.80, .90, and 3.77, .90, respectively. Further, the Lo and Hi pubertal status groups (within gender) were compared, but these groups also did not differ significantly; the $t(1, 115) = .00$ for girls, while for boys the $t(1, 93) = -1.13$. For girls, the means and standard deviations were 3.67, .90, and 3.67, and .98, Lo and Hi pubertal status, respectively. For boys, the

corresponding means and standard deviations were 3.78, .84, and 3.98, and .87. Therefore, no gender, grade, or pubertal status differences were identified for bedroom design frequency.

"Get" Scales

The second part of the survey that was used to investigate gender, grade, and pubertal status and bedroom design activity were the "get" scales. Statistically significant *t* values were identified only for gender for two of the four "get" scales. For "Ask Mother/Father for money, and to purchase small items" the $t(1, 232) = -4.22$, and the mean responses and standard deviations for boys and for girls, respectively, were 7.51, 3.15 and 9.83, 4.85. For "Seeking out things for the bedroom, and making things for the bedroom" the $t(1, 230) = -2.19$, the mean responses and standard deviations for boys and for girls, respectively, were 6.68, 2.51 and 7.43, 2.65. The other two "get" scales, "Asking Mother/Father to purchase large items for the bedroom," and "Using own money to purchase items for the bedroom" had non-significant $t(1, 232)$ values, -1.41 and 1.06, respectively. The means and standard deviations for the large items scale were 3.62, 2.09 and 4.02, 2.19 for boys and for girls. Whereas the means and standard deviations for the own money scale were 2.95, 1.46 and 2.76, 1.30 for boys and girls, respectively. The results of these *t* tests indicate that girls were overall more active than boys with regard to obtaining embellishments for their bedrooms. For pubertal status, the Lo and Hi pubertal status girls significantly differed only on the own money scale $t(1, 115)$, -2.09. The means for the Lo and Hi pubertal status groups were 2.65 and 3.16, respectively. The Lo and Hi pubertal status boys did not differ on the "get" scales,

however. Likewise, the *t* tests for grade, did not result in significant t values for any of the "get" scales. Further, to investigate whether differences in gender differed by grade, an ANOVA analysis was conducted; it confirmed that there was no Gender x Grade interaction.

Bedroom Location Change

The survey question, "During the past year have you changed the location of your bedroom?" was also used to relate bedroom design activity to gender, grade, and pubertal status. This question required a dichotomous (Yes/No) response. Only boys' Lo and Hi pubertal status groups differed significantly ($phi = .23$, $p < .03$) for change in bedroom location; developmentally advanced boys changed the location of their bedrooms less often than did the less advanced boys. Table 11 lists the mean responses, *phi*, and *p* values for gender, grade, and pubertal status for these analyses.

Summary for Gender, Grade, and Pubertal Status and Bedroom Design Activity

The following survey questions were used to examine the relationships between gender, grade, pubertal status and bedroom design activity: frequency of furnishing/arranging/decorating the bedroom during the past year; whether or not the participant had changed the location of their bedroom during the past year; and the "get" scales. Overall, there was not a strong relationship between these variables and *all* of the bedroom design activity questions. However, specific relationships were identified for gender and frequency of bedroom activity; girls made furnishing/arranging/decorating changes more frequently than did boys. Girls were also more likely to "...get things for

their bedrooms" than were boys. Also, girls with Hi pubertal status were more likely to use their own money to procure bedroom items than were the Lo pubertal status girls. For boys, statistically significant differences existed between the Lo and Hi pubertal status groups and bedroom location change. Hi pubertal status boys had changed their bedroom locations less often than Lo pubertal status boys.

Table 11

Bedroom Location Change During the Past Year and Gender, Grade, and Pubertal Status

Subgroup	Variable and bedroom change			*phi*	*p*
	Gender and bedroom change (Yes & No)				
		Boys (n = 105)	Girls (n = 128)		
	Yes	35.2%	26.6%		
	No	64.8%	73.4%	.09	n.s.
	Grade and bedroom change (Yes & No)				
		Eighth (n = 103)	Ninth (n = 130)		
	Yes	32.0%	29.2%		
	No	68.0%	70.8%	.09	n.s.
	Pubertal status and bedroom change (Yes & No)				
		Lo	Hi		
Girls (n = 117)		(n = 72)	(n = 45)		
	Yes	25.0%	28.9%		
	No	75.0%	71.1%	.04	n.s.
Boys (n = 95)		(n = 50)	(n = 45)		
	Yes	46.0%	24.4%		
	No	54.0%	75.6%	.23	.03

The preference data from the previous section indicated that girls had a greater range of items in their bedrooms than did boys. The activity data also suggests that girls are more likely to "get" things for their bedrooms, and to make changes in their bedrooms than are boys. Other important information from these analyses revealed that the "get" scales had high equivalence reliability, and the participants liked their bedrooms (moderately-very much).

Passive G-E effects and Adolescent Bedroom Design Activity, and Acceptance (Dislike-Like)

Pearson correlation coefficients were calculated to determine the strength of the relationships between the eight PAG-EE negative/positive passive genotype-environment effects scales and survey items related to bedroom design activity, and Acceptance. Specifically, the eight scales, resolution, free choice, intrusion, ignore, solution, no choice, argue, and work together, were correlated with responses from wall space coverage, frequency of bedroom (furnish/arrange/decorate) change during the past year, the activity "get" scales from the PAG-EE, and the 9-point hedonic scale. Table 12 contains correlations depicting these relations.

The Pearson correlation coefficients (r) for wall space coverage and the "passive" PAG-EE scales were not statistically significant. Likewise, none of the "passive" PAG-EE scales were significantly correlated with the frequency of change made to the bedroom during the past year.

The "passive" scales were correlated with the degree of bedroom furnishing/arranging/decorating acceptance (dislike-like). The only "passive" scale that

was significantly (negatively) correlated with acceptance was ignore. The greater the degree of liking the adolescent had for their bedroom, the less likely it was that they had designed and decorated their bedrooms the way they wanted to, after ignoring their parents' opinions.

Table12

Pearson Correlation Coefficients (r) for PAG-EE Passive Scales with Wall Space Coverage, Frequency of Change, and Acceptance (Dislike-Like)

PAG-EE passive scales	Wall space coverage	Frequency of change in the bedroom during the past year	Acceptance (dislike-like)	
Resolution	.07	-.06	.09	(234)
Free choice	.10	-.08	.09	(231)
Intrusion	-.09	.12	-.06	(232)
Ignore	-.08	.02	-.18**	(234)
Solution	-.01	-.10	.07	(234)
No choice	-.10	.01	.01	(234)
Argue	-.01	.11	-.08	(234)
Work together	-.05	-.11	.10	(234)

Note. numbers in parentheses are *n* values for each row

The "passive" scales were also correlated with the "get" scales. The specific "get" scales that were significantly correlated with the "passive" scales include: free choice, ignore, argue, and work together. Overall, the work together "passive" scale was significantly correlated with the greatest number of "get" scales: money/small items (r = .17), large items (r = .24), and seek out/make things (r = .25). Thus, the adolescents who perceived that they had "working relationships" with their parents, also said that they "got things" for their bedrooms. Interestingly, three other "passive" scales were significantly correlated with "get" scales; these "get" scales all included "money" items (own money, money/small items). For example, adolescents who used their own money for bedroom design and decoration also said that they had free choice about the way they designed and decorated their bedrooms, and they did not argue about their bedroom cleanliness/neatness with their parents. Also, adolescents who had parents who gave them money for their bedrooms, and purchased small items for their bedrooms, were able to ignore their parents opinions about the way they furnished/arranged/decorated their bedrooms and consequently they designed and decorated their bedrooms the way they wanted to.

Combined Biological and Social Influences on Bedroom Design Activity

Research question number four addressed the biological and social influences on low and high bedroom design activity. Initially, to determine some of the important variables to include in research question four, the relationships among the "influence" questions and the "get" questions were examined. Survey questions 14-26 (people and things influencing bedroom activity) were correlated with the "…how you get things for

your bedroom" group of survey questions (27-37). The Pearson correlation coefficients (r) for "influences" and "get" are shown in Table 13.

For the gender-combined group (boys & girls) the social influences of greatest influence ($p < .01$) were: friends, girlfriend/boyfriend, older teens, media, popular culture, and younger siblings. Also influential ($p < .05$) were classes, and older siblings. In contrast, religion, activities, and grandparents were not significant sources of influence. As biological influences for the gender combined group, mother and father were influential ($p < .05$).

Table 13

Pearson Correlation Coefficients (r) for Individual "Influences" and Summed "Get" Survey Questions

Influence	Boys & Girls	Boys	Girls
Mother	.14* (224)	.22* (103)	.05 (121)
Father	.16* (224)	.23* (103)	.13 (121)
Younger siblings	.22** (193)	.21* (92)	.18 (101)
Older siblings	.14* (177)	.09 (76)	.14 (101)
Grandparents	.00 (216)	-.03 (98)	.03 (118)
Friends	.35** (222)	.37** (101)	.28** (121)
Girlfriend/Boyfriend	.29** (149)	.43** (77)	.18 (72)
Older teens	.32** (209)	.31** (100)	.29** (109)
Media	.38** (222)	.33** (102)	.38** (120)
Popular culture	.34** (223)	.23* (102)	.34** (121)
Religion	.11 (220)	.13 (101)	.06 (119)
Classes	.14* (222)	.19 (103)	.13 (119)
Activities	.15 (223)	.28* (103)	.09 (120)

Note. numbers in parentheses are *n* values
*$p < .05$
**$p < .01$

However, gender differences were evident for "influences." Considering boys and girls separately, the following influences were significant for boys but not for girls: activities, girlfriend/boyfriend, younger siblings, father, and mother. For girls, the only significant sources ($p < .01$) of influence were: friends, older teens, media, and popular culture. Thus, the sources of influence for girls did not include family members or boyfriends.

The last activity question was, "Which combined biological and social influences (G-E effects) on adolescents are most predictive of low and high activity as reflected in the design of adolescents' bedrooms?" Activity was conceptualized in the following two ways: the frequency of bedroom design, and how things were procured for the bedroom (using the sum of the "get" scales). A multiple regression analysis identified friends as the predictor variable when Frequency of bedroom design was the dependent variable, and gender, grade, body mass index, passive scales (free choice, ignore, argue, and work together), and important social influences (younger siblings, friends, girlfriend/boyfriend, older teens, media, and popular culture) were independent variables. However, the variable friends only explained 2.5% of the variance for frequency of bedroom design. For participants who had a low frequency of bedroom design, "Almost never," the variable friends was also identified, as was the variable, argue. The variables friends and argue accounted for 14% of the variance in low frequency of bedroom design. For activity, conceptualized as procurement of bedroom items, the sum of the "get" scales was the dependent variable, and the independent variables were the same as those listed in the multiple regression analysis, previously discussed. The predictor variables for the "get" scales were: media, work together, girlfriend/boyfriend, and older teens. This

analysis was conducted for girls and boys, separately. For girls, the variable media was selected, however the variance explained was only 12.7%. For boys the following predictor variables explained 33.5% of the variance: work together, girlfriend, and older teens.

SUMMARY, DISCUSSION, AND CONCLUSIONS

Several research questions directed this investigation to determine if biological (genotype) influences were related to the bedroom design *preferences* and *activities* of adolescents. Specifically, the variables gender, grade, and pubertal status were investigated. Gender was identified as a very important variable, influencing both preferences and activity in bedroom design and decoration. Although not as influential as gender, grade and pubertal status variables were important, suggesting that development plays a role in adolescents' bedroom design and decoration.

Additionally, interactions between (biological) parents and their adolescents, with regard to bedroom design and decoration preferences, activity, and acceptance, provide support for the influence of genotype-environment passive effects. Social influences were also important variables influencing adolescents' bedroom design and decoration preferences and activity.

Gender

As previously mentioned, gender was a very important variable for influencing bedroom design preferences. Girls had a wider range of items in their bedrooms than did boys; girls' bedrooms contained both feminine and masculine items, whereas boys' bedrooms almost exclusively contained masculine items. These findings are consistent with the findings of Servin et al. (1999) where boys played more with masculine toys and girls played more with feminine toys; however, there was a trend for both the three- and five-year-old boys and girls to choose masculine toys. These researchers attributed the

toy choices to both biological and socialization factors. Specifically, girls' choice of both feminine and masculine toys was partly attributed to their culture, where Sweden supports women in traditional male workplace roles. The findings in this study with regard to boys choosing mostly masculine items for their bedrooms are also consistent with the findings of Servin et al. where boys chose masculine toys. Further, these findings are consistent with the biosocial perspective of Udry (2000), where a range of prenatal androgen exposure for females, and high prenatal androgen levels for males result in women exhibiting wider ranges of feminine behaviors, and men exhibiting a relatively tighter masculine range of behavior. Whether these findings support Udry's assertion that androgens are the primary influence on gender behavior and society's consequent reinforcement of these behaviors, and/or to what degree opportunity structures (Bronfenbrenner & Ceci, 1994) influence these behaviors, is yet to be determined. What is clear is that changes in gender roles have been occurring over the past several decades. According to Sollie (2000), gender role changes have been occurring from at least the time of the Industrial Revolution. There are more women in the workplace, and the expectations for men are also changing; allowing women to seek fulfillment beyond mothering, and men to be more nurturing, including greater societal acceptance of stay-at-home dads. Individuals are given opportunity structures (Bronfenbrenner & Ceci) that allow them to make choices that are consistent with their genetic make-up (Scarr & McCartney, 1983).

With regard to gender and bedroom design activity, girls were significantly more likely to "get" things for their bedrooms. Thus, the finding of this study indicating that girls were more active in obtaining embellishments for their bedrooms than were boys is

consistent with the findings of Hart (1979). Hart's study showed that both boys and girls were interested in building outside places, however, boys were interested in the structure of the building while girls were interested in the interior aspects of the building. Further, when Hart asked boys and girls about their favorite places, girls selected places in the home (primarily their bedrooms) while boys chose outside places. Related to this are Lynch's (1977) findings that girls selected their own home as their favorite place. With regard to girls' choice to spend time in their bedrooms, James (2001) identified one of the reasons for this was that they could control the actual bedroom space (music, memorabilia, and messiness). However, the other reasons that girls spent time in their bedrooms included concerns over their public appearance and personal safety. Thus, James concluded that the girls' time spent in their bedrooms, may, or may not have been entirely their choice. Related to James' findings are those of Hart who found that boys were allowed to travel much greater distances by themselves away from home (and they did so) as compared with girls. It may be that girls are provided fewer opportunity structures in their niche-picking behaviors, when compared with boys, such that they demonstrate greater niche-building behaviors in their bedrooms. It is also likely that genetic factors influence girls to niche-build within their bedrooms.

