

CHAPTER 5

Proposed Theoretical Framework, Model and Illustration

The goal of this study was to examine and integrate theories from a systems theory perspective found outside the field of CT and the theories used within the field. The results of this project were the development of a theoretical framework and a visual model of the general concepts that were identified in the data and an illustration of the framework using a discussion of the issue of body image and eating disorders in females. The four domains are *Relationship*, *Process*, *Organization*, and *Outcomes*. Using the visual model in Figure 2 as a guide, statements are discussed concerning the concepts that constitute the proposed theoretical framework.

In Chapter 1, humans were described as dynamic, complex systems as opposed to simple, mechanistic beings. A human had biological and psychological subsystems that functioned in contexts of their social and cultural environments. Humans were both objective and subjective beings who operated in a world with both objective and subjective reality. Solving human problems are difficult because of this complexity and a need for a holistic perspective and theoretical framework was realized.

Proposed Theoretical Framework and Model

From the domains, categories, and sub-categories of *Relationship*, *Process*, *Organization*, and *Outcomes*, a theoretical framework was developed. The components of this framework are dynamic, interactive, bi-directional, and coactive. The Human-Environment Systems model is an integration of the domains and illustrates the components in action. The model provides a visual representation of the complexity and dynamic quality of the universe—its *Relationship*, *Process*, and *Organization* that results in various *Outcomes* as it changes through time and space. The levels of Human, Social Environment, and Cultural Environment are depicted by white ovals, with Values shown as a column through the core of these levels. Surrounding the white ovals is a gray sphere that represents the Natural Environment. The Natural Environment is the physical world

