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**AN INVESTIGATION OF THE RELATIONSHIP AMONG LIFE-SKILLS,
SELF-ESTEEM, AND WELL-BEING IN ADULTS**

by

Scott David Meche, B.S., M.A.

**A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy**

**COLLEGE OF EDUCATION
LOUISIANA TECH UNIVERSITY**

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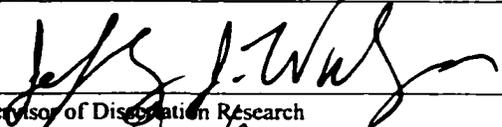
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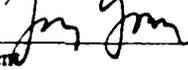
We hereby recommend that the dissertation prepared under our supervision
by Scott D. Meche

entitled An Investigation of the Relationship Among Life-Skills,
Self-Esteem, and Well-Being in Adults

be accepted in partial fulfillment of the requirements for the Degree of
Doctor of Philosophy



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ABSTRACT

This study examined the relationship among life-skills, self-esteem, and well-being in 278 adults. Adults were classified into three age groups. Of the 278 participants, 96 were young adults, 92 were middle-aged, and 90 were older adults. Life-skills, global organizations of general coping skills that are learned behaviors which enable effective functioning, were assessed with the Life-Skills Inventory – Adult Form (Gazda, Illovsy, & Taylor, 1991). Analyses were performed to understand the influence of four generic life-skills areas, interpersonal communication/human relations, problem-solving/decision making, identity development/purpose in life, and physical fitness/health maintenance, on self-esteem. Self-esteem was measured with the Self-Esteem Inventory-Adult Form (Coopersmith, 1981). Additional analyses explored the relationship between those four life-skills areas and well-being. Well-being was assessed by the General Well-Being Schedule (Dupuy, 1978). Lastly, analyses examined whether self-esteem serves as a moderator between life-skills and well-being.

Results indicated that there are significant differences among the three age groups in regards to the life-skills dimensions of physical fitness/health maintenance and identity development/purpose in life. Additionally, the dimension of interpersonal communication/human relations was found to be a significant predictor of self-esteem across the stages of adulthood in a pattern largely supportive of Erikson's stages of psychosocial development (Erikson, 1950, 1963). A significant association was found

between self-esteem and well-being, consistent with research identifying self-esteem as a component of well-being (Andrews & Robinson, 1991, Blascovich & Tomaka, 1991; Emmons & Diener, 1985b). Lastly, the study posited that self-esteem would serve as a moderator between life-skills and well-being. The results indicated that self-esteem can moderate the relationship. Clinical and theoretical implications are discussed, as well as, considerations for future research.

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In the Cajun tradition there is the saying, “Lâches pas la patate.” Taken literally this means, “Don’t drop the potato.” Figuratively, the saying urges one to continue the struggle despite adversity. This statement captures the essence of this lengthy and difficult project.

CHAPTER 1

Introduction

Introduction to the Problem

The impact of social skills on effective development and healthy functioning has been investigated by researchers (Havighurst, 1952, 1972; Phillips, 1985), counseling professionals (Corsini & Wedding, 1995), and developmental theorists (Erikson, 1950, 1963) for decades (Gazda, 1989). A great deal of attention has been given to the conceptualization and definition of social skills employed by humans in their everyday lives (Gazda, 1989). The term social skills is generic, and refers to the repertoire of interpersonal skills individuals employ in meeting the challenges of developmental tasks. Havighurst (1972) defined a developmental task as:

A task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society and difficulty with later tasks. (p. 2)

Individual social skills are used to succeed at the developmental tasks (Havighurst, 1953, 1972).

As a result of research in this area in the 1950s and 60s, social skills came to be understood as socially learned behaviors necessary for successful living (Gazda, 1971).

In addition, social skills represent those behaviors that contribute to physical and

emotional well-being, for example, competence in interacting socially and in forming close, intimate relationships (Rubin, 1969). Theorists and researchers (Goldstein, Sherman, Gershaw, Sprafkin & Glick, 1978; Lazarus, 1982; Rubin 1969) proposed developmental models that highlight the importance of social skills as strategies for complex social interactions that allow individuals the ability to adapt to a variety of life demands at different stages of development (Phillips, 1985).

Gazda (1992), with the collaborative efforts of colleagues such as Childers and Brooks, developed such a model. The Life-Skills Model is unique in its conceptualization of social skills. Gazda, Childers, and Brooks (1987) refined the concept of social skills, broadening it to include an intrapersonal domain along with an interpersonal domain. The two highlight individuals' social and inner worlds. Investigators renamed the skills employed by humans in meeting the developmental tasks and challenges before them, *life-skills*. The model prescribes broad, generic life-skills areas whereby the skills employed by humans can be categorized. They include: problem-solving/decision making, physical fitness/health maintenance, interpersonal communication/human relations, and identity development/purpose in life. All life-skills fall under these four broad categories (Gazda et al., 1987).

In the Life-Skills Model, Gazda et al. (1987) refer to developmental life-skills. This means that as individuals experience healthy resolution of life's conflicts, demands, and crises, they experience emotional maturity with an accompanying refinement of individual skills. This, in turn, may lead to heightened ability to be successful when confronted with future developmental tasks or conflicts. Children, adolescents, and adults are postulated to differ in their skill level and ability to handle life challenges (Gazda,

1992). However, the Life-Skills Model, as it currently stands, does not consider whether adults at various developmental levels, young, middle-aged or older adults, vary in their level of skill in the generic life-skills areas. Research has shown that differences do exist among young, middle-aged and older adults in many variables significantly affecting quality of life and prosocial/adaptive living such as relationship development, locus of control, and identity development (Berg, Meegan, & Klaczynski, 1999; Blazer, Hughes, & George, 1992; Gatz & Hurwicz, 1990; Lester, 1995; Santrock, 1999). That the Life-Skills Model consolidates all adults into one category is an oversight in the model that Gazda (1992) has conceded. The current study was designed to examine whether the differences exist among young, middle-aged, and older adults in generic life-skills. The present study was designed to assess the impact of adult development, entailing emotional maturity and life experiences, on life skills.

Additionally, the Life-Skills Model proposes that a linkage exists among life-skills, self-esteem, and well-being (Gazda et al., 1987). The model theorizes that individuals who have higher levels of life-skills will enjoy higher levels of self-esteem and well-being in as much as the ability to grapple with life's demands and crises is hypothesized to entail intrapsychic benefits (Bickham, 1993; Taylor, 1991). No research had investigated the relationship among all three constructs across the stages of adulthood. Accordingly, this study examined the relationship among life-skills, self-esteem, and well-being across adult development.

Statement of the Problem

The main problem addressed in this investigation was to test the Life-Skills Model by assessing whether there are age-related differences in life-skills across

adulthood. Additionally, the relationship among life-skills, self-esteem, and well-being, theorized by the Life-Skills Model, was examined. First, how age and adult development factor into life-skill development is important and until this time was an unexplored issue. Prior research indicated that there is a developmental nature to life-skills and that children, adolescents, and adults differ in generic life-skills (Bickham, 1993; Ginter & Gazda, 1997; Picklesimer, 1991). Improved life-skills result from the cumulative effects of life experiences and emotional maturity with age (Gazda, 1989). When adult life-skills have been studied, adults have been placed into one category. That no effort has been made to study age-related differences across stages of adulthood is a serious gap in the empirical literature that supports the Life-Skills Model (Gazda, 1992). Thus, the present study sought to fill in this gap.

A second goal of the present research was to determine whether a positive relationship exists among life-skills, self-esteem, and well-being across adulthood, as hypothesized by the Life-Skills Model (Bickham, 1993; Daughetee, 1993; Gazda, 1992; Taylor, 1991). No study has investigated whether life-skills are associated with higher self-esteem or higher well-being.

In summary, in order to assess more fully the usefulness of the Life-Skills Model for future clinical practice, didactic exercises, and research, the present study sought to improve upon the shortcomings of previous research by determining if adults at varying stages of adulthood differ in their levels of life-skills. In addition, it was necessary to examine if the relationship that is theorized to occur among life-skills, self-esteem, and well-being really does occur and generalizes across adulthood.

Justification for the Study

Both theory and evidence from extant research suggest that age-related differences in various coping skills exist (Barnas, Pollina, & Cummings, 1991; Bassey, 1998; Berg, Meegan, & Klaczynski, 1999; Bream, 1997; Hartley & Little, 2000; Jagacinski, 1997; Steptoe, Moses, & Edwards, 1990; Sommers, 1997; Widagdo, Pierson, & Helme, 1999). Since the Life-Skills Model postulates life-skills as global organizations of general coping skills that improve with age, it follows that improvement does not end as individuals become adults. As mentioned previously, prior research has demonstrated as much among children, adolescents, and adults (Bickham, 1993; Daughetee, 1993; Picklesimer, 1991; Taylor, 1991). However, past research has treated adults as an homogeneous group without regard for the developmental levels that differentiate adulthood, namely, young, middle-aged, and older adult (Gazda, 1992). No studies have explored differences in life-skills across different stages of adult development. Yet, researchers have suggested the need to compare young, middle-aged, and older adults in life-skills levels (Blazer, Hughes, & George, 1992; Craig, 1992; Gatz & Hurwicz, 1990; Lester, 1995; Santrock, 1999). With so many researchers suggesting that age-related differences exist in the ways that young, middle-aged and older adults cope with the life demands confronting them, the gap in the literature supportive of the Life-Skills Model more than justifies the present research.