Grade (within Gender)

As a result of gender by bedroom design preferences of the participants, the analyses were conducted separately by grade. For eighth- and ninth-grade boys, overall differences in ABDC preference items included functional, personal, and decorative items. Girls in the eighth- and ninth-grades differed overall by decorative preferences

(e.g., *wallpaper*, *bedspread*, lava lamp/disco ball lamp, wall clock). An initially surprising finding was that canopy bed was identified as the important item in the *furniture* category differentiating eighth- and ninth-grade boys. Inspection of the percentages for Canopy bed revealed that they were quite low for boys in both grades; thus were not included in the computer-generated selection of overall important items. It is also important to note that items such as canopy beds and old fashioned *wallpaper* may be visualized in different ways. For example, it is possible to imagine a canopy bed in a jungle theme and old fashioned wallpaper imprinted with antique cars or airplanes. In addition, "old fashioned" could be interpreted as outdated. Finally, it is important to mention that some unexpected findings in several discriminant analyses in this study may reflect the inclusion of the response, "Have in my bedroom, but would like more or to replace with a different one." For example, adolescents could "have" old fashioned wallpaper in their bedrooms that they would prefer to "replace."

Boys in the eighth- and ninth-grades had the following functional and personal item preferences: full-length mirror, signs on the outside of your door for other people to read, mini-blinds, secure lock to your bedroom door, and refrigerator. For each of these items, the eighth-grade boys had higher preference percentages than did the ninth-grade boys. These functional and personal item preferences suggest developmental differences that may have been occurring for eighth-grade boys, while the majority of the ninth-grade boys may have already experienced these changes. These findings are consistent with a previous report indicating that (self-image and privacy seeking) behavior change occurs in adolescent boys (Steinberg, 1999). Likewise, developmental differences between the two groups of girls may have resulted in dissimilarity in preference percentages for

decorative items. For example, the ninth-grade girls may have been more interested in "mature" *decorations* when compared to the eighth-grade girls who preferred stars and moons *wallpaper*, athletic and old fashioned *bedspreads*, lava lamp/disco ball lamp, and wall clock. Collectively, these findings suggest that adolescent development can influence bedroom design preferences. Future studies should explore the bedroom design preferences of younger children, including the identification of the proposed shift to active niche-building.

Pubertal Status and Girls

Differences in preference selections for Lo and Hi pubertal status girls support the developmental explanation provided above. Hi pubertal status girls were more likely to prefer internet access and candles/candleholders than were Lo pubertal status girls. Further, Lo pubertal status girls were more likely to prefer animal style *wallpaper* and lava/disco ball lamps than were the Hi pubertal status girls. For the bedroom design activity questions, the Lo and Hi pubertal status girls did not differ significantly for frequency of bedroom design. However, they did differ significantly on the own money "get" scale, with the Hi pubertal status girls more often using their own money to purchase items for their bedrooms than did the Lo pubertal status girls.

Pubertal Status and Boys

A canonical correlation of .32 was calculated for the most important preference items to distinguish Lo and Hi pubertal status boys. Regarding bedroom design activity, a significant difference was identified between Lo and Hi pubertal status boys for

bedroom location change only. Hi pubertal status boys were less likely to change the location of their bedrooms within the past year as compared to Lo pubertal status boys. Further study is needed to explain this finding.

"Passive" Scales and Bedroom Design Activity and Acceptance

Two research questions addressed the relationships of passive G-E effects to adolescent bedroom design, specifically, activity and acceptance. The "passive" scales were not significantly related to bedroom design activity (wall space coverage and frequency of change in the bedroom during the past year). A significant (negative) correlation, however, was identified for acceptance (dislike-like) with the "passive" scale ignore. This finding indicates that the lower the degree of liking the adolescents had for their bedrooms, the more likely it was that they had ignored their parents' opinions about their bedroom design, and had designed their bedrooms the way they wanted to.

The finding that lower degree of bedroom liking is significantly correlated with the ignore scale is consistent with the theory as proposed by Scarr and McCartney (1983) indicating that parents provide passive environments for their children that are (mostly but not always) positively correlated with their children's genotype. Therefore, when adolescents niche-build an environment that is incoherent with their parents' desires, the adolescents are not as happy about their bedroom designs. Also, adolescents who have greater liking for their bedroom designs do not find it necessary to ignore their parents' wishes because they are in agreement—a positive correlation exists between the adolescent's genotype and their environment. In directional support of the above, are results that show that all of the positive "passive" scales are negatively related to the

frequency of change in the bedroom during the past year (1 = Almost daily to 5 = Almost never), while all of the negative "passive" scales are positively related with the frequency of change in the bedroom during the past year. What this suggests is that more changes occur when parents and adolescents are in agreement; fewer changes occur when parents and adolescents are not in agreement. Thus, if there is a positive G-E correlation the adolescent is more likely to niche-build; and what is built will be liked.

"Passive" (Negative) Scales and Girls With and Without Masculine Bedroom Items

In addition to relating the passive scales to bedroom design activity and acceptance; the (negative) "passive" scales differed among girls who had varying numbers of masculine bedroom items. The group of girls who had no masculine items in their bedrooms had a significantly higher mean value for the (negative) "passive" scale no choice than did the girls who had bedrooms including one, two, or three masculine items. The no choice (negative) "passive" scale includes the two items related to both mothers and fathers having the final word about bedroom design. In contrast, when comparing the groups of girls on the other negative "passive" scales (ignore, intrusion, and argue), significant differences were not identified. These findings suggest that girls who have bedrooms containing no masculine items may have parents who are trying to create feminine passive environments for their daughters. Udry (2000) suggested that parents were only successful in "remedial socialization" (p. 450) of their daughters' femininity if the daughters were predisposed to femininity. In addition, if these daughters were trying to contribute to an environment where there was a positive G-E correlation,

they would avoid arguing and ignoring their parents' wishes. Further, if the daughters complied with their parents' wishes, their parents would be theoretically less likely to intrude in the adolescent bedroom.

Influences on Adolescent Bedroom Design Preferences

To take these findings from the "what" preferences to the "why" preferences, a question was asked to identify which ABDC preference items were related to which influences. Neither mothers nor fathers were associated with many preferences. This was interesting in that both mothers and fathers were identified by the adolescents as important sources for "getting" things for their bedrooms. Maybe the reason that adolescents don't see their parents as sources of influence on bedroom design, is that the adolescents are niche-building environments that are (generally) positively correlated with their biological parents' preferences, thus the influence is not "obvious." The other categories of influence had substantially more preference associated with them (e.g., friends, media). Further, in general, influence categories had associated preference items that were "expected" (e.g., your religion with religious pictures and/or other religious items). The relationship between perceived important sources of bedroom design influence and choice of related bedroom design preferences was evident. This finding supports the importance of role models on adolescent behavior.

Acceptance (Dislike-Like) of ABDC Preferences

Analysis of data for the final preference question resulted in information regarding the relationship between the degree of acceptance (dislike-like) on the 9-point

hedonic scale and ABDC preferences. Fourteen ABDC items distinguished between the Lo liking (1-7) and Hi liking (8-9) groups. The preference percentages that were highest for both of the groups were plenty of closet space, souvenirs, camera and photography supplies, and pictures of places where you've been. ABDC items that were preferred by the Hi liking group at over twice the rate as the Lo liking group included: floral *wallpaper border*, shag carpet (wall-to-wall), solid color *bedspread*, an interesting ceiling shape, globe or maps, and license plates. In contrast, the Lo group preferred the following ABDC items at levels at least double those of the Hi group: make-up/hair accessories and air-filled chair.

It is interesting that with the exception of plenty of closest space, both groups preferred ABDC items that brought experiences of other places into the bedroom. This finding is consistent with Hart's (1979) study of children and the time they spend building outdoor places for themselves.

With regard to the differences in preference for the Lo and Hi liking groups, the Lo liking group preferred functional items while the Hi liking group preferred decorative items (including "travel" items, globe or maps, and license plates). The Hi liking group members may have bedrooms that already include most of what they like, therefore, they have the "luxury" of currently having or wanting more/different decorative items, while the Lo liking group may include participants who are in the process of constructing their bedrooms, thus functional items are more important, or at least perceived as attainable. Future studies are needed to explain these findings.

Social and Biological Influences and Bedroom Design Activity

A research question was asked to identify which of the biological and social influences were most predictive of bedroom design activity. Bedroom design activity was conceptualized in two ways: frequency of bedroom design, and how things were procured for the bedroom. For frequency of bedroom design the variable friends was identified. Further, for those participants who had a low frequency of bedroom design, "Almost never," the variables friends and argue were identified. Identifying friends as the important influence on these participants' frequency of bedroom design is not surprising; the influence of peers on adolescents is well documented in the literature (Mewse, Eiser, Slater, & Lea, 2004; Savin-Williams, 1976). As previously mentioned the variable argue was included in addition to the variable friends for those participants who had a low frequency of bedroom design. This indicates that those adolescents who argued with their parents about bedroom cleanliness and neatness were less frequently designing their bedrooms. The how things were procured for the bedroom activity question was most meaningful when considered according to gender. For girls, the variable media was important, although the variance explained was moderate. For boys, the variables, work together, girlfriend, and older teens explained a large percentage of variance in the relationship. The finding that girls accomplished the process of procuring items for their bedrooms with significantly less assistance from other people as compared to boys, who needed several sources of assistance, is interesting. The biosocial influences that contribute to these differences need to be explored.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This cross-sectional study of eighth- and ninth-grade students limited a full understanding of the influence of developmental change on niche-building behaviors of adolescents. For this reason, it is suggested that future studies be longitudinal and include adolescents between the ages of 7-22. This age range would include the earliest of the early maturing participants, and the latest of the late maturing participants. In addition to pubertal measures, the use of cognitive and social developmental measures would be beneficial.

Another limitation of this study was that the biosocial processes that influence gender differences of bedroom design *preferences* and *activity* could not be explained because this was not the focus of the current study. To gain a better understanding of these processes, case studies that follow children from approximately two years of age (initial awareness of gender) through adolescence would be beneficial.

With regard to the passive genotype-environment correlation, additional use of the "passive" measure is suggested because this study was limited to adolescents who lived with biological parents. The primary goal would be to further investigate the directional (and significant) relationships between the "passive" scales and bedroom design activity, acceptance, and preference for adopted adolescents, as well as adolescents who reside with their biological parents.

The use of a self-report measure is another limitation to this study. The validity of a self-report measure is always in question, although generally the participants in this study took the survey seriously. This was partly evidenced by the fact that this

exceptionally long survey was fully completed by almost all of the participants, and was completed as instructed (appropriate number of checkmarks and circled responses) in nearly all cases. However, videotaping and coding of bedroom contents might increase the ecological validity of future studies.

The sample, consisting almost entirely of White, middle-class adolescents, represented a limitation for this study. For these participants, having working relationships with their parents resulted in getting things for their bedrooms. In addition, having money related to fewer arguments regarding bedroom cleanliness/neatness, and to having choices about bedroom design and decoration; including the ability to ignore parents' opinions. It is evident that opportunity structures for these middle-class adolescents, in the form of parent-adolescent interactions and financial resources, influenced their ability to get things for their bedrooms. This sample limitation can be addressed with additional studies in other U.S. locations, and in other countries so that the external validity of the findings can be strengthened.

Finally, this study did not fully address the relationships of opportunity structures to bedroom design contents. Safe neighborhoods are an example of opportunity structures that may influence bedroom design, in addition to those measured in this study ("get" scales). With regard to safe neighborhoods, it would be interesting to determine if boys who live where outside exploration is limited for safety reasons engage in the same amount of niche-building as girls who live in the same environment. In addition, are boys in less safe neighborhoods more likely to niche-build in their bedrooms as compared to boys who live at the same S.E.S. level but in a safer environment? And, given that this study documented that boys have less variety of items in their bedrooms than do girls, do

boys who are provided opportunity structures permitting the expression of androgyny, have a wider range of bedroom contents than boys who are restricted to masculine expression?

PRACTICAL IMPLICATIONS

Parents provide opportunity structures in the form of money or items for adolescents' bedroom designs (possibly in some cases because they feel that the adolescent is safer in their home than outside). Parents should be advised that the use of electronic items such as computers, televisions, electronic games, etc. not only have negative aspects, but the use of them in a "closed" environment may restrict human interaction which is beneficial for the development of essential social skills; skills which are necessary for success in personal and work relationships. However, the inclusion of computers in adolescent bedrooms may be seen as a positive as well as a negative. Future studies should explore the relationship of having the following items: computer and printer, desk and chair, adequate lighting, bookcase, file cabinet, etc. to academic success and intentions.

The promotion of life-long health habits is also of concern. Research studies continually document the relationships between a sedentary lifestyle, obesity and poor health outcomes. Thus, the inclusion of *electronic* items and ***furniture*** such as refrigerators, microwave ovens, and lounge-type chairs (in addition to the items previously mentioned) could in fact have more long-term negative outcomes associated with them than bedroom contents often feared by parents, e.g., a dresser or desk containing an illegal substance or socially undesirable materials.

REFERENCES

Abecassis, M., Hartup, W.W., Haselager, G.J.T., Scholte, R.H.J., & Van Lieshout, C.F.M. (2002). Mutual antipathies and their significance in middle childhood and adolescence. *Child Development, 73*(5), 1543-1556.

Altman, I., Nelson, P.A., & Lett, E.E. (1972). *The ecology of home environments.* U.S. Department of Health, Education, and Welfare. Final Report, Project No. 0-0502, Grant No. OEG-8-70-0202 (508).

Berndt, T.J., Hawkins, J.A., & Hoyle, S.G. (1986). Changes in friendship during a school year: Effects on children's and adolescents' impressions of friendship and sharing with friends. *Child Development, 57,* 1284-1297.