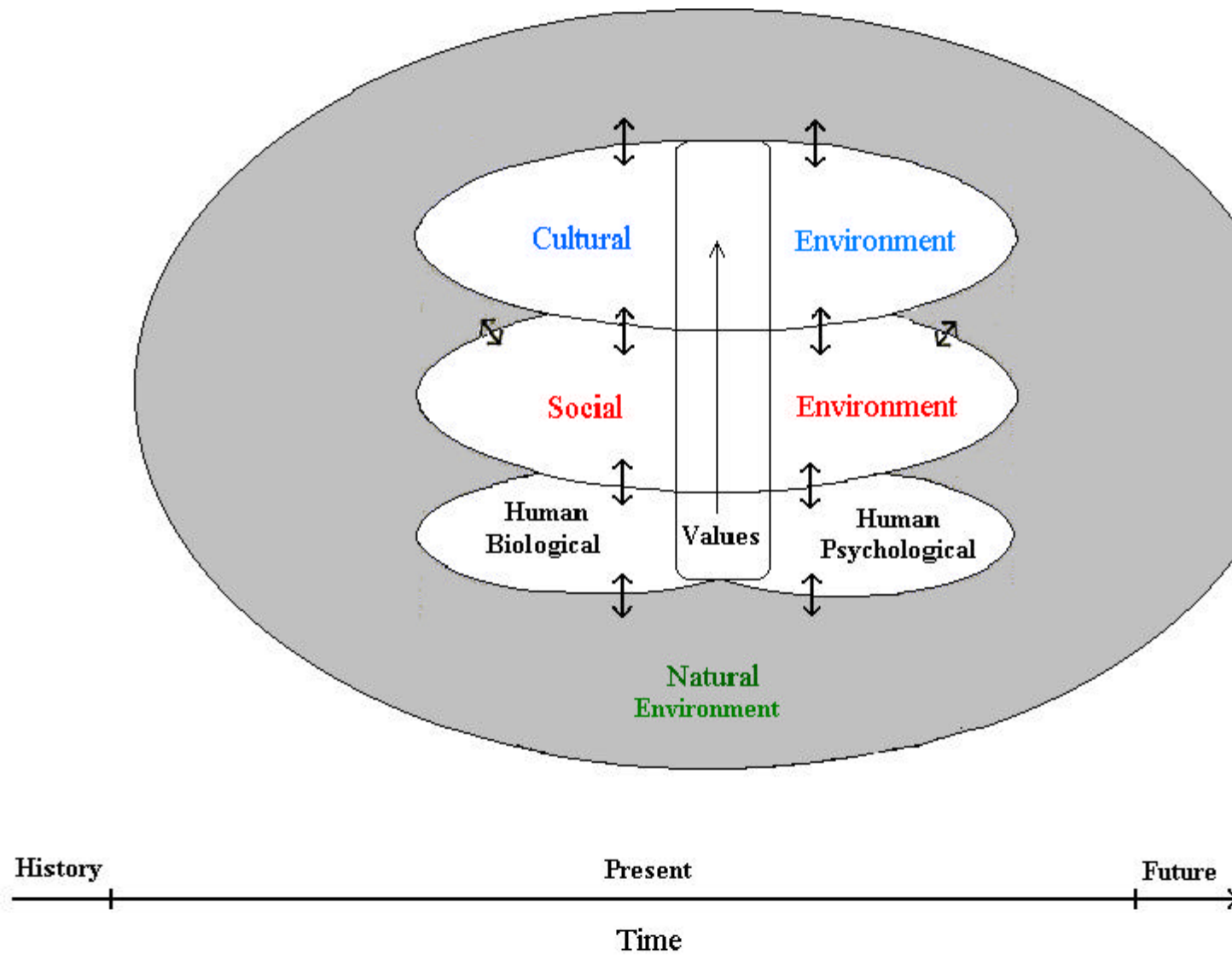


Figure 2: Human-Environment Systems Model of Integrated Theories.

around us, encompassing all levels, into space and beyond to infinity. The sphere is located above a line that depicts Time—the past or History, Present, and Future.

Relationship

The Human-Environment Systems model visually represents the holistic nature of the universe (see Figure 2). No single entity is considered central and the systems are viewed together, as a whole. There is an interrelation between all the systems in the universe. The world is an ordered whole with interrelations between the different levels of the systems that compose it. No system or part of a system is isolated. The environment consists of natural, social, and cultural levels. There is a relationship between living systems and the environment, forming an organism-environment unit. In the model, the organism is human and a human-environment unit is depicted. There is a coactive relationship among the parts of the systems, including between human and environment, and among the systems of the universe. The arrows between the levels and the overlapping of the circles represent this relationship (see Figure 2). The relationship is bi-directional with each part of a system and each system having an active part in the interaction, instead of a causal-reactor relation.

Interconnection between a human and the environment forms an interrelated unit. The human-environment relations are shown by the Human-Environment Systems model with all systems connecting with human systems (see Figure 2). Humans exist in interaction with the systems in the total environment: natural, social, and cultural. The social environment acts as an interrelated whole. The parts of other individuals, families, schools, church communities, and businesses are not independent. The model represents the social environment in general, not depicting parts of the social environment in detail. There is also coaction between the social environment and the other systems in the universe. Human-social environment interactions result in meanings to aid learning and understanding the world.

A coactive relationship also exists between the cultural environment and the other environments of the universe. This is shown in the model by bi-directional arrows and overlapping circles (see Figure 2). Cultural environment includes the human systems of

economics, religion, technology, and education. The cultural environment provides a larger social context that guides the social construction of meanings and promotes individual development in human-cultural environment interactions.

Process

Process is the interactions between the environments. Interactions between systems and the parts of systems were bi-directional and coactive. Coaction occurs horizontally as well as vertically. On the Human-Environment Systems model, the bi-directional arrows and the overlapping of the circles depict this coaction (see Figure 2). The organism-environment unit is an open system and is capable of self-regulation. Process includes the interaction of humans and environment as a unit--human-environment interaction. The human component is comprised of biological, psychological, and social aspects, and the environment component is comprised of natural, social, and cultural aspects. These two components and their different aspects have the capacity to result in many different processes. The model visually shows these different interaction units.

All systems and their dynamic interactions are affected by the natural elements of time and space. The model visually represents time as including past history, the present time, and the time to come, or the future. History has influenced relationships and processes in the present time, and the present time is a factor in what will occur in the future. Space is the three-dimensional area in which all systems exist and move in connection with time, shown on the model in and around all the levels and systems. Humans engage in psychological processes in interaction with the biological, social, cultural, and natural environments.