In addition, psychologists have called for research on life-skills change over adulthood in order to understand better what intervention and prevention strategies to use when working with adult clients (Blazer, Hughes, & George, 1992; Craig, 1992; Gatz & Hurwicz, 1990; Lester, 1995; Santrock, 1999).

The purpose of the Life-Skills Model was to assess individuals' life-skills and then determine prevention and intervention strategies for educational and clinical purposes (Gazda, 1992). School, university, and college counseling centers, community mental health centers, residential treatment centers, psychiatric hospitals and independent practitioners use the Life-Skills Model as a means of promoting effective life functioning and quality of living (Gazda, 1992; Ginter, 1999). If the Life-Skills Model is to meet fully this challenge in adults, it is crucial to understand how life-skills change over adulthood. Accordingly, the present study attempted to explore the nature of differences in the life-skills of young, middle-aged and older adults.

Secondly, predicted relationships have been implied in the literature among life-skills, self-esteem, and well-being. Life-skills are theorized to boost self-esteem (Bickham, 1993, Daughhete, 1993; Taylor, 1991). Self-esteem has been shown to boost well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991). However, no study has investigated the influence of life-skills on self-esteem and well-being concurrently. The present study attempted to examine the relationship among these variables.

This dissertation may benefit clinicians and other mental health professionals by providing them normative data against which to compare their own clients. Information on how early, middle-aged, and older adults vary in life-skills may assist clinicians in helping clients suffering from problems in meeting developmental tasks. Life-skill areas in which a client is weak compared with his or her age cohort can suggest points of intervention (Bickham, 1993; Daughhete, 1992; Gazda, 1989; Lazarus, 1982; Lazarus & Folkman, 1984; Taylor, 1991).

Professionals could use the information from studies such as this to gauge the range of developmental differences in the adult population (Blazer, Hughes, & George, 1992; Lester, 1995). Armed with this information, professionals can prevent or remediate life-skills problems with adults clients of all ages.

Finding a positive relationship among life-skills, self-esteem, and well-being has implications for clinical practice (Bickham, 1993; Daughhete, 1993; Ginter & Gazda, 1997; Powell, Illovsky, O'Leary, & Gazda, 1988; Taylor, 1991). For example, individuals who are suffering from mild depression or related syndromes may be experiencing their condition in part due to low self-esteem, which may be due to low life-skills. Low self-esteem in turn lowers overall sense of well-being (Andrew & Robinson, 1991; Blascovich & Tomaka, 1991). Clinicians might assess clients' life-skills and identify areas of deficit for intervention in the hope of alleviating their clients' low self-esteem. If life-skills boost self-esteem, knowing this will suggest to clinicians the need to help improve the quality of their clients' lives by training clients in life-skills.

In summary, though other investigations with the LSI have involved earlier stages of development, until the present study there have been no reported studies comparing the various stages of adulthood in life-skills. In addition, no study has explored the relationship among life-skills, self-esteem, and well-being and how it changes across adult development. Taken together the findings can lead to a better understanding of life-skills across adult development and how this may be incorporated into the treatment setting.

Review of the Literature

In this section, the literature related to life-skills is reviewed. First, social competence and life adjustment in relation to social skills is discussed. Second, the origin of life-skills research from social skills research is presented. A discussion pertaining to the suggested linkage among life-skills, self-esteem, and well-being follows. Next, the Life-Skills Model is reviewed, including its basic assumptions, empirical support, and underlying developmental theories. This dissertation explored age-related differences in relation to life-skills. Consequently, a discussion of the adult life cycle in relation to psychosocial and vocational domains is appropriate. Finally, a discussion of the research that provides the basis for differentiating participants in this study into young, middle-aged and older adult groups is presented.

Social Competence

Social competence is a term often associated with social skills literature (Wine & Syme, 1981). As interest in the study of social skills grew in the field of psychology, attention focused on the relationship between social skills and effective functioning in society (Gazda, 1984). For many of the earliest researchers, effective social functioning means social competence (Gazda, 1989).

Social competence has been generally defined as global mastery of those skills that enable adequate functioning in social situations (Bickham, 1993) and implies a high degree of interpersonal acumen and mastery of interpersonal situations. Wine and Syme (1981) defined competence as effectiveness in interactions with the social environment. Social competence is a multidimensional construct affected by individuals' age, education, intelligence, marital status, occupation, employment history, and social skills

(Bickham, 1993). It includes response repertoires, coping, problem-solving, and the capacity to generate appropriate matches between behavior and situational demands (Wine & Syme, 1981). Individuals high in social competence meet the requirements of everyday functioning, act to further their welfare, and exhibit concern regarding the welfare of others. Hence, individuals' overall level of social competence reflects their adaptiveness to societal demands (Kazdin, 1979).

The development of social competence and social skills has been the focus of a large amount of research and clinical attention over the past 20 to 25 years (Bickham, 1993). Even so, over 75% of all the scientific articles in this area appeared in the 1970s (Michelson, Sugai, Wood, & Kazdin, 1983). Phillips (1978) defined social skills as:

The extent to which [one] can communicate (interact) with others in a manner that fulfills one's rights, requirements, satisfactions, or obligations to a reasonable degree without damaging the other person's similar rights, etc. and hopefully shares these rights, etc. with others in free and open exchange. (p. 171)

Humans vary in social competency, that is, in interpersonal skills, and in knowledge of when and where to put skills to use (Hargie, Saunders, & Dickerson, 1981). Individuals' social skill level directly impacts their ability to adapt to the demands and requirements of the society (Gazda, 1989).

Zigler and Phillips (1961) were among the first researchers to propose that low social competence (poor social functioning) can lead to psychopathology, rather than always serving as a consequence of it. Kazdin (1979) and Gazda (1989) contended that neuroses and functional psychoses may result from a failure to develop life-skills. Social skills deficits have been related to low self-esteem (Percell, Berwick, & Beigel, 1974), an

external locus of control (Norwicky & Strickland, 1971), depression (Lazarus, 1968; Wolpe, 1971, 1973), “bad conduct” discharges from the military (Roff, 1961), criminal behavior (Roff, Sells, & Golde, 1972) and mental health problems in adults (Cowen, Dorr, Clarfield, Kreling, McWilliams, Pokracki, Pratt, Terrell, & Wilson, 1973; Kohn & Clausen, 1955; Roff, 1970).

As numerous studies have revealed a positive relationship between social skills and social competence (Lazarus, 1982; Lazarus & Folkman, 1984) Lazarus (1982) discussed the role of social skills in prosocial/adaptive living or social competence. He conceptualized individuals as if on a “life-trajectory” or journey through life. On this journey individuals encounter events that create conflicts or crises. Lazarus (1982) argued that with the appropriate behavioral or social skills, individuals can navigate their life trajectory, negotiating the challenges or crises successfully, and thereby increasing their well-being. He also argued that if individuals do not possess the skills, such as problem-solving or decision making skills, needed to master life crises, a blockage in adaptive functioning occurs. Individuals will detour off their life trajectory onto a dysfunctional path. Detours might involve drug abuse, hostile-aggressive behavior, criminal behavior, and so forth. Thus, the result may be unhappiness, lack of adaptive life functioning, or psychopathology.

Lazarus and Folkman (1984) developed a model of prevention of psychopathology based on social skills deficits. They posited that individuals employ social skills as behavioral efforts to master, tolerate, or reduce external and internal demands and conflicts. They argued that people can have two distinct coping styles. In problem-focused coping, individuals use cognitive and behavioral skills to deal with the

source of stress, that is, a situation or event, by changing social behaviors, by changing environmental conditions, or both. Emotion-focused coping involves using cognitive and behavioral skills to reduce or tolerate the emotional arousal or distress encountered when confronted by demands or conflicts. Simply put, in this model coping involves using cognitive and behavioral skills in order to manage or alter situations causing distress (problem-focused coping), or involves regulating emotional responses to the situation (emotion-focused coping).

Lazarus and Folkman (1984) argued that energy is directed by most people toward managing negative feelings, maintaining self-esteem, maintaining interpersonal relationships, as well as toward confronting stressful “life hassles.” They also maintained that the effectiveness with which people fulfill their various roles and achieve satisfactory interpersonal relationships constitutes positive social functioning. The social skills that individuals develop and have for fulfilling roles affect how they appraise and cope with the events of day-to-day living. According to Lazarus and Folkman (1984), “the effectiveness with which these day-to-day events are managed is a major determinant of the overall quality of the person’s functioning” (p. 185).