Bronfenbrenner, U., & Ceci, S.J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review, 101,* 568-586.

Caspi, A., Lynam, D., Moffitt, T.E., & Silva, P.A. (1993). Unraveling girls' delinquency: Biological, dispositional, and contextual contributions to adolescent misbehavior. *Developmental Psychology, 29*(1), 19-30.

Conger, R.D., & Ge, X. (1999). Conflict and cohesion in parent-adolescent relations: Changes in emotional expression from early to midadolescence. In M.J. Cox & J. Brooks-Gunn (Eds.), *Conflict and cohesion in families: Causes and consequences* (pp. 185-206). Mahwah, NJ: Erlbaum.

Cota-Robles, S., Neiss, M., & Rowe, D.C. (2002). The role of puberty in violent and nonviolent delinquency among Anglo American, Mexican American, and African American boys. *Journal of Adolescent Research, 17*(4), 364-376.

Csikszentmihalyi, M., & Rochberg-Halton, E. (1981). *The meaning of things: Domestic symbols and the self.* New York: Cambridge University Press.

Finken, L.L., & Jacobs, J.E. (1996). Consultant choice across decision contexts: Are abortion decisions different? *Journal of Adolescent Research, 11*(2), 235-260.

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63,* 103-115.

Goodenow, C., & Espin, O.M. (1993). Identity choices in immigrant adolescent females. *Adolescence, 28*(109), 173-184.

Graber, J.A., & Brooks-Gunn, J. (1999). "Sometimes I think that you don't like me": How mothers and daughters negotiate the transition into adolescence. In M.J. Cox & J. Brooks-Gunn (Eds.), *Conflict and cohesion in families: Causes and consequences* (pp. 207-242). Mahwah, NJ: Erlbaum.

Hart, R. (1979). *Children's experience of place.* New York: Irvington Publishers.

James, K. (2001). "I just gotta have my own space!": The bedroom as a leisure site for adolescent girls. *Journal of Leisure Research, 33*(1), 71-90.

Jones, L.V., Peryam, D.R., & Thurstone, L.L. (1955). Development of a scale for measuring soldiers' food preferences. *Food Research, 20,* 512-520.

Kim, K.J., Conger, R.D., Lorenz, F.O., & Elder, G.H., Jr. (2001). Parent-adolescent reciprocity in negative affect and its relation to early adult social development. *Developmental Psychology, 37*(6), 775-790.

Kroll, B.J. (1990). Evaluating rating scales for sensory testing with children. *Food Technology, 44*(11), 78-86.

Ladd, F.C. (1972). Black youths view their environments: Some views of housing. *Journal of the American Institute of Planners, 38*(1), 108-116.

Lynch, K. (Ed.). (1977). *Growing up in cities: Studies of the spatial environment of adolescence in Cracow, Melbourne, Mexico City, Salta, Toluca, and Warszawa.* Cambridge, MA: The MIT Press.

Marshall, S.K., & Markstrom-Adams, C. (1995). Attitudes on interfaith dating among Jewish adolescents. *Journal of Family Issues, 16*(6), 787-811.

Mewse, A.J., Eiser, J.R., Slater, A.M., & Lea, S.E.C. (2004). The smoking behaviors of adolescents and their friends: Do parents matter? *Parenting: Science & Practice, 4*(1), 51-72.

Parke, R.D., & Sawin, D.B. (1979). Children's privacy in the home: Developmental, ecological, and child-rearing determinants. *Environment and Behavior, 11*(1), 87-104.

Peryam, D.R., & Pilgrim, F.J. (1957). Hedonic scale method of measuring food preferences. *Food Technology, 11*(9), 9-14.

Petersen, A.C., Crockett, L., Richards, M., & Boxer, A. (1988). A self-report measure of pubertal status: Reliability, validity, and initial norms. *Journal of Youth and Adolescence, 17*(2), 117-133.

Phillipsen, L.C. (1999). Associations between age, gender, and group acceptance and three components of friendship quality. *Journal of Early Adolescence, 19*(4), 438-464.

Plomin, R., DeFries, J.C., & Loehlin, J.C. (1977). Genotype-environment interaction and correlation in the analysis of human behavior. *Psychological Bulletin, 84,* 309-322.

Rapoport, A. (1985). Thinking about home environments: A conceptual framework. In I. Altman & C.M. Werner (Eds.), *Home environments* (pp. 255-286). New York: Plenum Press.

Rheingold, H.L., & Cook, K.V. (1975). The contents of boys' and girls' rooms as an index of parents' behavior. *Child Development, 46,* 459-463.

Salinger, A. (1995). *My room: Teenagers in their bedrooms.* San Francisco: Chronicle Books.

Savin-Williams, R.C. (1976). An ethological study of dominance formation and maintenance in a group of human adolescents. *Child Development, 47,* 972-979.

Scarr, S. (1992). Developmental theories for the 1990s: Development and individual differences. *Child Development, 63,* 1-19.

Scarr, S., & McCartney, K. (1983). How people make their own environments: A theory of genotype-environment effects. *Child Development, 54,* 424-435.

Servin, A., Bohlin, G., & Berlin, L. (1999). Sex differences in 1-,3-, and 5-year-olds' toy-choice in a structured play-session. *Scandinavian Journal of Psychology, 40,* 43-48.

Shamai, S. (1996). Elementary school students' attitudes toward science and their course of studies in high school. *Adolescence, 31*(123), 677-689.

Shannon, C., Story, M., Fulkerson, J.A., & French, S.A. (2002). Factors in the school cafeteria influencing food choices by high school students. *Journal of School Health, 72*(6), 229-234.

Sollie, D.L. (2000). Beyond Mars and Venus. *National Forum, 80*(3), 42-45.

Steinberg, L. (1999). *Adolescence* (5th ed.). Boston: McGraw-Hill.

Stone, H., & Sidel, J.L. (1993). *Sensory evaluation practices* (2nd ed.) (S. L. Taylor, Series Ed.). San Diego, CA: Academic Press.

Taylor, D. E. (2003). *The passive, active genotype-environment effects measure.* Unpublished measure.

Taylor, D. E., & Jones, R. M. (2003). *The adolescent bedroom design checklist.* Unpublished measure.

Taylor, D.E., & Pangborn, R.M. (1990). Temporal aspects of hedonic responses. *Journal of Sensory Studies, 4,* 241-247.

Thomas, A., Gibson, S., & Adekunle, S. (1996). Ideal home: A care home resident describes his dream house. *The Architects' Journal, 204*, 38.

Troost, K.M., & Filsinger, E. (1993). Emerging biosocial perspectives on the family. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 677-710). New York: Plenum Press.

Udry, J.R. (2000). Biological limits of gender construction. *American Sociological Review, 65,* 443-457.

Werner, C.M., Altman, I., & Oxley, D. (1985). Temporal aspects of homes: A transactional perspective. In I. Altman & C.M. Werner (Eds.), *Home environments* (pp. 1-32). New York: Plenum Press.

APPENDICES

Appendix A. Informed Consent Form and Brief Questionnaire (Brief Survey)

INFORMED CONSENT FORM AND BRIEF SURVEY

ADOLESCENT DEVELOPMENT AND ENVIRONMENTS

INFORMED CONSENT FORM

Purpose: A research study is being conducted by Randall M. Jones, Professor in the Family, Consumer, and Human Development department at Utah State University to learn more about adolescent development and environments as they apply to human development theories. You are an adolescent in one of the following grades (6^{th}, 7^{th}, 8^{th} and 9^{th}) and therefore you are being asked to participate in this study. Approximately 400 students from your school district will participate in this study. It is your choice whether or not you agree to participate in this study. You are assured that your rights as a human subject (survey participant) must be protected. Your decision to take part in this study, or not to take part in this study, is completely voluntary.

Procedures: If you agree to participate in this research study, you will be asked to complete one brief survey (attached), and possibly an additional detailed survey in the future. The surveys will be given to you at school for your completion at home. Some students will only participate in the brief survey part of this study, while others will participate in both the brief and the detailed survey parts. The research sample and design in this study requires that some students participate in one survey, while others participate in both surveys. You need not worry if you participated in the brief survey, but are not asked to participate in the detailed survey; the selection of participants is solely based on research reasons. The brief survey (attached) will take less than 5 minutes to complete, and it needs to be turned into the front office at your school within one week after you received it. Most of the questions on the brief survey are "demographic" in nature, they ask about your grade, gender, if you live with your biological parents in the same home, and whether you have a bedroom of your own or share a bedroom. The questions on the detailed survey have to do with your physical development, adolescent-parent relationship/communication about your bedroom, and your bedroom design (a copy of this detailed survey is available from the researchers upon your request). The detailed survey is expected to take you 60-90 minutes to complete.

Risks: There are no known risks of the outlined procedures.

Benefits: The procedures in this study may or may not result in direct benefits to you. However, the investigators may find out more about how adolescent development and environments relate to human development theories. After you complete the brief survey you might think about your family, and your own/shared bedroom. Your completion of the detailed survey might stimulate you to think about your physical development, your relationship/communication with your parents, and the design of your bedroom. Additionally, those participants who complete and return <u>both</u> the brief and the detailed surveys will be entered into a drawing for a $100 gift certificate. Four $100 gift certificates will be awarded (one for each school grade of participants).

Cost: There is no cost associated with your participation in either the brief or the detailed survey parts of this research study.

Explanation: The explanation of this study was made by Denise Taylor; a graduate student from the department of Family, Consumer, and Human Development at Utah State University. If you have research-related questions, you may leave a message for Denise at 797-1553.

Confidentiality: Only the researchers will know what answers you gave to the questions on the survey(s). The researchers will keep your responses in confidence, and they are the only people who will have access to the data that you provide on the survey(s). The surveys will be kept in a locked file in a locked building. After twelve months, the surveys will be shredded. In addition, your information will be assigned a code number. The researchers will use your information by code number, not by your name.

IRB Approval: This research project has been reviewed and approved for protection of human subjects by the Institutional Review Board (IRB) at Utah State University.

Consent Copy: Two copies of this Informed Consent Form have been given to you. Please sign both copies and keep one of them for your files.

Assurances: I certify that this research study has been explained to the individuals who have consented below, by me or my research staff, and that the individuals understand the purpose and nature, the possible risks and benefits associated with taking part in this research study. Any questions that have been asked of the researchers have been answered.

Randall M. Jones, Project Director
797-1553

Denise E. Taylor, Student Researcher
797-1553

Parent Consent: I have read the above description about the study of adolescent development and environments. By signing this consent form I agree to my son or daughter's participation in both the brief survey and the detailed survey.

Parent's Signature | Parent's name (print) | Date

Youth Assent: My father/mother/parent(s) is/are aware of this research study, and I understand that I have been given permission by at least one of them to participate in both parts (brief survey and detailed survey) of this study. Even though my parent(s) has/have said "yes" to my participation in this study, the final choice to participate is up to me. I do not have to participate in this study, and no one will be upset if I decide not to participate. I can also change my mind about participating later, and decide to stop at anytime without getting anyone upset at me. Any questions that I have about this study can be asked now or later. By signing my name below I agree to participate in both the brief survey and the detailed survey parts of this study.

Youth's Signature | Youth's name (print) | Date

BRIEF SURVEY **(Parent Consent and Youth Assent Required)**

For Questions 1 & 2, circle the letter that applies to you:

1. Your GRADE in school is: a) 6^{th} b) 7^{th} c) 8^{th} d) 9^{th}

2. Your GENDER is: a) Male b) Female

For Questions 3 & 4, Circle A or B that applies to you:

3. Do you live with both of your biological parents in the *same* home?

A) Yes

B) No

4. Do you have your own bedroom or do you share a bedroom?

A) I have my own bedroom.

B) I share a bedroom.

PLEASE RETURN THIS INFORMED CONSENT FORM AND BRIEF SURVEY TO YOUR SIXTH HOUR TEACHER

Appendix B. Extensive Questionnaire (Detailed Survey): Girls' Version

FIRST, SOME INFORMATION ABOUT YOU AND YOUR FAMILY

1. Your GRADE in school is: a) 6th b) 7th c) 8th d) 9th

2. Your GENDER is: a) Male b) Female

3. Your AGE is _____years **and** _____ months (Example: 12 **years and** 11 months)

4. How many people (including yourself) live in your home? _____ (Write the number in this space)

THE FOLLOWING QUESTIONS RELATE TO YOU AND YOUR BEDROOM

5. During the **past year** have you changed the location of your bedroom? (circle A or B):

A) Yes, I have changed the location of my bedroom by either moving to a different home or by changing bedrooms in my home

B) No, I have not changed the location of my bedroom

6. Where is your bedroom located? (circle A or B):

A) On the *same* level in your home as your parents' bedroom

B) On a *different* level in your home than your parents' bedroom

7. How many bedrooms are there in your home? _____ (Write the number in this space)

8. During your typical 7 day week, the number of hours that you spend **AWAKE** and *ASLEEP* in your bedroom are:

_____hours spent each week **AWAKE** in your bedroom

_____hours spent each week *ASLEEP* in your bedroom

USE THE SPACE BELOW FOR MATH CALCULATIONS IN QUESTION 8

9. How <u>much</u> of the **wall space** in your bedroom has things on it, such as: posters, pictures, flags, bulletin boards, license plates, collections on shelves, mirrors, etc.? (Circle the answer that applies to you)

None of your bedroom wall space has things on it.	Your bedroom wall space has a **few** things on it.	About **half** of your bedroom wall space has things on it.	**Most** of your bedroom wall space has things on it.	Your bedroom wall space is **completely covered** with things.

10. During the **past year,** how <u>often</u> did you FURNISH/ARRANGE/DECORATE your bedroom?

Examples: **moved a bookcase, got a new mattress, hung a poster on the wall, changed an item on a bulletin board, rearranged some items on your desk, put a sign on your door;**
Do <u>not</u> include cleaning

Almost daily	Once a week	Once a month	3-6 times only during the entire year	Almost never

11. If you have made **changes** and **additions** to your bedroom in the **past year**, please briefly <u>describe</u> the changes and additions that you made:

12. Circle <u>one</u> of the *numbers (1-9)* below that represents overall how much you ***dislike-like*** the way your bedroom is **now** furnished/arranged/decorated:

DISLIKE EXTREMELY	DISLIKE VERY MUCH	DISLIKE MODERATELY	DISLIKE SLIGHTLY	NEITHER LIKE NOR DISLIKE	LIKE SLIGHTLY	LIKE MODERATELY	LIKE VERY MUCH	LIKE EXTREMELY
1	2	3	4	5	6	7	8	9

13. **You CURRENTLY may want to make Changes and Additions to your bedroom:**

If you could ***change*** one thing about your bedroom it would be (briefly describe the change):

If you could ***add*** one thing to your bedroom it would be (briefly describe the addition):

NOW, PLEASE ANSWER SOME MORE QUESTIONS ABOUT YOU AND YOUR BEDROOM

How often do the following people and things ***influence how*** you furnish/arrange/decorate your bedroom?

		NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
14.	Your mother	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
15.	Your father	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
16.	Your younger brother(s) and /or younger sister(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
17.	Your older brother(s) and/or older sister(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
18.	Your grandparent(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
19.	Your friends	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
20.	Your girlfriend/boyfriend	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
21.	Teenagers who are two or more years older than you (DO NOT include brother(s) and or sister(s) when answering this question)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
22.	The media (Examples: TV, movies, music, newspaper or magazine ads)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
23.	The popular culture (Example: other people's bedroom designs)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
24.	Your religion	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
25.	Your classes at school (Examples: science, art, social studies, home economics, all classes)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
26.	Your activities outside of class (Examples: sports, Boy or Girl Scouts, music lessons)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

This group of questions asks how you get things for your bedroom:

		NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
27.	How often do you ask your mother for money so that you can purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
28.	How often do you ask your father for money so that you can purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
29.	How often do you ask your mother to purchase decorations or small items for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
30.	How often do you ask your father to purchase decorations or small items for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
31.	How often do you ask your mother to purchase large items or furniture for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
32.	How often do you ask your father to purchase large items or furniture for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
33.	How often do you ask for things for your bedroom as birthday, holiday, graduation, etc., gifts?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
34.	How often do you use your own money (allowance, money you've earned, gift money, etc.) to purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
35.	How often do you seek out available furniture/large items in your home for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
36.	How often do you seek out available decorations/small items in your home for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
37.	How often do you make things specifically for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

This group of questions asks about your interactions with your parents:

38.	How often do you and your mother work together to furnish/arrange/ decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
39.	How often do you and your father work together to furnish/arrange/ decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
40.	How often does your mother give you advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
41.	How often does your father give you advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
42.	How often do you ask your mother for advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
43.	How often do you ask your father for advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
44.	How often do you and your mother agree about how your bedroom should be furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
45.	How often do you and your father agree about how your bedroom should be furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
46.	How often do you and your mother disagree or argue about the way you have furnished/arranged/decorated your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

47. How often do you and your father disagree or argue about the way you have furnished/arranged/decorated your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
48. If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your mother find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
49. If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your father find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
50. When finding a solution, how often does your mother listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
51. When finding a solution, how often does your father listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
52. How often does your mother give you the freedom to choose how your bedroom is furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
53. How often does your father give you the freedom to choose how your bedroom is furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
54. How often do you make your own decisions about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

55. How often does your mother have the final word about how you should furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
56. How often does your father have the final word about how you should furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
57. How often do you ignore your mother's opinions about how your bedroom should be furnished/ arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
58. How often do you ignore your father's opinions about how your bedroom should be furnished/ arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
59. How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
60. How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
61. How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
62. How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

63. How often do you and your mother disagree or argue about the cleanliness/neatness of your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
64. How often do you and your father disagree or argue about the cleanliness/neatness of your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
65. If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your mother find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
66. If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your father find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
67. How often does your mother give you the privacy you want in your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
68. How often does your father give you the privacy you want in your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

In the next section of this survey, you will be asked to make choices about how you would like to design your bedroom. When answering the questions, you will mark **(X)** on **one** *and only one* of the following response spaces for each bedroom item:

HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM

Below are some **examples** of how to respond to the following questions:

(Example): HAVE IN MY BEDROOM AND SATISFIED WITH IT

When you already have the item in your bedroom and you are *satisfied* with it, you would select this response. For example, you have carpet in your bedroom and you are satisfied with the carpet that is in your bedroom.

X	____	____	____

(Example): HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE

This response would be chosen if you already have the item in your bedroom but you would like more of this item **OR** you would like to *replace* the item with a different one. Examples: you have posters in your bedroom and you would like to have more posters in your bedroom OR you have a CD player in your bedroom but you want a *different* CD player in your bedroom.

____	X	____	____

(Example): DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM

When you do not have the item in your bedroom, but you would like to have the item in your bedroom you would choose this response. For example, you don't have a bookcase in your bedroom but you would like to have a bookcase in your bedroom.

____	____	X	____

(Example): DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM

This response would be chosen if you do not have the item in your bedroom and you would not like to have it in your bedroom. For example, you don't have musical instruments in your bedroom and you don't want to have musical instruments in your bedroom.

____	____	____	X

Please be sure that you have read the examples on the previous page before you begin…

69. **Designing Your Bedroom:** If you could, you would design your bedroom in the following ways:

MARK **(X) ONE** *AND ONLY ONE* OF THE FOUR RESPONSE CHOICE SPACES FOR **EACH** ITEM ON THE CHECKLISTS BELOW:

FURNITURE IN BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Air-filled chair	____	____	____	____
Bean-bag chair	____	____	____	____
Bedroom set (matching bed, dresser, nightstand)	____	____	____	____
Bookcase	____	____	____	____
Canopy bed (with top cover that matches bedspread)	____	____	____	____
Computer desk and chair	____	____	____	____
Make-up table with mirror	____	____	____	____
Mattress for a bed	____	____	____	____
Sofa (couch) & chair set	____	____	____	____
Study desk and chair	____	____	____	____
Table and chairs	____	____	____	____
Water bed	____	____	____	____
Other (please explain): _____	____	____	____	____

ELECTRONICS IN BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Alarm clock	____	____	____	____
CD player	____	____	____	____
Computer & printer	____	____	____	____
DVD player	____	____	____	____
Electronic games	____	____	____	____
Internet access	____	____	____	____
Microwave oven or toaster oven	____	____	____	____
Refrigerator	____	____	____	____
Sewing Machine	____	____	____	____
Stereo	____	____	____	____
Telephone	____	____	____	____
TV	____	____	____	____
Other (please explain): _____	____	____	____	____

DESIGNING YOUR BEDROOM continued...(Remember to mark **(X)** on **ONE** space for **each** item)

REMODELING OF BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
An interesting ceiling shape.....	____	____	____	____
An outdoor balcony or patio attached to your bedroom.....	____	____	____	____
Door leading from your bedroom to the outside of the house.....	____	____	____	____
Enough heating and/or air-conditioning.....	____	____	____	____
Fireplace.....	____	____	____	____
Large bedroom.....	____	____	____	____
Own bathroom attached to your bedroom....	____	____	____	____
Plenty of closet space.....	____	____	____	____
Secure lock to your bedroom door.....	____	____	____	____
Small bedroom.....	____	____	____	____
Special type of windows.....	____	____	____	____
Unique or different wall placement.....	____	____	____	____
Other (please explain): _____.....	____	____	____	____

DECORATIONS IN BEDROOM...(Remember to mark **(X)** on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Wall and/or ceiling paint...	____	____	____	____
Wallpaper				
Animals (Favorite animals).....	____	____	____	____
Athletic (Favorite sports team or favorite sporting equipment).....	____	____	____	____
Cartoon or Disney character(s).....	____	____	____	____
Floral (flowers).....	____	____	____	____
Old fashioned.....	____	____	____	____
Retro (70's style and colors).....	____	____	____	____
Solid color (one color only).....	____	____	____	____
Stars and moons.....	____	____	____	____
Stripes or Plaid.....	____	____	____	____
Other (please explain):_____.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (**X**) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
***Border* of wallpaper**				
Animals (Favorite animals).....	____	____	____	____
Athletic (Favorite sports team or favorite sporting equipment).....	____	____	____	____
Cartoon or Disney character(s).....	____	____	____	____
Floral (flowers).....	____	____	____	____
Old fashioned.....	____	____	____	____
Retro (70's style and colors).....	____	____	____	____
Solid color (one color only).....	____	____	____	____
Stars and moons.....	____	____	____	____
Stripes or Plaid	____	____	____	____
Other (please explain):				
_____.....	____	____	____	____

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Bedspread				
Special blanket as bedspread.....	____	____	____	____
Animals (Favorite animals).....	____	____	____	____
Athletic (Favorite sports team or favorite sporting equipment).....	____	____	____	____
Cartoon or Disney character(s).....	____	____	____	____
Floral (flowers).....	____	____	____	____
Old fashioned.....	____	____	____	____
Retro (70's style and colors).....	____	____	____	____
Solid color (one color only).....	____	____	____	____
Stars and moons.....	____	____	____	____
Stripes or Plaid.....	____	____	____	____
Other (please explain):				
_____.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark **(X)** on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Window coverings				
Curtains or drapes that match the bedspread..	____	____	____	____
Mini-blinds.....	____	____	____	____
Pull-down/up shades.....	____	____	____	____
Permanent covers letting no light in or out...	____	____	____	____
Other (please explain): _____.....	____	____	____	____

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Flooring				
A rug that coordinates with bedroom design (any size but not wall-to-wall carpet).....	____	____	____	____
Concrete.....	____	____	____	____
Linoleum.....	____	____	____	____
Low-pile carpet (wall-to-wall).....	____	____	____	____
Shag carpet (wall-to-wall).....	____	____	____	____
Tile.....	____	____	____	____
Wood.....	____	____	____	____
Other (please explain): _____.....	____	____	____	____

YOU NOW HAVE **YOU WOULD LIKE TO HAVE**

LIST the main bedroom colors : _____ _____

(Examples: **colors** of walls, carpet, bedspread, window coverings, etc.)

DECORATIONS IN BEDROOM continued...

Other decorations/items in bedroom (Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Animal trophies (from hunting/fishing).....	____	____	____	____
Aquarium and/or other pet(s).....	____	____	____	____
Artistic things that you have made.....	____	____	____	____
Athletic or sporting equipment.....	____	____	____	____
Awards, certificates, trophies.....	____	____	____	____
Books that you like to read.....	____	____	____	____
Bulletin board or dry erase board.....	____	____	____	____
Bumper stickers or other signs that explain your ideas/feelings/attitudes....	____	____	____	____
Calendars and/or schedules.....	____	____	____	____
Camera and photography supplies.....	____	____	____	____
Candles and candleholders.....	____	____	____	____
Ceiling decorations.....	____	____	____	____
Chess set or other board games *(non-electronic)*.....	____	____	____	____
Dolls (baby, Barbie, porcelain, etc.).....	____	____	____	____
Full-length mirror.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Globe or maps.....	____	____	____	____
Hanging decorative items (strings of beads, streamers, mobiles, etc)	____	____	____	____
Houseplants.....	____	____	____	____
Items that reflect your ethnic and/or cultural identity (Examples: flags from your country, things from your or parents'/grandparents' country, things that represent your culture, etc.....	____	____	____	____
Jewelry (earrings, necklaces, etc.).....	____	____	____	____
Lava lamp or spinning disco ball lamp.....	____	____	____	____
License plates.....	____	____	____	____
Magazines that you like to read.....	____	____	____	____
Make-up and/or hair accessories.....	____	____	____	____
Musical instrument(s).....	____	____	____	____
Paintings, drawings, sculptures made by other people.....	____	____	____	____
Personal collections (please explain): _____	____	____	____	____

DECORATIONS IN BEDROOM continued... (Remember to mark **(X)** on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Pictures of famous people in history.....	____	____	____	____
Pictures of your brother(s) and/or sister(s)	____	____	____	____
Pictures of your friends.....	____	____	____	____
Pictures of your grandparents(s).....	____	____	____	____
Pictures of your cousin(s).....	____	____	____	____
Pictures of your mother.....	____	____	____	____
Pictures of your father.....	____	____	____	____
Pictures of your pet(s).....	____	____	____	____
Pictures of yourself that show who you are..	____	____	____	____
Piggy bank or other money holder.....	____	____	____	____
Posters/pictures of nature or science.....	____	____	____	____
Pictures of places where you've been.....	____	____	____	____
Posters of places where you'd like to go....	____	____	____	____
Posters of female athletes.....	____	____	____	____
Posters of male athletes.....	____	____	____	____
Posters of female movie stars or models.....	____	____	____	____
Posters of male movie stars or models.....	____	____	____	____
Posters of female musicians.....	____	____	____	____
Posters of male musicians.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Religious pictures and/or other religious items.....	____	____	____	____
Room decorations with brand-name labels...	____	____	____	____
Signs on the outside of your door for other people to read.....	____	____	____	____
Souvenirs from places where you have traveled or have been on vacation...	____	____	____	____
Stuffed animals (cloth).....	____	____	____	____
Table lamp and/or ceiling light(s).....	____	____	____	____
Things for building or that you have built (models of things, structures, etc.).....	____	____	____	____
Toys (please describe):_____	____	____	____	____
Wall clock.....	____	____	____	____
Other (please describe):_____.....	____	____	____	____

70. Now, of the items that you checked in ALL of the checklists above,

CHOOSE and LIST **TEN** that you would **MOST LIKE** in your bedroom:

NOTE: An item on the checklist, its color or style *together* count as ***one*** below

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

71. How *closely* does the bedroom that you designed in this survey match your current bedroom?

Not at all like your bedroom	**Almost nothing like** your bedroom	**Somewhat like** your bedroom	**Almost the same** as your bedroom	**The same** as your bedroom
1	2	3	4	5

The next question should be answered ONLY if you gave a response of *[1 or 2 or 3]* to the prior question:

72. The major reason that your current bedroom *does not match* the bedroom that you just designed is:
(Read all of the possible answers below and circle the **ONE** that best applies to you)

a) You have not given much thought about how your bedroom looks.

b) You have thought about how your bedroom looks, but it's not that important to you.

c) You have thought about how your bedroom looks, but you've been too busy doing other things.

d) You designed your bedroom when you were younger and you haven't changed it.

e) Your parent(s) designed your bedroom when you were younger and you haven't changed it.

f) Your parent(s) would not allow you to design your bedroom that way.

g) Your parent(s) would not spend the money necessary to design your bedroom that way.