The social environment is in dynamic, complex interaction with the other levels of the universe. It serves as the context for human social interactions with people and the social construction of meanings. Humans use knowledge gained from their interactions to change and modify the environment, according to their values. The model shows human values in the center of the human system, which depicts their influence on the individual and the human-environment processes. The cultural environment is in interaction with the

human, social and natural levels and provides a larger context for the formation of societal values, symbols that serve as verbal and non-verbal languages of human meaning, and gender distinctions. On the model, the cultural environment is shown on a higher hierarchical level than human and social environment because the social environment acts as a mediator between human interaction and the cultural environment. Also, the coaction between the levels is depicted by the arrows.

Development is a process of change that operates over time and is regulated by context (i.e., biological, psychological, social, cultural, and natural). The contexts for development are shown on the Human-Environment Systems model, with biological and psychological being parts of the human level and social, cultural, and natural environments being other levels. The processes of development for the human-environment unit are dynamic or ever changing and complex. The development processes of the human-environment unit are fused or integrated and composed of multiple levels of organization. Changes in one level affect the function of all other levels, higher and lower. Development of a system results in increasing complexity or levels of organization.

Optimal human development is related to an individual's ability to be flexible (plasticity), and differentiated and integrated (complexity) with their environment. In the *psychological* process, an individual's thought processes contribute to their social perceptions. In social interactions, humans perceive, make interpretations, and assign meanings in a dynamic relationship across time. This coaction between an individual's systems and the systems of other people is shown on the Human-Environment Systems model by the arrows and overlapping of the circles between the Social Environment level and Human level, which is composed of the Human Biological, Human Values, and Human Psychological dimensions (see Figure 2). In the biological process of humans, genes and other biological functions are in relation to the human system and the environments surrounding that system. The interaction of genes and environment codetermines the developmental outcomes from many possible outcomes.

The human and interaction with both the social and cultural environments serve as contexts for human behavior and development. The social environment is the context where people interact and share meanings to understand the world and to guide individual development. Symbols serve as a guide for individuals to the cultural environment, which provides a large context of beliefs and values. Cultural processes contribute to the individual differences of people. The processes of acculturation, assimilation, and authentication influence attitudes, value development and use of social objects.

Organization

Systems are organized into hierarchical levels of organization. The structure of the world is a network of dynamic, complex, ordered systems and sub-systems. The Human-Environment Systems model shows these levels of organization (see Figure 2). The human level (system and subsystems) is depicted. The human system is shown with the sub-systems of biological and psychological. The organizational structure of human relationship and interaction is as a person-environment unit. The social environment level that is an immediate context of human interaction is seen on the model above the human system. The social environment level acts as a mediator of the cultural environment level. The natural environment system is shown on the model below, around, and above the other systems, encompassing all of the other levels. The natural environment has relationship and interaction with each level and system and influences their outcomes. The health of the natural environment directly impacts human quality of life.

Outcomes

The results or outcomes of the relationship, process, and organization of systems and the human-environment unit are humanistic outcomes, symbols, and an interdisciplinary nature. Humanistic outcomes include interpretations, values, and quality of life. Interpretations, or meanings, are derived through process from human relationships and interaction with the social and cultural environments. Values are an outcome of cultural interaction that serve as guiding principles for an individual in society, affecting their decisions, behavior, and development. The Human-Environment Systems model shows values in the middle of the Human level because all human activity

and relationships are impacted by an individual's values, which is a uniquely human outcome (see Figure 2). Human relationships and coaction with the natural, social, and cultural environments determine the quality of life of an individual.

Symbols are products or outcomes of an individual's interaction with the social and cultural environments. Codes and social objects provide meanings to life and are crucial for survival of the individual and societies. Another outcome of systems relationship and interaction is that it requires an interdisciplinary perspective. By the nature of the systems perspective, the subject matter requires study across disciplines, or transdisciplinary, and among many discipline areas, or multidisciplinary, in order to obtain a holistic view of the universe.