In contrast, as individuals are less effective in managing these events, quality of functioning decreases (Lazarus & Folkman, 1984). Soon after Lazarus and Folkman demonstrated a relationship between psychopathology, ineffective functioning, and social skills deficits, models originated that elaborated on these findings (Bellack & Morrison, 1982; Curran, 1979; Lazarus, 1982). According to these models, the prevention and remediation of poor functioning can occur through social skills based interventions (Gazda, 1989). In addition, there was a proliferation of models that addressed social skills

and social skills training (Adkins, 1984; Gazda et al., 1987; Guerney, 1977; Mosher & Sprinthall, 1971; Smith, 1982). The Life-Skills Model (Gazda et al., 1987) is one such model.

Life-Skills Model Originates from Social Skills Research

Gazda (1989) developed a model based on the core concept of social skills. There is a connection in Lazarus and Folkman's (1984) concepts and Gazda's (1989) model of social skills to be presented below. However, differences do exist in the model proffered by Lazarus and Folkman and that proffered by Gazda and associates. It is necessary to discuss these differences at the outset of this discussion to facilitate a better understanding of the Life-Skills Model.

Lazarus and Folkman referred to the means whereby an individual copes with environmental demands to optimize social functioning as social skills. Gazda et al. (1987) referred to these as life-skills and then broadened the concept of social skills to include a physical domain in addition to behavioral, affective, and cognitive domains. Gazda recognized the interconnectedness of the physical and psychological. Yet another difference is that Gazda and associates agreed with only one of the coping styles to which Lazarus and Folkman referred. Gazda and associates indicated that individuals use a style of coping that is problem-focused, when learning appropriate cognitive and behavioral skills is key to confronting developmental stressors and environmental conditions. Gazda asserted that skilled individuals experience positive emotions. He conceptualized negative emotions as being the result of failing at tasks and demands due to being inadequately skilled. Gazda viewed teaching clients the necessary life-skills as the only

way to help them to meet daily demands. Finally, while Lazarus and Folkman did not specify what social skills are, Gazda and associates were quite specific on this point.

Life-skills: A Definition

Cartledge and Milburn (1986) defined social skills as socially acceptable, learned behaviors that enable people to interact with others in ways that elicit positive responses and provide avenues to assist in avoiding negative responses from others. Gazda and Brooks (1985) subsumed social skills under life-skills. Gazda et al. (1987) defined life-skills as “all of those skills [learned behaviors] and knowledge, prerequisite to development of the skills, in addition to the academic skills, that are necessary for effective living” (p. 133). Ginter (1999) indicated that life-skills represent the “basic developmental building blocks of human existence - intrapersonal and interpersonal existence” (p. 191).

Gazda and associates argued that, while social skills should be confined to interpersonal relations, life-skills are broader than social skills representing broad and global organizations of general coping skills used in interpersonal and intrapersonal activities. Life-skills are crucial to effective self-management (Gazda et al., 1987). The Life-Skills Model posits that intrapersonal development, including such skills as physical fitness, health maintenance, career development, and identity development skills are just as important as those skills necessary for interpersonal development (Gazda, 1989). The model indicates that both interpersonal and intrapersonal skills are intertwined, influencing each other in relation to overall level of self-esteem, well-being, and adjustment. Hence, both interpersonal and intrapersonal components of behavior are collapsed into life-skills (Darden, Gazda, & Ginter, 1996).

Life-skills models are more comprehensive than social skills models. This characteristic sets the Life-Skills Model (Gazda et al., 1987) apart from comparable ones (Bickham, 1993). For example, general social skills include communication with others in order to get needs met. In the Life-Skills Model, life-skills would encompass not only the ability to communicate with others, but also, the capability to foster mutually rewarding relationships and intimacies, the establishment and maintenance of friendships, and the ability to interact with others in a way that is mutually respectful. Each of these skills enhances individuals' emotional maturity and identity. Thus, both interpersonal and intrapersonal functioning are crucial, in the Life-Skills Model, to achieving happiness and well-being (Bickham, 1993).

Life-skills as Learned Behavior

Hargie, Saunders, and Dickson (1981) proffered a theory of life-skills that was subsequently adopted by Gazda et al. (1987). Assumptions of their theory are that: (a) skills are learned, (b) are goal directed, (c) are under the control of the individual, (d) are interrelated, and (e) can be viewed as identifiable units of behavior.

Inherent in the terms "effective functioning" or "effective living" are the skills necessary for individuals to cope with tasks that accompany development, to perform certain social tasks, interpersonal tasks, and fundamental intrapersonal tasks competently (Gazda, 1989). Gazda and Brooks (1985) believed that life-skills are learned. They accepted Bandura's (1986) view of how people acquire life-skills.

Bandura (1986) proposed that observational learning is the means whereby individuals learn many behaviors. This is accomplished by observing the actions of others and the consequences of those actions on the models. There are four distinct stages

in the learning process: (a) attention, (b) reproduction, (c) retention, and (d) motivation. Individuals must first attend to the social model. Observing the behavior is necessary for imitating it. Secondly, they must reproduce the modeled behavior for themselves. Next, they must somehow retain the behavior in memory in order to employ it in future situations, otherwise the behavior will not be reproduced accurately. Mnemonic strategies may be useful. Finally, if the model was reinforced for engaging in the behavior, those who observed the model will be vicariously reinforced to imitate what was modeled. In this way, many life-skills are acquired from parents, peers, spouses, and so forth.

Developmental Nature of Life-skills

In order to understand the importance of life-skills, a developmental mindset is necessary (Gazda et al., 1987). The Life-Skills Model is based on several developmental accounts of how individuals change to meet societal demands (Brooks, 1984). Seven areas of human development were chosen as vital domains of life-skills (Gazda & Brooks, 1980). They are: (a) physical-sexual development, (b) psychosocial development, (c) moral development, (d) cognitive development, (e) affective development, (f) ego development, and (g) vocational development. The Life-Skills Model posits that each of these seven areas of development present demands or tasks which require resolution before individuals can progress to a higher level of development. The model postulates that skills become more sophisticated with age in order to resolve the increasingly complex developmental crises that are encountered (Gazda & Brooks, 1985). For example, Gazda (1989) understood that maturity usually entails better cognitive skills with age, including problem-solving and decision making

strategies. He believes that individuals who are ill equipped with the skills necessary to handle life tasks will not experience healthy emotional or physical development. This may result in maladaptive behaviors that could undermine future development and lead to frustration and distress (Gazda, 1992).

Thus, the Life-Skills Model postulates that humans, across the life-span and in numerous settings, including home and family, school, work, and the community at large, employ, with varying degrees of success, skills as coping mechanisms by which they grapple with the developmental tasks before them.

Life-Skills and Self-Esteem

Self-esteem is the extent to which individuals prize, value, approve, and like themselves. It is the confidence and satisfaction that they have in themselves. According to Blascovich and Tomaka (1991), it is the overall affective evaluation of self-worth, value, and importance.

Blascovich and Tomaka (1991) described self-esteem as an encompassing self-evaluation influenced by many variables including: abilities, traits, behaviors, clinical conditions, and coping abilities. Self-serving attributional bias is an example of a cognitive behavior with a positive relationship to self-esteem. Self-serving attributions are cognitive skills that serve two purposes. They provide an understanding of social events, and they defend the self against threatening interpretations of the social environment (Taylor & Brown, 1988). In making self-serving attributions, people accept greater personal responsibility for positive outcomes than for negative ones. For example, a coach whose team wins a game attributes the win to superior coaching abilities. However, should the team lose the game, the coach suggests that the reason was poor

officiating. Taking more personal credit for success than for failure can be an adaptive life-skill that enhances self-esteem. However, overreliance on this attributional bias can cause individuals to avoid taking risks in order to conserve a high self-esteem.

Persistence is an example of a life-skill that positively impacts self-esteem by allowing the individual to endure tasks that may appear insurmountable, and eventually achieve success. Depression, a clinical condition, typically lowers self-esteem. The depressed individual typically feels guilty, hopeless, and helpless. These feelings undermine self-worth and self-esteem. Task persistence is a learnable skill that allows individuals to cope effectively with life stressors. Hence, there is a positive relationship between the ability to persist and self-esteem (Taylor, 1983).

There is a strong correlation between self-esteem and psychosocial behavior, a significant component of the life-skills model (Bickham, 1993; Taylor, 1991). Conversely, Percell, Berwick, and Beigel (1974) reported data linking social skills deficits to lower self-esteem. Programs that provide life-skills training positively influence self-esteem (Bickham, 1993). The Life-Skills Model predicts that individuals who possess the life-skills needed to cope with the psychosocial tasks that accompany development will enjoy higher self-esteem. In addition the model predicts that a lack of interpersonal success, precipitated by low life-skills can produce low self-worth (Gazda, 1989; Ginter, 1999). Low self-worth can deleteriously affect quality of living and effective functioning (Blascovich & Tomaka, 1991). This research was the first to test whether higher levels of life-skills are associated with higher self-esteem separately in young, middle-aged, and older adults.