h) You would not spend your own money so that you could design your bedroom that way.

i) Other (please explain):

_____

CONTINUE TO THE NEXT PAGE

SOME QUESTIONS FOR *GIRLS* RELATING TO PHYSICAL DEVELOPMENT

Please fill-in your HEIGHT and WEIGHT information below:

73. Your HEIGHT in Feet_____ **and** inches_____

74. Your WEIGHT in pounds_____

Circle **one** answer for each statement (75-79) that reflects your development:

75.	**Growth spurt in height** (growing a lot in height quickly)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
76.	**Skin change** (pimples or zits)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
77.	**Breast development**	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
78.	**Pubic hair**	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
79.	**Have had one or more menstrual periods?**	NO	YES		

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Appendix C. Extensive Questionnaire (Detailed Survey): Boys' Version

SOME BASIC INFORMATION ABOUT YOU AND YOUR FAMILY

1. Your GRADE in school is: a) 6th b) 7th c) 8th d) 9th

2. Your GENDER is: a) Male b) Female

3. Your AGE is _____years **and** _____ months (Example: 12 years **and** 11 months)

4. How many people (including yourself) live in your home? _____ (Write the number in this space)

THE FOLLOWING QUESTIONS RELATE TO YOU AND YOUR BEDROOM

5. During the **past year** have you changed the location of your bedroom? (circle A or B):

A) Yes, I have changed the location of my bedroom by either moving to a different home or by changing bedrooms in my home

B) No, I have not changed the location of my bedroom

6. Where is your bedroom located? (circle A or B):

C) On the *same* level in your home as your parents' bedroom

D) On a *different* level in your home than your parents' bedroom

7. How many bedrooms are there in your home? _____ (Write the number in this space)

8. During your typical 7 day week, the number of hours that you spend **AWAKE** and *ASLEEP* in your bedroom are:

_____hours spent each week **AWAKE** in your bedroom

_____hours spent each week *ASLEEP* in your bedroom

USE THE SPACE BELOW FOR MATH CALCULATIONS IN QUESTION 8

9. How <u>much</u> of the **wall space** in your bedroom has things on it, such as: posters, pictures, flags, bulletin boards, license plates, collections on shelves, mirrors, etc.? (Circle the answer that applies to you)

None of your bedroom wall space has things on it.	Your bedroom wall space has a few things on it.	About **half** of your bedroom wall space has things on it.	**Most** of your bedroom wall space has things on it.	Your bedroom wall space is **completely covered** with things.

10. During the **past year,** how <u>often</u> did you FURNISH/ARRANGE/DECORATE your bedroom?

***Examples:* moved a bookcase, got a new mattress, hung a poster on the wall, changed an item on a bulletin board, rearranged some items on your desk, put a sign on your door;**
Do <u>not</u> include cleaning

Almost daily	Once a week	Once a month	3-6 times only during the entire year	Almost never

11. If you have made **changes** and **additions** to your bedroom in the **past year**, please briefly <u>describe</u> the changes and additions that you made:

12. Circle <u>one</u> of the *numbers (1-9)* below that represents overall how much you ***dislike-like*** the way your bedroom is **now** furnished/arranged/decorated:

DISLIKE EXTREMELY	DISLIKE VERY MUCH	DISLIKE MODERATELY	DISLIKE SLIGHTLY	NEITHER LIKE NOR DISLIKE	LIKE SLIGHTLY	LIKE MODERATELY	LIKE VERY MUCH	LIKE EXTREMELY
1	2	3	4	5	6	7	8	9

13. **You CURRENTLY may want to make Changes and Additions to your bedroom:**

If you could ***change*** one thing about your bedroom it would be (briefly describe the change):

If you could ***add*** one thing to your bedroom it would be (briefly describe the addition):

NOW, PLEASE ANSWER SOME MORE QUESTIONS ABOUT YOU AND YOUR BEDROOM

How often do the following people and things ***influence how*** you furnish/arrange/decorate your bedroom?

		NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
14.	Your mother	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
15.	Your father	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
16.	Your younger brother(s) and /or younger sister(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
17.	Your older brother(s) and/or older sister(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
18.	Your grandparent(s)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
19.	Your friends	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
20.	Your girlfriend/boyfriend	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
21.	Teenagers who are two or more years older than you (DO NOT include brother(s) and or sister(s) when answering this question)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
22.	The media (Examples: TV, movies, music, newspaper or magazine ads)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
23.	The popular culture (Example: other people's bedroom designs)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
24.	Your religion	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
25.	Your classes at school (Examples: science, art, social studies, home economics, all classes)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
26.	Your activities outside of class (Examples: sports, Boy or Girl Scouts, music lessons)	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

This group of questions asks how you get things for your bedroom:

27.	How often do you ask your mother for money so that you can purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
28.	How often do you ask your father for money so that you can purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
29.	How often do you ask your mother to purchase decorations or small items for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
30.	How often do you ask your father to purchase decorations or small items for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
31.	How often do you ask your mother to purchase large items or furniture for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
32.	How often do you ask your father to purchase large items or furniture for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
33.	How often do you ask for things for your bedroom as birthday, holiday, graduation, etc., gifts?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
34.	How often do you use your own money (allowance, money you've earned, gift money, etc.) to purchase things for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
35.	How often do you seek out available furniture/large items in your home for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
36.	How often do you seek out available decorations/small items in your home for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
37.	How often do you make things specifically for your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

This group of questions asks about your interactions with your parents:

38.	How often do you and your mother work together to furnish/arrange/ decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
39.	How often do you and your father work together to furnish/arrange/ decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
40.	How often does your mother give you advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
41.	How often does your father give you advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
42.	How often do you ask your mother for advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
43.	How often do you ask your father for advice about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
44.	How often do you and your mother agree about how your bedroom should be furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
45.	How often do you and your father agree about how your bedroom should be furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
46.	How often do you and your mother disagree or argue about the way you have furnished/arranged/decorated your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

47. How often do you and your father disagree or argue about the way you have furnished/arranged/decorated your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
48. If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your mother find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
49. If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your father find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
50. When finding a solution, how often does your mother listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
51. When finding a solution, how often does your father listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
52. How often does your mother give you the freedom to choose how your bedroom is furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
53. How often does your father give you the freedom to choose how your bedroom is furnished/arranged/ decorated?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
54. How often do you make your own decisions about how to furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

55. How often does your mother have the final word about how you should furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
56. How often does your father have the final word about how you should furnish/arrange/decorate your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
57. How often do you ignore your mother's opinions about how your bedroom should be furnished/ arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
58. How often do you ignore your father's opinions about how your bedroom should be furnished/ arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
59. How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
60. How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
61. How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
62. How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

63. How often do you and your mother disagree or argue about the cleanliness/neatness of your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
64. How often do you and your father disagree or argue about the cleanliness/neatness of your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
65. If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your mother find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
66. If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your father find a solution that you both are satisfied with?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
67. How often does your mother give you the privacy you want in your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*
68. How often does your father give you the privacy you want in your bedroom?	NEVER	ALMOST NEVER	SOMETIMES	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS	*DOES NOT APPLY TO YOU*

In the next section of this survey, you will be asked to make choices about how you would like to design your bedroom. When answering the questions, you will mark **(X)** on **one** *and only one* of the following response spaces for each bedroom item:

HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM

Below are some **examples** of how to respond to the following questions:

(Example): **HAVE IN MY BEDROOM AND SATISFIED WITH IT**

When you already have the item in your bedroom and you are *satisfied* with it, you would select this response. For example, you have carpet in your bedroom and you are satisfied with the carpet that is in your bedroom.

X			

(Example): **HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE**

This response would be chosen if you already have the item in your bedroom but you would like more of this item **OR** you would like to *replace* the item with a different one. Examples: you have posters in your bedroom and you would like to have more posters in your bedroom OR you have a CD player in your bedroom but you want a *different* CD player in your bedroom.

	X		

(Example): **DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM**

When you do not have the item in your bedroom, but you would like to have the item in your bedroom you would choose this response. For example, you don't have a bookcase in your bedroom but you would like to have a bookcase in your bedroom.

		X	

(Example): **DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM**

This response would be chosen if you do not have the item in your bedroom and you would not like to have it in your bedroom. For example, you don't have musical instruments in your bedroom and you don't want to have musical instruments in your bedroom.

			X

Please be sure that you have read the examples on the previous page before you begin…

69. **Designing Your Bedroom:** If you could, you would design your bedroom in the following ways:

MARK **(X) ONE** *AND ONLY ONE* OF THE FOUR RESPONSE CHOICE SPACES FOR **EACH** ITEM ON THE CHECKLISTS BELOW:

FURNITURE IN BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Air-filled chair	____	____	____	____
Bean-bag chair	____	____	____	____
Bedroom set (matching bed, dresser, nightstand)	____	____	____	____
Bookcase	____	____	____	____
Canopy bed (with top cover that matches bedspread)	____	____	____	____
Computer desk and chair	____	____	____	____
Make-up table with mirror	____	____	____	____
Mattress for a bed	____	____	____	____
Sofa (couch) & chair set	____	____	____	____
Study desk and chair	____	____	____	____
Table and chairs	____	____	____	____
Water bed	____	____	____	____
Other (please explain): _____	____	____	____	____

ELECTRONICS IN BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Alarm clock	____	____	____	____
CD player	____	____	____	____
Computer & printer	____	____	____	____
DVD player	____	____	____	____
Electronic games	____	____	____	____
Internet access	____	____	____	____
Microwave oven or toaster oven	____	____	____	____
Refrigerator	____	____	____	____
Sewing Machine	____	____	____	____
Stereo	____	____	____	____
Telephone	____	____	____	____
TV	____	____	____	____
Other (please explain): _____	____	____	____	____

DESIGNING YOUR BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

REMODELING OF BEDROOM

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
An interesting ceiling shape.....	____	____	____	____
An outdoor balcony or patio attached to your bedroom.....	____	____	____	____
Door leading from your bedroom to the outside of the house.....	____	____	____	____
Enough heating and/or air-conditioning.....	____	____	____	____
Fireplace.....	____	____	____	____
Large bedroom.....	____	____	____	____
Own bathroom attached to your bedroom....	____	____	____	____
Plenty of closet space.....	____	____	____	____
Secure lock to your bedroom door.....	____	____	____	____
Small bedroom.....	____	____	____	____
Special type of windows.....	____	____	____	____
Unique or different wall placement.....	____	____	____	____
Other (please explain): _____.....	____	____	____	____

DECORATIONS IN BEDROOM...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Wall and/or ceiling paint	____	____	____	____
Wallpaper				
Animals (Favorite animals).....	____	____	____	____
Athletic (Favorite sports team or favorite sporting equipment).....	____	____	____	____
Cartoon or Disney character(s).....	____	____	____	____
Floral (flowers).....	____	____	____	____
Old fashioned.....	____	____	____	____
Retro (70's style and colors).....	____	____	____	____
Solid color (one color only).....	____	____	____	____
Stars and moons.....	____	____	____	____
Stripes or Plaid.....	____	____	____	____
Other (please explain):_____.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
***Border* of wallpaper**				
Animals (Favorite animals).....	_____	_____	_____	_____
Athletic (Favorite sports team or favorite sporting equipment).....	_____	_____	_____	_____
Cartoon or Disney character(s).....	_____	_____	_____	_____
Floral (flowers).....	_____	_____	_____	_____
Old fashioned.....	_____	_____	_____	_____
Retro (70's style and colors).....	_____	_____	_____	_____
Solid color (one color only).....	_____	_____	_____	_____
Stars and moons.....	_____	_____	_____	_____
Stripes or Plaid	_____	_____	_____	_____
Other (please explain): _____.....	_____	_____	_____	_____

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Bedspread				
Special blanket as bedspread.....	_____	_____	_____	_____
Animals (Favorite animals).....	_____	_____	_____	_____
Athletic (Favorite sports team or favorite sporting equipment).....	_____	_____	_____	_____
Cartoon or Disney character(s).....	_____	_____	_____	_____
Floral (flowers).....	_____	_____	_____	_____
Old fashioned.....	_____	_____	_____	_____
Retro (70's style and colors).....	_____	_____	_____	_____
Solid color (one color only).....	_____	_____	_____	_____
Stars and moons.....	_____	_____	_____	_____
Stripes or Plaid.....	_____	_____	_____	_____
Other (please explain): _____...	_____	_____	_____	_____

DECORATIONS IN BEDROOM continued...

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Window coverings				
Curtains or drapes that match the bedspread..	____	____	____	____
Mini-blinds.....	____	____	____	____
Pull-down/up shades.....	____	____	____	____
Permanent covers letting no light in or out...	____	____	____	____
Other (please explain): _____.....	____	____	____	____

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Flooring				
A rug that coordinates with bedroom design (any size but not wall-to-wall carpet).....	____	____	____	____
Concrete.....	____	____	____	____
Linoleum.....	____	____	____	____
Low-pile carpet (wall-to-wall).....	____	____	____	____
Shag carpet (wall-to-wall).....	____	____	____	____
Tile.....	____	____	____	____
Wood.....	____	____	____	____
Other (please explain): _____.....	____	____	____	____

YOU NOW HAVE ***YOU WOULD LIKE TO HAVE***

LIST the main bedroom colors : _____ _____

(Examples: **colors** of walls, carpet, bedspread, window coverings, etc.)