Illustration of the Integrated Theoretical Framework

Body image and eating disorders in females is a complex issue facing our society. In the overview on this subject in Chapter 2, many studies were discussed that have attempted to explain the causes of this disordered behavior. Several different conceptual or theoretical bases have been used to examine the problem. According to Thompson (1990), some research focused on the relationship between neuropsychological functioning and body image disturbances. The developmental factors of puberty and their role in the development of body image during that important transitional time in life have also been studied extensively for their impact on eating disorders (MacGillivray & Wilson, 1997; Thelen & Cormier, 1995; Striegel-Moore, Schreiber, Pike, Wilfley, & Rodin, 1995; Thompson, Covert, Richards, Johnson, & Cattarin, 1995). Some of the factors examined were actual and perceived weight, teasing history, and global psychological function. The theoretical explanation that was most studied was the sociocultural theory that states that thinness was emphasized in the idealized standard of beauty (Alan & Grilo, 1995; Dunning, 1997; Gupta, 1995; Johnson, 1990; Lennon, 1992, 1997; Lennon & Rudd, 1994; Lennon, Rudd, Sloan, & Kim, 1999; Miller, 1996; Silverstein Perdue, Peterson, Vogel, & Fantini, 1986; Stice & Shaw, 1994; Waddell-Kral & Thomas, 1990). Some researchers, using self-ideal discrepancy theory, have studied a person's perception of the difference between their actual self and their ideal body size

and the resulting level of dissatisfaction (Cash, 1995; Hamilton & Waller, 1993, Jaffee & Lutter, 1995; Kaiser, 1985; Silverstein, Peterson, & Perdue, 1986; Stiegel-Moore, Silberstein, & Rodin, 1986). A few studies have researched the failure of some people to modify their estimations of actual size after a weight change, using adaptive failure theory (Kwon & Parham, 1994). A small amount of research has studied the theory that individuals tend to exaggerate the size of smaller body sites, or perceptual artifact theory (Vandereycken, Coppinolle, & Peters, 1995) (Thompson). These researchers used conceptual or theoretical bases that were more narrowly focused in studying the subject of body image and eating disorders.

In discussing prevention of eating disorders, Nagel and Jones (1993) recognized the need of education on the human level including biological, physical, cognitive aspects, social level, and cultural level. The findings of this study suggest that a holistic, interdisciplinary approach would best address a complex human issue such as body image and eating disorders in women. The developed theoretical framework and its usefulness in the research are illustrated using the complex issues of body image and disordered eating behavior in females.

Relationship

The interrelation between all the systems is realized in viewing the universe in a holistic manner. A coactive relationship exists between the subsystems of the human system (i.e., biological, psychological) and between humans and the other environments in the universe (i.e., natural, cultural, social). The biological and psychological subsystems, an individual's values, and the social system or environment are interconnected. The Human-Environment Systems model in Figure 2 shows this interconnection by the arrows and the overlapping of the circles. In looking at the issue of body image and eating disorders in females, a researcher using the theoretical framework and Human-Environment Systems model would interpret a coaction and interrelationship between a female's biological subsystem, values, psychological subsystem, and the social, cultural, and natural environments. A female's self-esteem, perception of their body, and eating habits pertain to the psychological subsystem. The physiology of a

female's body is a function of the biological subsystem. Values are the attitudes a female uses to guide her thinking and actions. The social environment can consist of peers, family attitudes, school prevention programs, providing a context for a female's understanding of life, gender expectations, and self-esteem. The messages from the medical community, toy images, media and the weight control market promoting idealized body images and dieting, as well as other values and beliefs pertaining to a female's role expectation that influences development is provided by the cultural environment. The natural environment is the physical reality of the world, which influences and codetermines the health of females, their development, and quality of life.

The Human-Environment Systems model allows the researcher to address the complex relationship between a female, her individual subsystems, and her environment and promotes using a holistic view in the research of the problem of body image and eating disorders. Researchers are encouraged to study the dynamic, complex relationship of the human-environment unit as the focus of study.