Life-Skills and Well-being

Well-being refers to general happiness and overall satisfaction with life (Andrews & Robinson, 1991). According to Abbey and Andrews (1985) and Emmons and Diener (1985b), self-esteem contributes directly to well-being. Other researchers have suggested that higher self-esteem should contribute to well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Gazda & Brooks, 1984; Rotter, 1966).

Rotter (1966) noted that the relationship between self-esteem and well-being is moderated by locus of control orientation. Rotter argued that when individuals perceive that outcomes in their lives result from their own behavior or personal characteristics (an internal locus of control orientation), as opposed to resulting from chance, or other causes beyond their control, or due to the control exerted by powerful others (an external locus of control orientation), they will experience a sense of empowerment. An external locus of control can produce low self-esteem and low self-confidence out of a sense of helplessness. An internal locus of control often develops as an individual mimics behaviors of others that have been observed to produce consequences with high reinforcement value. These behaviors are skills that generalize and lead to individuals developing still other skills with which to cope with various tasks in their environment. Those having an internal locus of control orientation feel that as though they are in the driver's seat of their lives (Rotter, 1966). They experience greater satisfaction and well-being. The Life-Skills Model theorizes that individuals who have high levels of life-skills are able to meet the developmental, psychosocial tasks that arise, evidencing in effective functioning, thus giving rise to higher levels of self-esteem, better emotional adjustment, higher well-being, and better mental health (Gazda et al., 1987; Ginter, 1999). The

model postulates that life-skill level will correlate positively with social competence, self-esteem, and well-being. Research that directly correlates life-skills, self-esteem, and well-being across stages of adulthood was lacking until the current study.

Assessing Life-Skills

For the Life-Skills Model to have clinical significance, clients' life-skills must be measurable. Gazda (1984) was concerned that there was no single instrument that provided a global picture of life-skills. Brooks (1984) had shown that the developmental tasks and skills needed to cope with them could be conveniently classified into stages reflecting three major life-span areas: childhood, adolescence, and adulthood. Thus, any measure of life-skills would need to reflect life-skills development throughout the life span. As a result, age-appropriate instruments relevant to each age group would need to be developed to assess skill levels. Accordingly, Gazda and colleagues, Bickham, Brooks, Childers, Darden, Ginter, Illovsky, and Taylor, formulated assessment instruments by which individuals' life-skills could be measured. Life-skills instruments have been developed specifically for adults (Daughhete, 1992; Gazda, Illovsky, & Taylor, 1991), college-aged students (Picklesimer, 1991), adolescents (Darden, 1991) and for children (Bickham, 1993). The adult version was used in this investigation.

The Life-Skills Training (LST) Model and its Development

This dissertation is based on the Life-Skills Training (LST) Model: a comprehensive psychoeducational system grounded in theories of human development. The LST is intended for use in psychotherapy, training, education, and rehabilitation. A growing body of empirical and theoretical literature supports the effectiveness and wide applicability of the life-skills approach (Darden, Ginter, & Gazda, 1996; Ginter, 1996;

Ginter, 1999; Ginter & Brown, 1996; Ginter & Gazda, 1997; Ginter & Glauser, 1997; Picklesimer, Hooper, & Ginter, 1998). This model was primarily developed for training purposes in order to help clients who were experiencing coping difficulties. However, Gazda (1992) suggested a preventative approach that teaches skills, thereby averting problems.

As an extension of models proposed by Argyle (1967), Bandura (1986), and Kelly (1982), Gazda et al. (1987) proposed the Life-Skills Model in part attempt to understand the impact of life-skills on self-esteem, well-being, and on other psychological outcomes. The model is developmental and integrative, based on the theories of other developmentalists whose theories allow the conceptualization of various stages of the human life cycle and the skills needed to negotiate those stages. The model supports the analyses of whether individuals are functioning effectively in meeting the developmental tasks and societal demands before them.

The LST Model originated from three sources of contemporary psychological thought and practice (Bickham, 1993; Taylor, 1991). They include: (a) developmental group counseling (Bickham, 1993; Taylor, 1991), (b) human relations training (Carhuff, 1969a, 1969b), and the (c) development and training-as-treatment approach (Authier, Gustafson, Guernsey, & Kasdorf, 1975; Gazda, 1975; Gazda & Powell, 1981).

Gazda and colleagues have worked to adapt the life-skills approach to assisting clients. Gazda et al. (1987) and Ginter, Robinson, Darden, and Gazda (1994) listed 10 assumptions that underlie the adaptation of the life-skills approach to working with clients. Six of the assumptions apply to LST when used in the preventative mode and all 10 apply to the application of the model in a remedial mode.

Assumptions of LST

1. All individuals must acquire skills in seven areas of human development in order to function effectively in society, which are: psychosocial, physical-sexual, vocational, cognitive, ego, moral, and affective.
2. For these seven areas, coping behaviors (life-skills) exist that are age and stage appropriate.
3. In each area there are specifiable stages through which all persons must progress if they are to achieve mastery of more advanced stages, and lead happy lives.
4. Mastery is dependent on learning life-skills, that is, coping behaviors appropriate to stage and task.
5. There are critical periods when life-skills and coping behaviors are optimally applied.
6. Individuals are born with a capacity for learning, but the degree of their achievement depends on availability of appropriate life experiences.
7. Neuroses and functional psychoses result from a failure to develop life-skills; therefore neuroses, personal maladjustment and functional psychoses can best be overcome through the direct instruction and training of clients in life-skills areas.
8. Life-skills can be taught when a client is developmentally ready to learn given concepts and skills, helping to prevent mental health problems.
9. Training in life-skills introduced when individuals are suffering from emotional or mental disturbance can lessen the disturbance.

10. The greater the degree of functional disturbance, the greater is the likelihood that individuals will suffer from multiple life-skills deficits.

Empirical Basis and Support for the LST Model

Brooks (1984) provided the empirical basis for the taxonomy of generic life-skills found in the Life-Skills Model. This taxonomy involved the use of life-skills descriptors that were considered necessary across the life span for effective living. Gazda created a pool of 500 life-skills descriptors based on an exhaustive review of the literature related to the seven areas of human developmental theory integrated into the Life-Skills Training Model (Gazda, 1989). These descriptors were grouped by stages: childhood, adolescence and adulthood. Editing for redundancy reduced the number of descriptors to about 350 (Brooks, 1984).

Brooks established three panels of developmental experts to respond to the descriptors appropriate for the three major life periods of childhood, adolescence, and adulthood. The panel cooperated in a three-round survey until Brooks obtained a consensus as to the life-skills and descriptors necessary for each age group. The Delphi technique (Dalkey, 1967, 1969) was used to reduce the number of descriptors and to classify the items into generic life-skills areas. During the first round, with the experts serving as raters, were charged with the tasks of rating items in terms of their inclusion, eliminating descriptors that were unsuitable and generating new items if needed. Refinement and stabilization of the items occurred during the second round. In the third and final round, the raters resolved differences of opinion on the remaining items, and classified all items in generic life-skills categories (Brooks, 1984).

Nine skill categories emerged: (a) aesthetic awareness, (b) career development, (c) emotional awareness, (d) family living, (e) fitness/health maintenance, (f) identity development, (g) interpersonal communication, (h) problem-solving/decision making, and (i) social relations. Brooks (1984) noted that the categories of fitness/health maintenance, identity development, interpersonal communication, and problem-solving/decision making skills, were not sufficiently differentiated to warrant their classification as separate groups. The resulting taxonomy consisted of 305 descriptors that were classified into categories, with the acknowledgement by Brooks that essential elements of functioning are probably still missing.

The content of the categories was further analyzed. Categories were collapsed and descriptors in a category that appeared to be special cases of other categories were reclassified, thus, reducing the number of areas of generic life-skills (Brooks, 1984). What eventually emerged were four developmental, life-skills areas (Brooks, 1984), each adopted as a component of the Life-Skills Inventory.

The four broad categories are as follows: (a) interpersonal communication/human relations, (b) problem-solving/decision making, (c) physical fitness/health maintenance, and (d) identity development/purpose in life. The following is a brief summary of the four areas of generic life-skills and a breakdown of the adult life-skills descriptors within each area.

Interpersonal Communication/Human Relations Skills (IPC/HR). According to Erikson (1950, 1963) and Havighurst (1953, 1972), interpersonal communication/human relations skills concern psychosocial development. This category (IPC/HR) consists of those skills necessary for effective communication, both verbal and nonverbal, for

establishing and maintaining relationships with others, including qualities such as empathy, warmth and genuineness, clarity of expression, confrontation, ability to give and receive feedback calmly, community membership, and, finally, management of interpersonal intimacy (Brooks, 1984).

Skill levels are assessed by 29 life-skills descriptors from the following categories: 15 from social relations skills, 2 from interpersonal communications skills, 6 family living skills, and 6 miscellaneous (Brooks, 1984).