Other decorations/items in bedroom

(Remember to mark (**X**) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Animal trophies (from hunting/fishing).....	____	____	____	____
Aquarium and/or other pet(s).....	____	____	____	____
Artistic things that you have made.....	____	____	____	____
Athletic or sporting equipment.....	____	____	____	____
Awards, certificates, trophies.....	____	____	____	____
Books that you like to read.....	____	____	____	____
Bulletin board or dry erase board.....	____	____	____	____
Bumper stickers or other signs that explain your ideas/feelings/attitudes....	____	____	____	____
Calendars and/or schedules.....	____	____	____	____
Camera and photography supplies.....	____	____	____	____
Candles and candleholders.....	____	____	____	____
Ceiling decorations.....	____	____	____	____
Chess set or other board games (*non-electronic*).....	____	____	____	____
Dolls (baby, Barbie, porcelain, etc.).....	____	____	____	____
Full-length mirror.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Globe or maps.....	____	____	____	____
Hanging decorative items (strings of beads, streamers, mobiles, etc)	____	____	____	____
Houseplants.....	____	____	____	____
Items that reflect your ethnic and/or cultural identity (Examples: flags from your country, things from your or parents'/grandparents' country, things that represent your culture, etc.....	____	____	____	____
Jewelry (earrings, necklaces, etc.).....	____	____	____	____
Lava lamp or spinning disco ball lamp.....	____	____	____	____
License plates.....	____	____	____	____
Magazines that you like to read.....	____	____	____	____
Make-up and/or hair accessories.....	____	____	____	____
Musical instrument(s).....	____	____	____	____
Paintings, drawings, sculptures made by other people.....	____	____	____	____
Personal collections (please explain): _____	____	____	____	____

DECORATIONS IN BEDROOM continued (Remember to mark **(X)** on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Pictures of famous people in history.....	____	____	____	____
Pictures of your brother(s) and/or sister(s)	____	____	____	____
Pictures of your friends.....	____	____	____	____
Pictures of your grandparents(s).....	____	____	____	____
Pictures of your cousin(s).....	____	____	____	____
Pictures of your mother.....	____	____	____	____
Pictures of your father.....	____	____	____	____
Pictures of your pet(s).....	____	____	____	____
Pictures of yourself that show who you are..	____	____	____	____
Piggy bank or other money holder.....	____	____	____	____
Posters/pictures of nature or science.....	____	____	____	____
Pictures of places where you've been.....	____	____	____	____
Posters of places where you'd like to go....	____	____	____	____
Posters of female athletes.....	____	____	____	____
Posters of male athletes.....	____	____	____	____
Posters of female movie stars or models.....	____	____	____	____
Posters of male movie stars or models.....	____	____	____	____
Posters of female musicians.....	____	____	____	____
Posters of male musicians.....	____	____	____	____

DECORATIONS IN BEDROOM continued...(Remember to mark (X) on **ONE** space for **each** item)

	HAVE IN MY BEDROOM AND SATISFIED WITH IT	HAVE IN MY BEDROOM, BUT WOULD LIKE MORE OR TO REPLACE WITH A DIFFERENT ONE	DON'T HAVE BUT WOULD LIKE TO HAVE IN MY BEDROOM	DON'T HAVE AND DON'T WANT TO HAVE IN MY BEDROOM
Religious pictures and/or other religious items.....	____	____	____	____
Room decorations with brand-name labels...	____	____	____	____
Signs on the outside of your door for other people to read.....	____	____	____	____
Souvenirs from places where you have traveled or have been on vacation...	____	____	____	____
Stuffed animals (cloth).....	____	____	____	____
Table lamp and/or ceiling light(s).....	____	____	____	____
Things for building or that you have built (models of things, structures, etc.).....	____	____	____	____
Toys (please describe):_____	____	____	____	____
Wall clock.....	____	____	____	____
Other (please describe):_____.....	____	____	____	____

70. Now, of the items that you checked in ALL of the checklists above,

CHOOSE and LIST **TEN** that you would **MOST LIKE** in your bedroom:

NOTE: An item on the checklist, its color or style *together* count as *one* below

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

71. How *closely* does the bedroom that you designed in this survey match your current bedroom?

Not at all like your bedroom	**Almost nothing like** your bedroom	**Somewhat like** your bedroom	**Almost the same** as your bedroom	**The same** as your bedroom
1	2	3	4	5

The next question should be answered ONLY if you gave a response of *[1 or 2 or 3]* to the prior question:

72. The major reason that your current bedroom *does not match* the bedroom that you just designed is:
(Read all of the possible answers below and circle the **ONE** that best applies to you)

a) You have not given much thought about how your bedroom looks.

b) You have thought about how your bedroom looks, but it's not that important to you.

c) You have thought about how your bedroom looks, but you've been too busy doing other things.

d) You designed your bedroom when you were younger and you haven't changed it.

e) Your parent(s) designed your bedroom when you were younger and you haven't changed it.

f) Your parent(s) would not allow you to design your bedroom that way.

g) Your parent(s) would not spend the money necessary to design your bedroom that way.

h) You would not spend your own money so that you could design your bedroom that way.

i) Other (please explain):

_____

CONTINUE TO THE NEXT PAGE**.....**

SOME QUESTIONS FOR BOYS RELATING TO PHYSICAL DEVELOPMENT

Please fill-in your HEIGHT and WEIGHT information below:

73. Your HEIGHT in Feet_____ **and** inches_____

74. Your WEIGHT in pounds_____

Circle **one** answer for each statement (75-79) that reflects your development:

75. **Growth spurt in height** (growing a lot in height quickly)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
76. **Skin change** (pimples or zits)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
77. **Facial hair growth** (growth of hair on face)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
78. **Voice change** (voice is deepening)	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4
79. **Pubic hair**	No Development 1	Development has barely begun 2	Development is definitely underway 3	Development is already completed 4

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Appendix D. Questionnaire Development

Development of the Adolescent Bedroom Design Checklist

Development of the Adolescent Bedroom Design Checklist occurred over a six-month period of time. Randy Jones suggested the checklist format and several response categories, and the inclusion of "Internet access" as an item. Many of the items for the checklist were derived from observations of my children's bedrooms (Elaine a female adolescent, and Clark a male preadolescent), and changes and additions that Elaine made to her bedroom over the past several years. Elaine also suggested the item, "An outdoor balcony or patio attached to your bedroom". My adolescent niece inspired, "Posters of female athletes" and "Awards, certificates, trophies". Additionally, after describing my dissertation research to a friend, she invited me to observe her son's bedroom (a male adolescent); this observation led to the inclusion of the item, "Items that reflect your ethnic and/or cultural identity (Examples: flags from your country, things from your or parents'/grandparents' country, things that represent your culture, etc.)". Another friend purchased bean-bag chairs as Christmas presents for her children, so I included this as an item. Ideas for other items came while visiting my cousin; I observed that her son (a senior in high school) had plastered his bedroom walls with posters of musicians and license plates, and his bedspread was leftover from earlier days, a sporting equipment, juvenile looking print. Family stories also reinforced the inclusion of an item on the checklist. My grandmother and dad told stories of my aunt's adolescent frustration of being given the choice of bedroom only to discover that she had chosen the bedroom without a closet, thus the inclusion of "Enough closet space"; most homes these days have bedrooms that include at least a small closet. I included, "Canopy bed (with top

cover that matches bedspread)" as a feminine item and as a longed-for-but-never-had personally desired bedroom item. In addition, some of the items included in the checklist were inspired by department store ads, personal shopping trips, and wallpaper books (while searching for wallpaper borders for Elaine's bedroom).

My literature search reinforced chosen ABDC items and uncovered some additional ones, for example: camera (Csikszentmihalyi & Rochberg-Halton, 1981), I used "Camera and photography supplies"; sewing machine and vanity dressing table (Altman, Nelson, & Lett, 1972), I used "Sewing machine" and an updated version of vanity dressing table, "Make-up table with mirror". "Enough heating and/or air conditioning", and "Fireplace" were inspired by Ladd's (1972) interviewees. An adolescent boy included sculptures in his wished-for home design (Thomas, Gibson, & Adekunle, 1996) so the item "Paintings, drawings, sculptures made by other people" was included. A book containing photographs of adolescents' bedrooms (Salinger, 1995) inspired the items, "Special blanket as bedspread" and "Pictures of famous people in history".

Development of the Passive, Active Genotype-Environment Effects Measure

The development of the PAG-EE measure also occurred over several months. Initial development of the PAG-EE was based on the niche-picking and niche-building active G-E effects concepts, and the negative and positive passive G-E effects concepts as presented in the genotype-environment effects theory of Scarr and McCartney (1983). The PAG-EE was specifically designed to measure both active and passive G-E effects in the adolescent bedroom context. Additionally, items were added based on family

communication research, especially the concept of conflict resolution (Graber & Brooks-Gunn, 1999; Kim, Conger, Lorenz, & Elder, 2001), and the concept of listening (Conger & Ge, 1999). Also included in the PAG-EE was a question related to privacy, based on an investigation of children's development and privacy in the home environment (Parke & Sawin, 1979). Recent personal experience also contributed to the development of the PAG-EE; a comment that Elaine made led to the question, "How often does your mother [father] give you the freedom to choose how your bedroom is furnished/arranged/decorated?"

Appendix E. Explanation sheet for South Cache 8/9 Center Teachers, Phase II

ADOLESCENT DEVELOPMENT AND ENVIRONMENTS

PHASE II: DETAILED SURVEY

FOR *SELECTED* SOUTH CACHE 8/9 CENTER STUDENTS

To: Teachers, South Cache 8/9 Center
From: Denise Taylor, USU Researcher, Family, Consumer, & Human Development Dept.
Re: Phase II, Detailed Survey

Thank you for assisting with Phase I of this study. We are now ready to begin the second and final phase of this project, the distribution and return of the Detailed Surveys. ***Only*** those students who were selected to participate in Phase II of the study should complete the Detailed Surveys.

Phase II items include:

- ☐ A list of Girls participating from your class
- ☐ A list of Boys participating from your class
- ☐ Detailed Surveys for **Girls-only give to *girls*** (but please *don't* mention gender)
- ☐ Detailed Surveys for **Boys-only give to *boys*** (but please *don't* mention gender)
- ☐ Tickets for Girls in your class who return the survey*
- ☐ Tickets for Boys in your class who return the survey*

IMPORTANT: Completed surveys *must* be returned in **SEALED envelopes**. The sealed envelopes should **not** have any names or identifying marks on them. The students have *one week* to complete and return the survey.

* Direct those students, who completed the survey and received a ticket for the drawing, to take the ticket to the office to be placed in the appropriate ticket box:

8th grade Boys
8th grade Girls
9th grade Boys
9th grade Girls

The drawing will identify four $100 gift certificate winners, one from each of the four categories of students, listed above.
Please take all returned surveys to the front office.
Your assistance with Phase II of this study is greatly appreciated.

Appendix F. PAG-EE Passive Positive/Negative Genotype-Environment Effects Scales: Survey Items for Each Scale and Corresponding Cronbach Alpha Reliability Coefficients

Resolution, 6 items, alpha=.91

How often do you and your mother agree about how your bedroom should be furnished/arranged/decorated?

How often do you and your father agree about how your bedroom should be furnished/arranged/decorated?

If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your mother find a solution that you both are satisfied with?

If disagreements or arguments occur about the way you have furnished/arranged/decorated your bedroom, how often do you and your father find a solution that you both are satisfied with?

When finding a solution, how often does your mother listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?

When finding a solution, how often does your father listen to your opinions about how you would like your bedroom to be furnished/arranged/decorated?

Free choice, 5 items, alpha=.83

How often does your mother give you the freedom to choose how your bedroom is furnished/arranged/decorated?

How often does your father give you the freedom to choose how your bedroom is furnished/arranged/decorated?

How often do you make your own decisions about how to furnish/arrange/decorate your bedroom?

How often does your mother give you the privacy you want in your bedroom?

How often does your father give you the privacy you want in your bedroom?

Intrusion, 3 items, alpha=.76

How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom without first asking you if you want these changes and additions?

How often does your mother make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?

How often does your father make furnishing/arrangement/decoration changes and additions to your bedroom that you dislike?

Ignore, 2 items, alpha=.88

How often do you ignore your mother's opinions about how your bedroom should be furnished/arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?

How often do you ignore your father's opinions about how your bedroom should be furnished/arranged/decorated, and you furnish/arrange/decorate your bedroom the way you want to?

Solution, 2 items, alpha=.88

If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your mother find a solution that you both are satisfied with?

If disagreements or arguments occur about the cleanliness/neatness of your bedroom, how often do you and your father find a solution that you both are satisfied with?

No choice, 2 items, alpha=.87

How often does your mother have the final word about how you should furnish/arrange/decorate your bedroom?

How often does your father have the final word about how you should furnish/arrange/decorate your bedroom?

Argue, 2 items, alpha=.74

How often do you and your mother disagree or argue about the cleanliness/neatness of your bedroom?
How often do you and your father disagree or argue about the cleanliness/neatness of your bedroom?

Work together, 6 items, alpha=.89

How often do you and your mother work together to furnish/arrange/decorate your bedroom?

How often do you and your father work together to furnish/arrange/decorate your bedroom?

How often does your mother give you advice about how to furnish/arrange/decorate your bedroom?

How often does your father give you advice about how to furnish/arrange/decorate your bedroom?

How often do you ask your mother for advice about how to furnish/arrange/decorate your bedroom?

How often do you ask your father for advice about how to furnish/arrange/decorate your bedroom?