Process

The Human-Environment Systems model shows that the process between systems and the parts of systems were bi-directional and coactive. For this situation, the process involved in the formation of body image and its resulting appearance management behaviors would occur horizontally between the parts of the systems and vertically between all the systems in a bi-directional manner. In the human-environment unit the female's own systems interact and codetermine each other. For a female with a body image problem, the cognitive process of dissatisfaction with one's body could be related to changing eating habits in the form of dieting, which then impacts the physiology of the body's biological systems. At the same time, all parts of the human system are being influenced by interaction with all the other systems--social, cultural, and natural. For example, in the social environment, family attitudes regarding desired body size and gender expectations, a school's eating disorder prevention program, and teasing from one's peer group are examples of the social environment that coacts with the individual's systems to contribute to human variations. The idealized body image implied in the

cultural environment of symbols of language, objects, and media, contributes to the beliefs and values of people and groups of people also interact with the individual systems. The natural elements of the world, the weather and the physical condition of our planet concerning air quality and food purity, are examples of physical impacts to an individual's biological functioning, cognitive abilities, and over all well-being and quality of life. The natural environment coacts with the functioning of the other systems in the world.

A female interacting with her environment is an open system and is capable of self-regulation, which is making choices based on the information she acquires. For example, a female may choose to learn about normal body types and the fallacies of advertising and make changes in eating choices and other appearance management behaviors according to the values and beliefs she co-constructs with the social and cultural environments. The Human-Environment Systems model shows the bi-directional interaction that is possible.

The model also depicts the factor of time that influences the development and outcomes of females. All of these interactions exist in space that is connected and affected by time--history, present, and future. A female's past experiences impact her self-esteem and view of her body. The present can reinforce her previously learned beliefs or challenge them and influence a change for a healthier self-image in the future. The process of change or development operates over time and is regulated by the biological, psychological, social, and cultural contexts. The model illustrates process by the lines above and below the systems, showing the past history, present, and future time on a continuum. A psychological process is a female's perception of self, including body image, which occurs over time, with puberty being a vulnerable time of transition. Habits and behaviors from the first half of life, or a female's history, influence the outcomes in the present and future. Low self-esteem and disordered eating behaviors can influence the biological process, the body's physiology, and change the development of the individual in later years. The social and cultural environments are the context that serves as a regulator to this development. In a supportive cultural environment that does not promote

arbitrary gender roles and a value of lookism for females, but emphasizes ability development and healthy body attitudes, the interaction with the individual will be very different than a non-supportive cultural environment that promotes unrealistic body ideals and arbitrary gender roles for females. The perspective of the Human-Environment Systems model represents the potential for this different and supportive environment.

The processes of the development of females in the human-environment unit are dynamic and complex. The degree in which a female is differentiated, or has a sense of herself, and at the same time is integrated, or has a sense of belonging to the sociocultural systems, determines complexity. According to the model, this development process is ever changing--dynamic. If females have no sense of self-identity, or are non-differentiated, but are fully integrated into a social system that sets specific roles and ideals, such as a thin body that is unattainable for many, the development of complexity of person would be lessened.

The developmental processes of a female is fused, or integrated, and composed of multiple levels of organization. The model depicts these levels of organization. The human, social, cultural, and natural levels of organization are integrated and impact a female's development. Changes in one level of a female's interaction and relationship with the environment, such as a feeling of dissatisfaction with her body, affects the function of all the other levels, higher and lower—personal, social, cultural, and natural. The development of a female results in increasing the degree of differentiation, or sense of self, and integration, a state of belonging and functioning as part of a group, or subsystem. This complexity and ability to be flexible and changeable with her environment promotes optimal development. An example of optimal development is a female who can participate in a dynamic society that encourages her abilities and *true* self as she develops, and has cultural messages that place value on females and their contributions. And less than optimal development is a female who is a part of a dynamic society that inhibits the development of her abilities and silences her voice and the cultural messages devalue females and their contributions.