Problem-Solving/Decision Making Skills (PS/DM). According to Fischhoff (1980), the term problem solving as applied to life management is resolution of a task with a definite solution. By contrast, decision making applies to dilemmas in which no solution stands out as clearly right or wrong. According to Maier (1970), effective decision making is implicit in productive problem solving. Problems and decisions are an inevitable and pervasive part of living. Therefore, adults must have the skills that enable them to make good decisions, which, in turn, can lead to good problem-solving skills. The problem-solving/decision making (PS/DM) dimension is comprised of skills for information seeking, information assessment and analysis, problem identification, solution implementation and evaluation, goal setting, systematic planning and forecasting skills, time management, critical thinking, and conflict resolution skills (Brooks, 1984).

This area is comprised of 28 life-skills descriptors from these categories: 11 from problem-solving/decision making skills, 5 from career development skills, 2 from family living skills, 1 from emotional awareness skills, and 9 from miscellaneous skills (Brooks, 1984).

Physical Fitness/Health Maintenance (PF/HM). According to Hettler (1983), the number one killer of Americans, cardiovascular disease, and the second leading cause of death, cancer, are diseases responsive to lifestyle moderation. He reported that of the risk factors associated with cardiovascular disease, age, gender, familial history, levels of cholesterol, blood pressure, tobacco usage, obesity, stress management, and exercise habits, only chronological age, familial history, and gender cannot be controlled or altered by lifestyle choice. Thus, the leading causes of death are diseases resulting from bad choices. Therefore, adults must have the knowledge and skills that enable them to make good choices with regards to diet and exercise. This dimension (PF/HM) is comprised of skills necessary for motor development and coordination, nutritional maintenance, weight control, physical fitness, athletic participation, physiological aspects of sexuality, stress management, safety and selection of leisure activity (Brooks, 1984).

Skill levels are assessed by six life-skills descriptors: 5 from fitness/health maintenance skills, and one from miscellaneous skills (Brooks, 1984).

Identity Development/Purpose in Life Skills (ID/PIL). Individuals often face struggles in forming their own identity and in defining their purpose in life. According to Brooks (1984), the identity development /purpose in life (ID/PIL) category includes the necessary skills for ongoing development of personal identity and emotional awareness. This dimension underlies the other three and includes skills necessary for self-monitoring, maintaining positive self-view, manipulating and accommodating to one's environment, clarifying personal values, making moral choices, self-esteem, emotional expression, sex role development, certain aspects of sexuality, such as the capacity for interpersonal intimacy, and career direction (Brooks, 1984). Hence, this particular

dimension involves individuals' sense of place and purpose in life (Gazda, Childers, & Brooks 1987) and is assessed by 42 life-skills descriptors: 25 from identity development skills, 2 from career development skills, 5 from emotional awareness skills, 2 from family living skills, and 8 from miscellaneous skills (Brooks, 1984).

According to Gazda (1992), generic life-skills are theoretically interlaced. Even so, while development in one area is necessary, it does not ensure development in other areas. In some cases, development in one area may be compensatory for lack of development elsewhere. Finally, development in one area may accelerate or impede development in other areas.

Adult Development

This dissertation sought to determine if any differences exist between young, middle-aged and older adults in the generic life-skills of the Life-Skills Model. In order to understand why this research was needed, it is necessary to review the developmental literature related to changes that occur over adulthood. What follows is research and theory that illustrates age-related differences in quality of life and prosocial functioning. Next, research and theory related to psychosocial and vocational development is reviewed. These two areas have been chosen for review because the theorists associated with these domains, Erikson, Havighurst, and Super, attended to the fact that development does not stop with adulthood. Instead, they highlighted the fact that young, middle-aged, and older adults face conflicts, demands, and tasks which differ not only from children and adolescents, but also from each other. These theories provide a basis for extrapolating what life-skills may be important at different stages of adulthood.

Research Noting Age-Related Differences in Adult Development

For many early developmental theorists, a lingering influence of the works of Freud has been to treat development as continuous until the time of adulthood (Levinson, Darrow, Klein, Levinson, & McKee, 1978). By the time an individual reached adulthood, development was considered to be complete. Developmental theorists such as Piaget (1961) reflected this orientation. Piaget's (1961, 1963) work on the development of logical thinking only has one stage of cognitive development for adulthood. However, other research clearly shows that cognition changes over adulthood (Cattell, 1963; Horn & Donaldson, 1980; Neugarten, 1976; Craig, 1992).

Other dominant developmental accounts, especially the psychosocial stage theory of Erikson, presented a different mindset that analyzed adulthood into different stages of development. Erikson (1950, 1963) hypothesized differences among young, middle-aged, and older adults in their relationships, intrapersonal management, and life appraisal tasks which they confront. Likewise, Super's (1953, 1957, 1963) study of vocational identity and self-concept also recognized that adults of different ages emphasize different social skills.

The works of Erikson and Super indicate that Gazda et al. (1987) left a gap in their model. So too has the research of others. For example, Berg, Meegan, and Klaczynski (1999) observed differences among younger, middle-aged and older adults in success in finding relationships, in making judgements, in analyzing problems, in solving everyday problems, and so forth. Santrock (1999) reported that as individuals age, they become more concerned with health, which, in turn, influences overall sense of well-being. Sternberg and Barnes (1988) reported that the nature of adults' interpersonal

intimacies change with age, with more of a focus on shared emotional interests and commonalities over physical intimacy. Lester (1995) noted differences across adulthood in emotional adjustment and the ability to handle stressors.

Blazer, Hughes, and George (1992) found that older adults' perceived lack of social support often correlated with their constricted social worlds and greatly increased their susceptibility to depressive symptoms. Gatz and Hurwicz (1990) observed that older adults, as compared to younger and middle-aged ones, are at the lowest levels of well-being and feelings of purpose in life. Rhee (1994) sought to identify development factors influencing well-being and found that younger adults allowed others to influence their identity more so than did older adults, which in turn influenced perception of overall well-being. Thus, research clearly supports the existence of differences among young, middle-aged, and older adults in several important dimensions.

Theories Noting Age-Related Differences in Adult Development

What follows is a brief overview of developmental change across young, middle and older adulthood psychosocially and vocationally. This discussion shall reveal the changing tasks and societal demands which accompany increasing age.

Early Adulthood

In early adulthood individuals are faced with tremendous burdens as they attempt to choose an occupation, select a mate, decide whether to have a family, contend with financial demands, modify ties to the pre-adult world, and integrate aspects of adulthood (Berger, 1998; Santrock, 1999). Craig (1992) characterized this time as both the most abundant and most stressful time in the life cycle given that young people typically enjoy

good health and a great deal of energy, while simultaneously faced the tremendously difficult tasks of adaptation.

Psychosocial. During the late teens and early twenties, young adults form tentative identities regarding their place in the social world. Erikson (1950, 1963) wrote that the psychosocial stage of *identity vs. identity confusion* reaches its culmination during the period that corresponds to early adulthood, especially when it first starts. Launching is the process by which young adults move into adulthood by separating from their family of origin (Santrock, 1999). While launching, young adults ideally are formulating personal life goals, are completing the formation of a sense of identity, and are becoming autonomous. Another relevant stage is *intimacy vs. isolation* which starts in the early twenties and runs through early adulthood. This stage involves either establishing a mutually satisfying and close relationship with others or remaining alone. The former is the happier outcome for most people.

Skilled, young adults will try to form relationships that broaden their social spectrum and establish intimacy. Young adults typically develop the most intimate relationship with mates. An important aspect of these relationships is the intricate balance between intimacy and commitment of partners to each other on the one hand and independence and freedom from each other on the other (Stemberg & Barnes, 1988). Intimacy achievement occurs as mate selection establishes the family unit. The unit strengthens with the addition of children.

Isolation can be due to failure to achieve intimacy, or due to an identity too weak to risk the personal freedom that might be lost in union with others. When the

developmental task of establishing intimacy goes unfulfilled, most young adults are lonely and endure isolation (Erikson, 1950; 1963).

A sampling of life-skills measured by the LSI-A required for successful psychosocial development in young adulthood (Gazda, 1989) includes: (a) relates to others with appropriate openness, (b) manages intimacy with close friends, (c) uses one's peers for support while maintaining individual autonomy, (d) maintains continuous satisfying relationships with family members, (e) possesses the ability to commit to a long-term relationship with a partner, (f) participates fully in intimate sexual relationships, (g) forms close relationships based on interdependence, (h) communicates wants and needs effectively, (i) uses interpersonal skills to expand one's relationships, and (j) behaves in a marriage relationship by balancing giving and getting.

Vocational. In the vocational realm, the most widely recognized marker of entry into adulthood is entrance into the job market (Phillips & Blustein, 1994). Earning a living after having chosen an occupation is the usual sequence of events. Ideally, young adults narrow their career choices and initiate behaviors that enable them to enter a desired career in what is known as career specification (Super, 1953, 1957, 1963). The young adults have usually progressed from the point of career exploration to that of career establishment. During the establishment stage, they have selected a chosen field. They then implement the career choice and, in essence, establish a career identity (Marcia, 1987). Job and career shifts occur in the early years for most young adults (Super, Savickas, & Super, 1996). Young adults are likely to experience the need for adjustment following having implemented a career choice that is non-optimal (Marcia, 1987). Even if they continue in an occupation, young adults will often go through many

qualitative changes in work place: changes in status, identity, meaning, and mode of work (Super et al., 1996). Transitions are required when an individual adjusts to new roles. Careers tend to become stable in the latter half of this period of early adulthood in what is known as stabilization (Super et al., 1996).