Appendix G. Sources of Influence and Bedroom Design and Decoration Preference Correlation Coefficients

SOURCE OF INFLUENCE:	NUMBER OF ABDC ITEMS:
MOM	10
DAD	5
YOUNGER SIBLINGS	15
OLDER SIBLINGS	23
GRANDPARENTS	8
FRIENDS	45
GIRLFRIEND/BOYFRIEND	21
OLDER TEENS	25
MEDIA	47
POPULAR CULTURE:(OTHER PEOPLE'S BEDROOM DESIGNS)	54
RELIGION	29
CLASSES AT SCHOOL	21
ACTIVITIES OUTSIDE OF CLASS	23

MOM (10)

BEDROOM SET	-.14
REFRIGERATOR	-.14
CLOSET SPACE	.14
LARGE BEDROOM	.16
WALLPAPER-FLORAL	.16
CURTAINS MATCH BEDSPREAD	.15
ITEMS REFLECT ETHNIC/CULTURAL IDENTITY	.19
MAKE-UPAND/ORHAIR ACCESSORIES	.13
SOUVENIRS	.14
STUFFED ANIMALS	.17

DAD (5)

AIR-FILLED CHAIR	.17
ENOUGH HEATING AND/OR AIR CONDITIONING	-.13
BEDSPREAD-ANIMALS	-.14
GLOBE OR MAPS	.15
SOUVENIRS	.20

YOUNGER SIBLIINGS (15)

BEDROOM SET	.15
COMPUTER DESK/CHAIR	-.14
DVD PLAYER	-.16
WALLPAPER-FLORAL	.24
BORDER WALLPAPER-FLORAL	.21
CALENDARS AND/OR SCHEDULES	.15
MAGAZINES THAT YOU LIKE TO READ	.15
PAINTINGS, DRAWINGS, SCULPTURES MADE BY OTHER PEOPLE	.15
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.23
PICTURES OF YOUR COUSIN(S)	.21
PICTURES OF YOUR MOTHER	.17
PICTURES OF YOUR FATHER	.20
PICTURES OF YOUR PET(S)	.22
PICTURES OF PLACES WHERE YOU'VE BEEN	.16
SOUVENIRS	.19

OLDER SIBLINGS (23)

AIR-FILLED CHAIR	.15
BOOKCASE	.16
OUTDOOR BALCONY OR PATIO	.17
WALLPAPER-OLD FASHIONED	.16
BEDSPREAD-FLORAL	.24
BEDSPREAD-STRIPES OR PLAID	.23
RUG COORDINATES WITH BEDROOM DESIGN	.22
CONCRETE	-.16
LOW-PILE CARPET (WALL TO WALL)	.16
BULLETIN BOARD OR DRY ERASE BOARD	.16
CAMERA AND PHOTOGRAPHY SUPPLIES	.16
PAINTINGS, DRAWINGS, SCULPUTES MADE BY OTHER PEOPLE	.19
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.22
PICTURES OF YOUR COUSIN(S)	.20
PICTURES OF YOUR MOTHER	.19
PICTURES OF YOUR FATHER	.22

PICTURES OF YOURSELF THAT SHOW WHO YOU ARE	.18
POSTERS OF FEMALE MOVIE STARS OR MODELS	.15
POSTERS OF MALE MOVIE STARS OR MODELS	.20
RELIGIOUS PICTURES AND/OR OTHER RELIGIOUS ITEMS	.19
SIGNS ON THE OUTSIDE OF DOOR-OTHER PEOPLE READ	.22
SOUVENIRS	.22
THINGS FOR BUILDING OR THAT YOU HAVE BUILT	.16

GRANDPARENTS (8)

WALLPAPER-OLD FASHIONED	.15
BORDER OF WALLPAPER-OLD FASHIONED	.16
TILE	.19
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.15
PICTURES OF YOUR GRANDPARENT(S)	.16
PICTURES OF YOUR COUSIN(S)	.18
PICTURES OF YOUR PET(S)	.13
POSTERS OF FEMALE ATHLETES	.15

FRIENDS (45)

BEDROOM SET	.21
CANOPY BED	.15
MAKE-UP TABLE WITH MIRROR	.33
COMPUTER & PRINTER	.18
INTERNET ACCESS	.15
MICROWAVE OR TOASTER OVEN	.18
STEREO	.16
TELEPHONE	.24

BALCONY OR PATIO	.16
DOOR LEADING FROM BEDROOM TO OUTSIDE OF HOUSE	.23
OWN BATHROOM ATTACHED TO BEDROOM	.16
PLENTY OF CLOSET SPACE	.14
SECURE LOCK, BEDROOM DOOR	.21
SPECIAL TYPE OF WINDOWS	.16
UNIQUE/DIFFERENT WALL PLACEMENT	.14
WALLPAPER-SOLID COLOR	.15
BEDSPREAD-FLORAL	.22
BEDSPREAD-SOLID COLOR	.15
BEDSREAD-STRIPES OR PLAID	.20
SHAG CARPET (WALL-TO-WALL)	.15
FLOORING-WOOD	.20
BULLETIN BOARD/DRY ERASE BOARD	.18
BUMPER STICKERS/OTHER SIGNS THAT EXPLAIN YOUR IDEAS/FEELINGS/ATTITUDES	.26
CAMERA/PHOTOGRAPHY SUPPLIES	.16

CANDLES AND CANDLEHOLDERS	.23
CHESS SET/OTHER BOARD GAMES	-.13
FULL-LENGTH MIRROR	.29
GLOBE OR MAPS	-.14
HANGING DECORATIVE ITEMS	.14
JEWELRY (EARRINGS, NECKLACES, ETC).	.25
LAVA LAMP/SPINNING DISCO BALL	.13
MAGAZINES THAT YOU LIKE TO READ	.31
MAKE-UP AND/OR HAIR ACCESSORIES	.25
PICTURES OF YOUR FRIENDS	.23
PICTURES OF PLACES WHERE YOU'VE BEEN	.16
POSTERS OF FEMALE ATHLETES	.16
POSTERS OF FEMALE MOVIE STARS OR MODELS	.24
POSTERS OF MALE MOVIE STARS OR MODELS	.28
POSTERS OF FEMALE MUSICIANS	.15
POSTERS OF MALE MUSICIANS	.17

ROOM DECORATIONS WITH BRAND-NAME LABELS	.19
SIGNS ON THE OUTSIDE OF YOUR DOOR FOR OTHER PEOPLE TO READ	.19
SOUVENIRS	.18
THINGS FOR BUILDING OR THAT YOU HAVE BUILT	-.15
WALL CLOCK	.18

GIRLFRIEND OR BOYFRIEND (21)

COMPUTER DESK & CHAIR	.17
SOFA (COUCH) & CHAIR SET	.20
TABLE AND CHAIRS	.23
COMPUTER & PRINTER	.17
DVD PLAYER	.17
INTERNET ACCESS	.20
MICROWAVE OR TOASTER OVEN	.17
REFRIGERATOR	.27
TELEPHONE	.22
BALCONY OR PATIO	.18
DOOR LEADING FROM BEDROOM TO OUTSIDE OF HOUSE	.28

FIREPLACE	.26
OWN BATHROOM ATTACHED TO YOUR BEDROOM	.25
FLOORING-WOOD	.26
BULLETIN BOARD/DRY ERASE BOARD	.19
BUMPER STICKERS/OTHER SIGNS THAT EXPLAIN YOUR IDEAS/FEELINGS/ATTITUDES	.17
LAVA LAMP/SPINNING DISCO BALL LAMP	.18
PICTURES OF YOUR GRANDPARENT(S)	-.16
POSTERS OF FEMALE MOVIE STARS OR MODELS	.18
POSTERS OF MALE MOVIE STARS OR MODELS	.18
WALL CLOCK	.22

OLDER TEENS (25)

BEDROOM SET	.16
MAKE-UP TABLE WITH MIRROR	.21

COMPUTER & PRINTER	.13
BORDER WALLPAPER-SOLID COLOR	.15
BEDSPREAD-CARTOON/DISNEY	-.14
BEDSPREAD-FLORAL	.14
BEDSPREAD-STRIPES OR PLAID	.22
FLOORING-RUG THAT CORDINATES W/BEDROOM DESIGN NOT WALL-TO-WALL	.16
FLOORING-WOOD	.27
BUMPER STICKERS/OTHER SIGNS THAT EXPLAIN YOUR IDEAS/FEELINGS/ATTITUES	.15
CAMERA/PHOTOGRAPHY SUPPLIES	.14
CANDLES AND CANDLEHOLDERS	.19
CHESS SET/OTHER BOARD GAMES	-.14
FULL-LENGTH MIRROR	.15
JEWELRY (EARRINGS, NECLACES, ETC.)	.19
MAGAZINES THAT YOU LIKE TO READ	.25
PICTURES OF YOUR FRIENDS	.19
POSTERS OF FEMALE ATHLETES	.20

POSTERS OF FEMALE MOVIE STARS OR MODELS	.20
POSTERS OF MALE MOVIE STARS OR MODELS	.28
POSTERS OF FEMALE MUSICIANS	.14
POSTERS OF MALE MUSICIANS	.17
ROOM DECORATIONS WITH BRAND-NAME LABELS	.14
SIGNS ON THE OUTSIDE OF YOUR DOOR FOR OTHER PEOPLE TO READ	.16
WALL CLOCK	.16

MEDIA (47)

AIR-FILLED CHAIR	.17
BEAN-BAG CHAIR	.17
BEDROOM SET	.16
MAKE-UP TABLE WITH MIRROR	.32
TABLE AND CHAIRS	.15
WATER BED	.19
DVD PLAYER	.14
INTERNET ACCESS	.18
SEWING MACHINE	.17

TELEPHONE	.21
TV	.15
OUTDOOR BALCONY/PATIO	.25
DOOR FROM BEDROOM TO OUTSIDE OF THE HOUSE	.23
LARGE BEDROOM	.14
OWN BATHROOM ATTACHED TO YOUR BEDROOM	.15
SPECIAL TYPE OF WINDOWS	.17
WALLPAPER-RETRO (70'S STYLE AND COLORS)	.15
BORDER OF WALLPAPER- RETRO (70'S STYLE AND COLORS)	.19
BEDSPREAD-FLORAL	.20
FLOORING-RUG THAT COORDINATES WITH BEDROOM (NOT WALL-TO-WALL)	.16
SHAG CARPET (WALL-TO-WALL)	.13
BUMPERS STICKERS/OTHER SIGNS THAT EXPLAIN YOUR IDEAS/FEELINGS/ATTITIUDES	.27
CANDLES AND CANDLEHOLDERS	.19

DOLLS (BABY, BARBIE, PORCELAIN, ETC.)	.14
FULL-LENGTH MIRROR	.18
GLOBE OR MAPS	-.16
JEWELRY (EARRINGS, NECLACES, ETC.)	.21
MAGAZINES THAT YOU LIKE TO READ	.25
MAKE-UP AND/OR HAIR ACCESSORIES	.24
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.20
PICTURES OF YOUR FRIENDS	.22
PICTURES OF YOUR COUSIN(S)	.19
PICTURES OF YOUR MOTHER	.13
PICTURES OF YOUR FATHER	.16
PICTURES OF YOUR PET(S)	.16
PICTURES OF YOURSELF THAT SHOW WHO YOU ARE	.16
PICTURES OF PLACES WHERE YOU'VE BEEN	.19
POSTERS OF PLACES WHERE YOU'D	.14

LIKE TO GO	
POSTERS OF FEMALE MOVIES STARS OR MODELS	.28
POSTERS OF MALE MOVIE STARS OR MODELS	.32
POSTERS OF FEMALE MUSICIANS	.23
POSTERS OF MALE MUSICIANS	.24
ROOM DECORATIONS WITH BRAND-NAME LABELS	.30
SIGNS ON THE OUTSIDE OF YOUR DOOR FOR OTHER PEOPLE TO READ	.18
SOUVENIRS FROM PLACES WHERE YOU HAVE TRAVELED/VACATION	.16
STUFFED ANIMALS (CLOTH)	.16
WALL CLOCK	.15

POPULAR CULTURE: OTHER PEOPLE'S BEDROOMS (54)

AIR-FILLED CHAIR	.21
BEDROOM SET (MATCHING)	.24
CANOPY BED	.14
MAKE-UP TABLE WITH MIRROR	.35
SEWING MACHINE	.19

TELEPHONE	.21
OUTDOOR BALCONY OR PATIO	.26
ENOUGH HEAT/AIR CONDITIONING	.25
OWN BATHROOM ATTACHED TO BEDROOM	.20
SPECIAL TYPE OF WINDOWS	.19
WALLPAPER-RETRO 70'S	.24
WALLPAPER-SOLID COLOR	.14
BORDER WALLPAPER-RETRO 70'S	.25
BORDER WALLPAPER-SOLID COLOR	.13
BORDER WALLPAPER-STARS&MOONS	.18
BORDER WALLPAPER-STRIPES/PLAID	.15
BEDSPREAD-FLORAL	.21
BEDSPREAD-RETRO 70'S	.20
FLOORING-COORDINATING RUG	.18
FLOORING-SHAG CARPET	.14
FLOORING-WOOD	.15
BULLETIN OR DRY ERASE BOARD	.26
BUMPER STICKERS OR OTHER SIGNS	.26
CALENDARS AND/OR SCHEDULES	.15
CAMERA AND PHOTO SUPPLIES	.19

CANDLES AND CANDLEHOLDERS	.31
DOLLS (BABY, BARBIE, PORCELAIN, ETC.)	.25
FULL-LENGTH MIRROR	.37
HANGING DECORATIVE ITEMS	.14
JEWELRY (EARRINGS, NECKLACES, ETC.)	.35
LAVA LAMP OR SPINNING DISCO BALL LAMP	.21
MAGAZINES YOU LIKE TO READ	.28
MAKE-UP AND/OR HAIR ACCESS.	.39
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.29
PICTURES OF YOUR FRIENDS	.32
PICTURES OF YOUR GRANDPARENT(S)	.26
PICTURES OF YOUR COUSIN(S)	.35
PICTURES OF YOUR MOTHER	.27
PICTURES OF YOUR FATHER	.28
PICTURES OF YOUR PET(S)	.15
PICTURES OF YOURSELF THAT SHOW WHO YOU ARE	.15

PIGGY BANK OR OTHER MONEY HOLDER	.13
PICTURES OF PLACES WHERE YOU'VE BEEN	.22
POSTERS OF PLACES WHERE YOU'D LIKE TO GO	.13
POSTERS OF FEMALE ATHLETES	.16
POSTERS OF FEMALE MOVIE STARS OR MODELS	.26
POSTERS OF MALE MOVIE STARS OR MODELS	.30
POSTERS OF FEMALE MUSICIANS	.19
POSTERS OF MALE MUSICIANS	.13
ROOM DECORATIONS WITH BRAND-NAME LABELS	.28
SIGNS OUTSIDE YOUR DOOR	.26
SOUVENIRS FROM PLACE WHERE YOU HAVE TRAVELED/VACATIONED	.20
STUFFED ANIMALS (CLOTH)	.22
WALL CLOCK	.22

RELIGION (29)

BOOKCASE	.26
SOFA (COUCH) & CHAIR SET	-.17
DVD PLAYER	-.20
ELECTRONIC GAMES	-.21
INTERNET ACCESS	-.19
MICROWAVE/TOASTER OVEN	-.16
REFRIGERATOR	-.18
TV	-.20
WALLPAPER-OLD FASHIONED	.18
ARTISTIC THINGS THAT YOU'VE MADE	.15
BOOKS THAT YOU LIKE TO READ	.24
BULLETIN OR DRY ERASE BOARD	.14
CALENDARS AND/OR SCHEDULES	.19
CAMERA/PHOTO SUPPLIES	.19
INTEMS REFLECT ETHNIC/CULTURAL IDENTITY	.19
LAVA LAMP/SPINNING DISCO BALL LAMP	-.17
MUSICAL INSTRUMENT(S)	.17
PAINTINGS, DRAWINGS, SCULPTURES MADE BY OTHER	.20