A woman's individual thought processes, or psychological processes, contribute to her social perceptions. In interacting with others, she perceives, makes an interpretation using the information she receives, and concludes meanings. This process changes across time—hours, days, years. A female, by interacting with her peers, perceives what the acceptable looks are, she uses this information to interpret the situation and herself, and concludes by having an understanding of the social repercussions for different individual variations. A female uses the cultural symbols, such as clothing, language, and the media, to understand the sociocultural messages and to form her own beliefs and values. For example, a female could observe the fashion style of bare midriff tops and read magazine articles on how to achieve the flat stomach like popular TV stars. She makes a decision to engage in appearance management behaviors such as disordered eating habits and exercise in an attempt to sculpt her body to fit the current style.

In studying the issue of eating disorders using the Human-Environment Systems model, genetics and other biological functions are viewed in relation to the individual system and all other systems. The model shows the biological and psychological subsystems of the human system and the arrows and overlapping circles indicate the interaction between all environments. The factors involved in body image and eating disorders in females coact together within the larger context.

The social environment is a context of human behavior and development. A female's family, peers, and significant others composing her social environment impact her greatly. The coaction between females and her social environment influences her overall health and functioning, for example her self-esteem, body image, values, and actions. The cultural environment is a larger context and also contributes to the development of a female. Different cultures and subcultures provide different messages and values on things such as body ideals, gender role expectations, and consumerism. The cultural symbol of dress influences a female's formation of her self-identity and body image due to the social meanings and values connected to this socially constructed

phenomena. The Human-Environment Systems model shows the multiple factors that interact and influence the development of a female's body image.

Organization

Systems consist of complex, hierarchical levels of organization. The visual model depicts the levels of interacting environments. The individual female is part of the human environment, a social environment that is found in the context of a cultural environment in which all are part of the natural environment. The structure of the world is made up of ordered, organized, changing systems and subsystems. The female's system is made up of several subsystems, such as the biological subsystem and psychological subsystem, while at the same time the female system is a subsystem for other systems, for example her family. The family system is then a subsystem of the cultural system. As the model illustrates, the structure is composed of a person-environment unit. A female and the environment have relationship and interactions as a unit that codetermine the outcomes of her life.

Outcomes

The outcomes of the relationships and interactions of systems are humanistic aspects, the symbols of cultures, and an interdisciplinary perspective. Because of a female's social and cultural relationships, she will be provided with interpretations, or social meanings and will form a set of values that serve as guiding principles to her thought processes and future actions. The Human-Environment Systems model shows values at the center of the Human level. These interpretations and values affect the decisions that are made by a female, such as appearance management in order to achieve a valued ideal of the culture. These human-environment relations determine the quality of her life. The symbols of the culture provide meanings to the females in our society and their quality of life and survival depend on the healthiness of those values and ideals. For example, an outcome of a female's interaction with the cultural environment is the symbol of appropriate and accepted dress or clothing. Culture also may convey unrealistic body ideals and dress expectations, which can lower the quality of a female's life by promoting unhealthy psychological thinking such as low self-esteem when she is

unable to achieve a thin body shape, and changes in her biological functions as she changes her eating habits. In some cases the female's survival can be seriously jeopardized. The holistic nature of the systems perspective of the universe requires an interdisciplinary approach. The subject of body image and eating disorders in females has a high degree of complexity and human variation, requiring an interdisciplinary perspective.

In summary, this study's theoretical framework and Human-Environment Systems model focuses on the interaction between and within systems to address complex, dynamic human issues such as body image and eating disorders. It integrates more narrow, specific CT theories within the broader systems theory perspective, thereby providing a broader theoretical framework to examine human-environment problems. It provides human development principles to aid better understanding the human component and the effects of its interaction with its environment. This understanding can be applied to clothing related issues because of the use of CT specific concepts in the development of the theoretical framework. While this illustration of the theoretical framework and Human-environment Systems model provides a general theoretical perspective and discussion of the issue, it serves to frame a complex problem and place the emphasis of the inquiry on the *whole* picture, instead of a single part. Designing an interdisciplinary research program with researchers of many fields would better utilize a holistic perspective to study body image and eating disorders in females as well as other complex human issues, ultimately improving the quality of human life. The developed theoretical framework and Human-Environment Systems model extends systems theory in addressing body image and eating disorders in females by joining developmental principles and the CT theories of human-environment interaction that pertains specifically to dress and appearance management behaviors.