Occupation, marital, and family status, along with style of living all define young adulthood. By working and having a family, young adults contribute to the social fabric of society. They also develop a sense of doing something for themselves and others. This helps establish purposefulness in life (Levinson et al., 1978; Maslow, 1968).

A sampling of life-skills of the LSI-A that are relevant to vocational development in young adulthood (Gazda, 1989) includes: (a) identifies one's identity in terms of personal ideals and values implicit in particular occupations, (b) makes personally relevant appropriate educational and occupational decisions, (c) applies information-seeking skills to a job search, (d) sets personal professional goals and plans for their implementation, (e) manages conflicts on the job and at home, and (f) gets along with superiors and peers on the job.

The life-skills of young adults will determine in large part how well they face the demands and challenges of this developmental period. They will also impact young adults' sense of self-esteem and well-being, (Gazda, 1992). As noted above, success in young adulthood affects middle-adult success.

Middle Adulthood

According to Santrock (1999), as a much greater percentage of the population lives to an older mean age, the midpoint of life (what constitutes middle age) is occurring later in life. He stated, "It looks like middle age is starting later and lasting longer for

increasing numbers of active, healthy and productive people” (p. 440). As with early adulthood, middle-age is characterized by important developmental changes that are biological, psychological, social, vocational and affective.

For many midlife is a time of gradually declining physical skills but expanding responsibility, a period in which people become more conscious of a young-old polarity and a shrinking amount of time left in life (Santrock, 1999). Around this time many seek to transmit something meaningful to the next generation (Erikson, 1950, 1963). In addition, this is a time when most reach and maintain satisfaction in their careers (Super et al., 1996).

According to Levinson et al. (1978), middle-age can be one of the most confusing and disturbing of times, partly because there is no concrete, tangible event that serves to demarcate the end of early adulthood and the beginning of middle adulthood. Decline, as noted above, is gradual, whereas, puberty universally signifies the shift from childhood to adolescence, and, retirement marks the onset of old age. Studies of depression, divorce, illness, and the empty nest syndrome often coincide with the latter part of Middle Adulthood. Still, they all occur at different ages and for different reasons, and, as a result, do not provide a basis for clear demarcation of middle-age (Santrock, 1999).

Psychosocial. Erikson (1950, 1963) identified *generativity versus stagnation* as the principle crisis of middle adulthood. Most middle-aged adults try to achieve generativity through the creation and nurturance of a family, while others attempt to achieve it through productivity in their work (Craig, 1992). Through generativity, the adult achieves a kind of immortality by leaving a legacy. Another form of generativity is for middle-aged adults to promote and guide the next generation by parenting, teaching,

leading, or doing other things that benefit the community (Erikson, 1950, 1963). In theory, generative adults commit themselves to the continuation and improvement of society as a whole through their connection to the next generation. Adults concerned with generativity prefer helping and guiding younger people and tend to have a more positive identity. They also possess a greater sense of well-being (Dettaan & MacDermid, 1995; Ryff, 1984; Vandewater, Ostrone, & Stewart, 1997).

A sampling of life-skills critical to psychosocial development in middle adulthood (Gazda, 1989) includes: (a) maintains intimacy with partner during child-rearing years, (b) undertakes adult civic and social responsibilities, (c) analyzes one's relationship with one's partner and plans in light of that analysis, (d) relates effectively to one's aging parents and copes effectively with their possible dependence, (e) relates empathetically and effectively to one's children at all developmental stages, (f) recognizes and respects the individual rights, personal worth, and uniqueness of others, (g) adjusts to change and loss in close relationships, (h) understands the meaning of dependence, independence, and interdependence, and how to strike a balance.

Vocational. Individuals in middle adulthood are typically concerned with the maintenance stage of the occupational cycle. However, many adults in the beginning phases of middle adulthood seek to advance their careers and reach higher status positions. The most dramatic career advancement occurs by early middle adulthood (Osipow & Fitzgerald, 1996).

According to Rhodes (1983), work satisfaction often increases steadily throughout the working years (age 20 through age 60) for males and females alike. Individuals who stay in the same occupation for a longer period of time tend to be more committed to it

(Richardson, 1993). However, at a certain point in middle adulthood, they concentrate on maintaining and “holding-on” to their positions (Super et al., 1996). For many, there tends to be less interest in attaining greater power, prominence, and prestige. Rather, emphasis is placed on remaining at the current level, and enjoying the fruits of their labor.

Another dramatic change that characterizes middle adulthood is the reductions in physical stamina associated with physical decline. In a society that emphasizes physical attributes, many of the changes of middle-age (e.g., hair loss, graying, weight gain) are perceived negatively. However, other changes can be positive. Levinson et. al. (1978) characterized middle adulthood as a time when wisdom, compassion, and breadth of perspective ripen. This can lead to enhanced social roles and interpersonal relationships in which individuals feel that they are contributing to both self and society. Levinson et al. (1978) wrote:

The modest decline in the elemental drives, with mid-life development, enable a man to enrich his life. He can be more free from the petty vanities, animosities, envies and moralisms of early adulthood . . . the quality of his love relationships may well improve as he develops a greater capacity for intimacy...” (p. 25)

Yet, there are those who are negatively affected by these changes. These individuals may experience what is commonly referred to as “mid-life crisis.” They are facing confusion and despair as they painfully realize the loss of their youthful vitality. According to Levinson et al. (1978), this causes turmoil to some middle-aged individuals who interpret loss as a threat to their integrity and identity.

The life-skills relevant to vocational development of middle-age that Gazda (1989) included are: (a) understands how one's values are affected by external influence, (b) maintains one's sense of occupational competence in the face of competition from younger workers, (c) realistically assesses one's future career prospects while valuing one's career accomplishments, (d) maintains satisfactory performance in one's occupation, (e) sets goals and applies personally chosen performance standards to their achievement, and (f) balances security and risk-taking in occupational decisions, taking one's personal goals and family commitments into account.

Hence, the life-skills of middle-aged adults determine how they handle the tasks and demands of this developmental period. Life-skills levels are believed to influence self-esteem and well-being (Gazda, 1992). Success in negotiating middle-age surely influences success at the next stage: late adulthood.

Late Adulthood

Middle adulthood normally ends by the early sixties. Conventionally, late adulthood spans the years from 65 and above, a common age of retirement. During the transition to late adulthood, individuals become increasingly concerned about their advanced physical signs of aging and lessening physical health and stamina. They begin having serious thoughts of retirement from work. Thus, the transition entails many biological, psychosocial, or social changes. Jung (1960) referred to middle adulthood as the noon of life. Late adulthood is the evening of life.

The concept of "late adulthood" is recent because, until the twentieth century, most individuals died before age 65. Today, over 31 million Americans are over the age

of 65, 12.6% of the U.S. population, a fact attributable to improved health care, better nutrition, and greater economic standing (Santrock, 1999).

As with the previous life stages, late adulthood is characterized by changing life conditions, including, retirement and widow- or widowerhood. Late adulthood differs from the others in that it leads to no further stages save death. Unlike the others, the physical and social environment of older adults tends to contract rather than expand (Botwinick, 1984). Late adulthood has been referred to as a time of status decline and reflection, (Santrock, 1999).

Senior citizens are not a cohesive group. Rather, they are a collection of subgroups ranging from active, newly retired 65-year-olds to frail nonagenarians (Craig, 1992). Each group has unique problems and capabilities. Many share age-related difficulties of reduced income, failing health, loss of friends, and loved ones (Botwinick, 1984).

As people enter late adulthood, there is the reality and the experience of precipitous bodily decline. Even when in good health, the older adult has many reminders of declining vigor and capacity. However, many of the incapacities of aging do not produce noticeable decline until extreme old age (Santrock, 1999).

Craig (1992) reported that some older adults are terrorized with the realization of the imminence of death and incipient nature of illness in loved ones, friends, colleagues, and the self. There can be guilt or depression in those who now know that they are no longer as physically able to accomplish and achieve as was the case previously. However, some face late adulthood with enthusiasm, energy, and thereby lead active lives.

Psychosocial. The last of the psychosocial stages that Erikson (1950, 1963) proposed, relevant to older adults, is *ego integrity versus despair*. Older adults must balance consistency of identity and gradual openness to experience against their own immortality. As they age, most senior citizens know that they have completed the major part their lives. Contribution to family and to society is largely behind them. Older adults often spend time reflecting on their lives. The appraisal centers on finding meaning and value. Erikson suggested that older people wish not to have regrets over their lives and legacies (Erikson, 1950, 1963). Erikson believed that if the appraisal of their lives produces integrity, then they will die without bitterness. Older adults will face despair if their appraisal goes badly. Those who look back with satisfaction that their lives have had meaning and that they have done their best will have a sense of integrity (Erikson, 1950, 1963). Those who see nothing but a succession of wrong turns, missed opportunities, or resentments will experience doubt, gloom, and despair over the total worth of their lives (Erikson, 1950, 1963).