PEOPLE	
PICTURES OF FAMOUS PEOPLE IN HISTORY	.24
PICTURES OF YOUR BROTHER(S) AND/OR SISTER(S)	.29
PICTURES OF YOUR GRANDPARENT(S)	.22
PICTURES OF YOUR COUSIN(S)	.20
PICTURES OF YOUR MOTHER	.20
PICTURES OF YOUR FATHER	.26
PICTURES OF YOURSELF THAT SHOW WHO YOU ARE	.22
POSTERS/PICTUES OF NATURE OR SCIENCE	.22
RELIGIOUS PICTURES AND/OR OTHER RELIGIOUS ITEMS	.46
SOUVENIRS FROM PLACES WHERE YOU HAVE TRAVELED/VACATIONED	.27
STUFFED ANIMALS (CLOTH)	.25

CLASSES AT SCHOOL (21)

BOOKCASE	.17

INTERNET ACCESS	-.17
REFRIGERATOR	-.15
STEREO	-.16
TELEPHONE	-.18
SPECIAL TYPE OF WINDOWS	.16
WALLPAPER-OLD FASHIONED	.18
WALLPAPER-SOLID COLOR	.23
ARTISTIC THINGS THAT YOU HAVE MADE	.14
BOOKS THAT YOU LIKE TO READ	.18
GLOBE OR MAPS	.25
ITEMS THAT REFLECT YOUR ETHNIC/CULTURAL IDENITY	.15
MUSICAL INSTRUMENT(S)	.19
PAINTINGS, DRAWINGS, SCULPTURES MADE BY OTHER PEOPLE	.19
PICTURES OF FAMOUS PEOPLE IN HISTORY	.19
PICTURES OF YOUR BROTHER(S) AND OR SISTER(S)	.13
POSTERS/PICTURES	.23

NATURE/SCIENCE	
POSTERS OF PLACES YOU'D LIKE TO GO	.14
RELIGIOUS PICTURES AND/OR OTHER RELIGIOUS ITEMS	.17
SOUVENIRS FROM PLACES WHERE YOU HAVE TRAVELED/VACATIONED	.14
WALL CLOCK	.13

ACTIVITIES OUTSIDE OF SCHOOL (23)

CANOPY BED	.15
COMPUTER DESK AND CHAIR	-.16
MAKE-UP TABLE WITH MIRROR	-.15
INTERNET ACCESS	-.14
WALLPAPER-OLD FASHIONED	.19
BORDER WALLPAPER-ATHLETIC	.14
BEDSPREAD-SPECIAL BLANKET	.20
BEDSPREAD-SOLID COLOR	.16
AQUARIUM AND/OR OTHER PET(S)	.14
ARTISTIC THINGS YOU HAVE MADE	.13
ATHLETIC OR SPORT EQUIPMENT	.17
AWARDS, CERTIFICATES, TROPHIES	.19

ITEMS REFLECT ETHNIC/CULTURAL IDENTITY	.19
PAINTINGS, DRAWINGS, SCULPTURES MADE BY OTHER PEOPLE	.19
PICTURES OF FAMOUS PEOPLE IN HISTORY	.20
PICTURES OF YOUR PET(S)	.14
PICTURES OF PLACES WHERE YOU'VE BEEN	.14
POSTERS OF FEMALE ATHLETES	.26
POSTERS OF MALE ATHLETES	.15
ROOM DECORATIONS WITH BRAND-NAME LABELS	.15
SOUVENIRS FROM PLACES WHERE YOU HAVE TRAVELED/VACATIONED	.16
STUFFED ANIMALS (CLOTH)	.13
THINGS FOR BUILDING OR THAT YOU HAVE BUILT	.15

CURRICULUM VITAE

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EDUCATION

1999-present **Ph.D. Candidate: Family, Consumer, and Human Development,** Utah State University, Logan, Utah.
Expected completion *Spring Semester 2005*—passed Ph.D. defense on 11-22-04. Dissertation research—Bedroom Design and Decoration: A Context for Investigating Developmental Theory in Adolescence.

1997-99 **Graduate course work in Human Development and Family Studies,** University of Missouri-Columbia, Columbia, Missouri.

1989 **M.S., Food Science**, University of California, Davis, Davis, California.
Sensory Evaluation concentration. Thesis title: Time-intensity and response surface applications to hedonic response to chocolate milk.

1982 **B.S., Food Science**, California Polytechnic State University, San Luis Obispo, California.

1979 **A.A., General Education**, Modesto Junior College, Modesto, California.

RESEARCH EXPERIENCE

2003-2004 **Co-Investigator**, Utah State University, Logan, Utah
Awarded Agricultural Experiment Station grant for the research project: Adolescent Development and Environments. Developed two original measures, and a survey for 8-9 grade students. Coordinated research project with district and school personnel. Collected and coded survey data. Analyzed data. Prepared a manuscript for publication.

2001 **Graduate Research Assistant**, Utah State University, Logan, Utah
College of Family Life, dean's grant. Identified potential grant sources, and assisted in writing a grant proposal.

1999 **Research team member**, Utah State University, Logan, Utah
Early Head Start Project. Coded and transcribed videotapes of father-infant interactions; developed coding criteria.

1987-89 **Graduate Research Assistant**, University of California-Davis, Davis, California
Used computer-aided method to record time and hedonic responses of human participants to chocolate milk. Also compared these responses to traditional pencil-paper method. Analyzed data by ANOVA, correlations and Response Surface Methodology.

1982 **Undergraduate Research Assistant**, California Polytechnic State University, San Luis Obispo, California
Research grant for formulation of a restructured tomato product. Prototype development, Instron measurement, and sensory evaluation.

TEACHING EXPERIENCE

2004 **Instructor:** Fall Semester
Utah State University
Human Development: Lifespan (Family, Consumer, and Human Development 1500)
Instructed this class of 15 students for USU Continuing Education at Bridgerland Applied Technology College. Advised students in-person and though e-mail messages.

2004 **Teaching Assistant:** Spring Semester
Utah State University
Family and Social Policy (Family, Consumer, and Human Development 4230)
Graded papers (APA writing style) for this class of 100 students. Maintained grade book in Excel, advised students, and lectured.

2003 **Instructor:** Fall Semester
Utah State University
Parenting and Child Guidance (Family, Consumer, and Human Development 2610)
Wrote lectures and examination questions; instructed the class of 187 students. Advised students by holding office hours and answering e-mail messages. Organized and facilitated a parent panel for a class period, contacted guest speakers, and supervised a teaching assistant.

1998 **Teaching Assistant**: Winter Semester
University of Missouri-Columbia
Working With Parents (Human Development and Family Studies 261)
Prepared class materials, facilitated classes, graded assignments, and advised students.

1988 **Teaching Assistant**: Winter Quarter
University of California, Davis
Principles of Sensory Analysis of Foods (Food Science 107)
Set-up and conducted laboratory portion of course, and advised students.

1986 **Teaching Assistant**: Fall Quarter
University of California, Davis
Undergraduate core food science course (Food Science 100)
Wrote the examinations for this team-taught course.

INTERNSHIPS

1987 **Sensory/Consumer Products Technician**
Tragon Corporation, Redwood City, California
Summer internship. Conducted sensory/consumer evaluation panels, prepared data for analysis, and created computer graphics of final results.

1981 **Process Control Technician**
General Foods Corporation, Modesto, California
Summer internship. Revised the Cereal Process Specifications; developed in-process Kool Aid testing procedure; provided trouble-shooting and scale-up assistance.

PROFESSIONAL WORK EXPERIENCE

1999 **Extension Program Assistant**
Human Environmental Sciences Extension, University of Missouri-Columbia, Columbia, Missouri
First author of a theory and research based Extension publication for fathers. Served as one of three leaders on the use of theory to guide Missouri State Extension programming for fathers. Developed an Extension promotional piece for parents.

1998 **Project team member**
ParentLink, University of Missouri-Columbia, Columbia, Missouri
First author of the "Action Ideas" portion of the "Parenting Corner" resource manual, as a part of a grant funded project for the establishment of parenting resource corners in nine Missouri communities. The "Action Ideas" consisted of 48 educational activities and corresponding incentives for attracting parents to the "Parenting Corner."

1994-96 **Sensory Scientist (Research Specialist)**
Department of Food Science and Nutrition, University of Missouri-Columbia, Columbia, Missouri
Managed contract sensory facility for the evaluation of food and personal products. Wrote cost/project proposals. Recruited and trained panelists. Conducted sensory panels: descriptive, affective, and discrimination. Prepared test designs and protocols. Analyzed data using SAS and computer spreadsheets. Wrote reports. Supervised assistants and students. Provided off-site guidance and presentations to clients. Conducted library research for assistance with the preparation of a book manuscript.

1993 **Sensory Scientist**
The Pillsbury Company, Minneapolis, Minnesota
Discussed projects with R&D and marketing personnel; wrote questionnaires for Central Location Tests, Home Use Tests, and employee panels using hedonic and diagnostic questions; interpreted data from ANOVA, Principal Components Analysis, Just-About-Right Frequencies. Wrote final reports.

1992 **Research Technician**
Sandoz Nutrition, St. Louis Park, Minnesota
Assisted with bench top development/improvement of various products and evaluation of storage studies.

1989-91 **Sensory Scientist (Post Graduate Researcher)**
Agricultural Engineering and Vegetable Crops Departments, University of California-Davis, Davis, California
Managed sensory aspects of Campbell Soup grant-funded tomato quality improvement project; and NASA/other funding of packaging studies for extended shelf-life in apples, celery, and cauliflower. Methods used included difference testing and descriptive analysis (including panel training and reference development).

1982-86 **Research Scientist**
General Foods Corporation-California Vegetable Concentrates, Modesto, California
Developed a line of freeze dried fruits; implemented product improvements; resolved customer complaints; developed quality control testing procedures; revised specifications; coordinated inter-company research; one of initial personal computer users in Research department-trained co-workers in this area; provided technical support to Production, and to Sales at IFT Symposiums; conducted pilot plant testing, storage studies, and product evaluation for the identification of a sulfite replacement; wrote reports; and supervised Research Technicians.

PUBLICATIONS

Taylor, D.E., Jones, R.M., Singh, A., & Cook, J.L. (2005). *Bedroom design and decoration: Gender differences in niche-building preference, activity, and influence.* Manuscript submitted for publication.

Taylor, D.E., & Clark, J.A. (2000). *Fathering to meet the needs of children (GH 6500).* Human Environmental Sciences Extension, University of Missouri-Columbia.

Taylor, D., Mertensmeyer, C., Murphy, V., et al. (1999). *Action ideas. Parenting Corner; Parenting information within your reach training curricula.* ParentLink, University of Missouri-Columbia.

Taylor, D.E., & Pangborn, R—M. (1990). Temporal aspects of hedonic responses. *Journal of Sensory Studies, 4*, 241-247.

ACADEMIC AND PROFESSIONAL ACTIVITIES

2005 **Guest Lecturer**, *Qualitative Research Methods* course, Utah State University

2004 **Poster presentation**: *Adolescent Development and Environments*, American Association for the Advancement of Science, Pacific Division Annual Meeting

2000, 2003-04 **Student Member**, National Council on Family Relations

1988 **Poster presentation:** M.S. research on the temporal aspects of hedonic responses, Institute of Food Technologists Annual Meeting

1987-88 **Graduate Student Representative**, Department of Food Science, University of California, Davis

1983-86 **Chairman, Program Chairman, Secretary, Treasurer**, Northern California Central Valley, Institute of Food Technologists

1984 & 1985 **Chairman**, "Made in Modesto," General Foods Corporation

1982 **Chairman**, Undergraduate Research Paper Competition, Institute of Food Technologists

1981-82 **President**, Food Technology Club, California Polytechnic State University

HONORS AND AWARDS

Phi Kappa Phi Honor Society Award, Utah State University, Logan, Utah, 2002

Presidential Fellowship, Utah State University, Logan, Utah, 2000

Graduation with honors, California Polytechnic State University, San Luis Obispo, California, 1982

Graduation with honors, Modesto Junior College, Modesto, California, 1979

California Scholastic Federation, Lifetime Member, Hughson Union High School, Hughson, CA, 1977

Faculty Citizenship Award, Hughson Union High School, Hughson, California, 1977

SERVICE

2000-present **Parent Volunteer**, Edith Bowen Laboratory School, Utah State University
Read books to groups of K-2nd grade students. Provided transportation and supervision for 1st – 2nd grade student field trips. Currently providing weekly classroom assistance for 3rd graders.

2004, March **Child & Parent Advocate**, Children's House, Utah State University
Participated, as an interviewee, in the making of a DVD to solicit funds for building a Child Development Center on the Utah State University campus. The Child Development Center will be a child care facility that will replace the current facility, Children's House.

2000-02 **Parent Advisory Committee Member**, Children's House, Utah State University
Represented child care needs of children and parents. Organized and lead a successful grassroots effort of parents and university professionals to prevent the closure of the Children's House.

1999 **Advisory Committee & Subcommittee Member**, ParentLink, University of Missouri-Columbia
Special Health Care Needs Project: Attended several meetings to participate in the development of ideas for outreach materials (written packet, poster, TV spot) for parents of children who have special health care needs.

1999 **4-H Scholarship Reviewer**, 4-H Youth Development, University of Missouri-Columbia.
Spent one day reviewing college scholarship applications from 4-H members. Made recommendations for scholarship recipients based on pre-assigned criteria.

1998 **Neighborhood Representative**, Mothers' March of Dimes
Sent information about Mothers' March of Dimes to neighbors to solicit contributions, mailed donations to headquarters.

1995, 97 **Parent Panel participant**, *Working With Parents* course, University of Missouri, Columbia
Served on two panels of parents for the purpose of educating students about parents' needs.

1995-96 **Parent Advisory Committee Member**, Child Development Laboratory (CDL), University of Missouri-Columbia. Attended monthly meetings during the school year to represent the parents of infants at the CDL.

1989 **Future Homemakers of America, Contest Judge**, Hughson Union High School
Judged presentations by Future Homemakers of America high school students during this one-day event.

1983 **United Way Chairman**, General Foods Corporation
Promoted United Way for the purpose of obtaining General Foods employee donations.