A sampling of life-skills of the LSI-A relevant to psychosocial development in later adulthood includes: (a) adjusts to changes in family role responsibilities, (b) accepts changing commitments as one grows older, (c) finds purpose and satisfaction from continued interpersonal relationships, (d) balances the need to maintain independence with the need to ask for help when necessary, and (e) possesses the ability to be at peace with others.

Vocational. When individuals enter late adulthood, they often have achieved the culmination of their careers. Super et al. (1996) characterized this as the time when they are decelerating in work-related activities. Decelerating involves tapering off work

responsibilities to avoid a sudden drop in activity at retirement. Retirement planning is involved in the deceleration. Retirement living, the third part of the deceleration process, involves older adults coming to grips with concerns over stopping work and thinking about life as a retired person. When actual retirement occurs, older adults must redefine their lives (Marcia, 1987).

Retirement, the last stage in the occupational cycle, is perhaps the most significant status change of late adulthood. Normally, if the shift to retirement is dramatic or if personal identity has been tied closely to an occupational role, the change is difficult (Super et al., 1996). A number of factors influence how well older adults respond to retirement, including health, economic status, need for fulfillment, flexibility, personal history, and the reactions of significant others (Santrock, 1999).

A sampling of life-skills critical to vocational development in late adulthood (Gazda, 1989) includes: (a) accepts and copes with irreversible effects of aging, (b) maintains one's identity and self-esteem as occupational involvement changes, (c) values one's achievements while realistically planning for achieving one's remaining goals, and (d) plans for retirement alternatives

In summary, late adulthood is a period of decline as well as an opportunity for development. Proper diet, adequate exercise, mental stimulation, social relationships, support, and health care allow older adults to prosper (Santrock, 1999). However, there are many threats to the integrity and functioning of older adults. The level of life-skills that older adults have greatly influences their ability to cope and is believed to influence their sense of well-being for the remainder of their lives (Gazda, 1992).

Differentiation of Age Groups

As previously noted, this dissertation sought to determine if differences exist among young, middle-aged, and older adults in life-skills levels. It is necessary at this juncture to describe the research that was used as the basis for differentiating individual participants into young, middle-aged and older adults. Adult development has traditionally not received as much attention by developmental psychologists as have childhood and adolescent development (Santrock, 1999). This may in part be due to the lingering influence of Freud, Piaget, and others of a like mind who believed that adulthood is a stable life period or a time for re-enactment of earlier events and processes. As a result, for many years research into the nature of adult human development lagged (Levinson et al., 1978). However, Jung (1960), considered by many to be the father of the modern study of adult development, believed that research and theory should be directed at understanding the longest period of the life cycle: adult development. Spurred on by Jung, Erikson (1963), while widely appreciated for his contributions to understanding the developmental period of childhood, also contributed to and greatly influenced the study of adulthood. Only then did adult development become a focus of psychological, biological, and sociological inquiry.

Researchers and theorists (Deeg, Kardaun, & Fozard, 1996; Ellsworth, Muir, & Hains, 1993; Ferraro & Farmer, 1996; Flavell, 1992) have found it useful to divide adulthood into three distinct periods: a) early adulthood, b) middle adulthood, and c) late adulthood. Levinson et al. (1978) provide operational definitions, albeit with some modification, for each of these periods that were used in the present research.

Levinson et al. (1978) proposed that periods of adult development occur approximately in 20 year intervals. Each has a typical age of onset and age of completion. Acquiring competencies unique to each is crucial. The character of each period derives from the nature of the developmental tasks or societal expectations involved. A period begins when its major tasks become predominant in an individual's life and ends when its tasks lose their relevancy. The tasks are those that were defined by developmental theorists such as Erikson (1950, 1963) and Super (1957). For example, the predominant psychosocial task of young adulthood is identity formation, while the predominant vocational task is entry into the world of work.

There is some variation regarding the end of one period and the beginning of another. Between each is a transitional period at which time no task stands out as particularly relevant. During transitions, individuals can explore some new possibilities, test and possibly replace some initial choices, or build new life structures (Levinson et al., 1978), including new beliefs, values, opinions, morals, and goals.

Levinson et al. (1978) argued that the transition period is needed to terminate a period in one's life and initiate the next phase. They theorized that during transition, individuals question what was achieved in the previous period, and begin evaluating values, beliefs, morals, goals, and possibilities for the future. Hence, the transitional period is both a time of reflection and initiation. Individuals at first evaluate their former lives' priorities. This leads to new priorities.

For example, those moving from Early Adulthood to Middle Adulthood may reflect on the status of their lives and decide that changes are needed. Transitioning females may decide to divorce, and make major shifts in occupation. Changes in social

outlook may ensue. Individuals may become more liberal, more conservative, or more centrist. In addition, they may experience changes in personal values (Levinson et al., 1978).

Levinson et al. (1978) proposed the following general sequence of the adult life cycle with these normative age ranges as appropriate in modern, Western society: Early Adulthood, ages 18-40, Mid-Life Transition, ages 40-45, Middle Adulthood, ages 45-60, Late Adult Transition, ages 60-65, Late Adulthood, ages 65 and above.

Hypotheses

The research reviewed above demonstrates that children, adolescents, and adults all differ in life-skills as a function of the emotional maturity and life experiences that accompany development. To reiterate, until this study, adults of different stages, young, middle and older, have never been compared in level of life-skills. In addition, research has shown age-related differences among adults on other variables that affect quality of life and prosocial/adaptive functioning. This author posited that the construct of life-skills is yet another that reflects age-related differences across adult developmental levels and sought to address a shortcoming of the Life-Skills Model (Gazda, 1992). Additionally, as mentioned above, the Life-Skills Model advances that positive relationships exist among life-skills, self-esteem, and well-being. Yet, research prior to this study had not tested this across adult stages of development.

As a result, this study addressed several issues. The current study examined the influence of age and developmental level on participants' life-skills. Specifically, does adult developmental level influence level of life-skills? That is, do young, middle-aged and older adults differ significantly in their levels of life-skills? Another issue examined

was whether level of life-skills relates positively to level of self-esteem in adults at varying developmental levels. A third issue examined was whether life-skills level significantly relates to level of well-being in adults at varying developmental levels. Finally, does self-esteem moderate that relationship between life-skills and well-being? The following hypotheses were tested.

Rationale for Hypothesis One

- a) Young adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.

According to the Life-Skills Model (Gazda et al., 1987), higher levels of life-skills are reflected in that individuals are better able to cope with the developmental tasks before them. The model also states that being able to cope successfully should enable individuals to have healthy emotional development, leading to a better sense of self-worth. Self-worth enhances self-concept and self-esteem (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Percell, Berwick, & Beigel, 1974). Gazda (1984) stated that high levels of life-skills lead to higher levels of self-worth, and better self-esteem. Likewise, the model asserts a link between lower skill levels or skills deficits and lower self-worth and lower self-esteem (Gazda, 1984). There is a link between life-skills deficits and lower self-esteem (Gazda, 1992; Percell, Berwick, & Beigel, 1974). In

addition, there is research indicating that higher levels of life-skills relate to higher levels of self-esteem (in children, Bickham, 1993; in adults, Daughehete, 1993; Taylor, 1991), although not broken down by adult developmental level. Based on this research it was expected that level of life-skills would be related to overall level of self-esteem, with those evidencing higher levels of life-skills also evidencing higher levels of self-esteem. This was expected to occur across adult developmental levels.

Rationale for Hypothesis Two

- a) Young adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

According to the Life-Skills Model, higher levels of life-skills relate to an increased ability to cope, which in turn leads to healthy emotional development (Gazda et al., 1987). Additionally, the prosocial/adaptive living afforded by higher levels of life-skills (Gazda, 1992) is theorized to lead to higher self-worth and self-esteem. Higher self-esteem is associated with increased feelings of well-being, while lower levels of self-esteem are associated with a lessened sense of well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Percell, Berwick, & Beigel, 1974). Based on this research it was expected that level of life-skills would be related to overall level of well-being, with those evidencing higher levels of life-skills also evidencing higher levels of well-being. This was expected to occur across developmental levels.

Rationale for Hypothesis Three

- a) For young adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- b) For middle-aged adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- c) For older adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.

Researchers (Percell, Berwick, & Beigel, 1974) have long proposed that a direct relationship exists between self-esteem and well-being. Blascovich and Tomaka (1991) theorized that self-esteem positively relates to well-being such that individuals with higher levels of self-esteem also have heightened levels of well-being. Andrews and Robinson (1991) reported results indicating that lessened self-esteem translates into lessened well-being. Based on these findings, it was expected that statistical analyses would reveal a positive correlation between the variables of self-esteem and well-being.

Rationale for Hypothesis Four

Self-esteem, will moderate the relationship between life-skills and well-being.

Life-skills deficits have been related to low self-esteem (Bickham, 1993; Daughhettee, 1993; Taylor, 1991). Since low self-esteem is associated with more maladaptive functioning resulting in feelings of dysfunction, distress, or lessened well-being (Blascovich & Tomaka, 1991), it is posited that life-skills influence well-being, and

that this influence is moderated by self-esteem. Based on this research, it was expected that level of life-skills would be related to overall level of well-being as moderated by self-esteem. Those evidencing higher levels of life-skills were expected to evidence higher levels of self-esteem and well-being. This was expected to occur across developmental levels.

Rationale for Hypothesis Five

Middle-aged adults will score higher in problem-solving/decision making (PS/DM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

As mentioned before, problem-solving and decision-making are cognitively-based tasks, characterized by goal setting, judgment, reasoning, critical thinking, and solution implementation. Santrock (1999) and Cattell (1963) argued that cognitive abilities such as judgement and reasoning tend to develop throughout life. Neugarten (1976) found that crystallized intelligence, defined as the learned abilities to process information whereby individuals find relationships, makes judgements, analyzes problems, and use learned strategies to find solutions to problems increases with age. Thus, intelligence and skills favorable to problem solving and decision-making should increase in adulthood. This should be especially true for adults who remain actively engaged in work and living. The latter has implications for late adulthood, typically the time when individuals begin to relinquish work roles and may have less stimulation and social interaction (Santrock, 1999). Schaie (1990) further noted that intelligence scores tend to decrease beginning in the transition period to late adulthood, and fluid intelligence declines most dramatically

in late adulthood. In addition, other factors such as failing health or lack of formal education contribute to cognitive decline in older adulthood (Craig, 1992). Thus, while adults enjoy increasing abilities in abstract analytical skills facilitative to problem solving and decision-making, these can begin to decline by the time individuals reach later adulthood (Schaie, 1990). Based on this, it was expected that differences in the three developmental groups would occur with middle-aged adults scoring highest on this dimension, while younger adults would score higher than older adults.

Rationale for Hypothesis Six

Middle-aged adults will score higher in interpersonal communication/human relations (IPC/HR) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

Differences were expected between the three developmental groups. Young adults are typically at the stage where they are beginning to form long-lasting interpersonal relationships through contacts in the personal, work, and social realms (Craig, 1992). The social world expands even further and peaks during middle-age (Santrock, 1999). As previously mentioned, Levinson et al. (1978) characterized middle-aged as at a time when wisdom, compassion and breadth of perspective leads to enhanced social roles and interpersonal relationships that benefit the self and society. Craig (1992) suggested that through expanded roles in the family, at work and in society, middle-aged adults generally experience increased skills related to interpersonal communication and human relations. Middle adults as compared to the two other groups, typically have the most expanded social world (Santrock, 1999).

As physical health declines with advanced age, older adults have greater difficulty in adapting to and interacting with surroundings, often limiting their social and cultural contacts. Due to retirement, older adults often times lessen associations with their contacts they used to have from work, and the social world constricts (Santrock, 1999). Thus, based on the above, middle-aged adults would perform best in relation to the other two groups on this dimension, with young adults scoring next highest.

Rationale for Hypothesis Seven

Middle-aged adults will score higher in identity development/purpose in life (ID/PIL) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

Self-esteem, emotional expression, moral choice, intimacy issues, family variables, career, and self-discovery are all facets of this dimension. Santrock (1999) suggested that young adults are “launching” into the world. Identity development and self-discovery are aspects of this process. During early adulthood, individuals focus increasingly on being able to understand self and others (Loevinger, 1978). Many researchers (Craig, 1992; Craik, 1977; Erikson, 1950, 1963; Santrock, 1999) suggested that young adults are grappling with forming an identity and face many issues in identity development. Such issues include career choice (Marcia, 1987; Super et al., 1996), as well as, attempting to determine a purpose in life. Young adults attempting to define themselves encounter many “fits and starts” and this can be an especially trying and turbulent time for young people as they are faced with such challenging tasks (Santrock, 1999).

Due to maturity, middle-aged adults have typically developed a strong sense of self and strong sense of identity (Loevinger, 1978). With age, they usually find their place and purpose in life. Santrock (1999) noted increased stability with regards to identity within family life in middle adulthood. In addition, career stabilization has occurred for most middle-aged adults (Super et al., 1996).

Whereas middle-age is characterized by stable, secure identity, assaults on identity and on purpose in life often occur in late adulthood. Since individuals often derive identity from work, retirement is especially threatening (Super et al., 1996). The loss of family members and friends, in addition to declining physical health, challenges older adults. Older adults may redefine their identity somewhat as they cope with numerous biological, psychosocial and social changes that accompany advanced age. These changes can sometimes lower the quality of life for older adults (Levinson et al., 1978). However, older adults have settled typically into a stable identity (Erikson, 1950, 1963) and have completed most or all of their life's work by the time they have reached this point in their lives (Santrock, 1999). This can leave a sense of purpose and often integrity as well. Still, middle-aged adults were predicted to fare best on this dimension, with older adults scoring higher than young adults.

Rationale for Hypothesis Eight

Middle-aged adults will score higher in physical fitness/health maintenance (PF/HM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

Differences were expected among the three developmental groups. Because young adults are at a time of life when individuals typically have their greatest strength and energy, and enjoy biological abundance, there is a sense of being invincible (Santrock, 1999). There is a belief among the young that nothing will ever happen to assault their physical integrity, and as a result, young adults typically do not concern themselves with health maintenance. However, this changes as individuals age (Craig, 1992).

Health status becomes a major concern in middle adulthood as declines in physical functioning are first experienced. Medical directives for more frequent health examinations and routine exercise programs factor into the middle-age mindset (Santrock, 1999). It is at this time in life that individuals realize their immortality and begin working to maintain and preserve physical integrity, while attempting to stave off the aging process (Santrock, 1999).

Older adults are faced with the ravages of aging (Botwinick, 1984). Declines in physical strength, as well as, the increased susceptibility to chronic illness and disease present formidable challenges to older adults (Santrock, 1999). As the population has aged, many older adults remain conscious of the need to stay fit in order to better cope with the assaults on physical integrity that accompanies advanced age (Santrock, 1999). This is evident by the dramatic increase in participation in medically oriented or university affiliated health and wellness programs targeted for seniors citizens (Santrock, 1999). Yet, for some seniors citizens, a lack of education as to proper diet and exercise, and limited resources, which factors into health care utilization, impinges upon health

maintenance (Botwinick, 1984). Thus, it was expected that middle-aged adults would score highest on this dimension, with older adults scoring the next highest.

Summary of Hypotheses

The preceding considerations led to the following research hypotheses being tested in this study.

- (1a) Young adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- (1b) Middle-aged adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- (1c) Older adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- (2a) Young adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- (2b) Middle-aged adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- (2c) Older adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

- (3a) For young adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- (3b) For middle-aged adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- (3c) For older adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- (4) Self-esteem will moderate the relationship between life-skills and well-being.
- (5) Middle-aged adults will score higher in problem-solving/decision making (PS/DM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adult.
- (6) Middle-aged adults will score higher in interpersonal communication/human relations (IPC/HR) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adult.
- (7) Middle-aged adults will score higher in identity development/purpose in life (ID/PIL) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the

Life-Skills Inventory-Adult Form, than older adults who will score higher than young adult.

- (8) Middle-aged adults will score higher in physical fitness/health maintenance (PF/HM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adult.**

CHAPTER 2

Method

Participants

A representative sample of 300 participants was recruited for this investigation. One hundred young adults were drawn from undergraduate students enrolled in psychology courses at Louisiana Tech University. One hundred middle-aged (45-60) and one hundred older adults (65 and older) were recruited from a senior outreach program, a university senior health and wellness course, and civic clubs of rural northern Louisiana and southern Arkansas. An attempt was made to recruit equal numbers of males and females and a variety of races.

Extra credit in the form of bonus points applied to a test grade was offered to the college students surveyed. Those students not wishing to participate were offered an alternative activity (writing a one page summary of a psychological research article) for an equivalent amount of credit. All others agreed to participate without compensation. The ethical standards, in relation to treatment of research participants, set forth by the American Psychological Association, were strictly followed. Also, data collection did not proceed until approval had been obtained from the Human Subjects Use Committee of Louisiana Tech University.

Instrumentation

Demographic Survey

Demographic variables were included in this investigation for exploratory and control purposes. They included: age, gender, marital status, educational level and birth order. If differences had been found between demographic categories in self-esteem, well-being, or life-skills, then the variables would have been included in the analyses that follow in order to reduce error variance.

Life-Skills Inventory – Adult Form

The Life-Skills Inventory – Adult Form (LSI-A) (Gazda, Illovsy, & Taylor, 1991) is a 97 item self-report instrument designed to assess adults' life-skills. Gazda et al. (1991) designed it for clinical and research purposes. The LSI-A can be used to predict possible future areas of skill deficit that adults may encounter. The LSI-A is a measure of nonpathological, or normal, functioning.

Research has established that the reliability of the LSI-A total and four subscales is excellent. Test-retest reliability for the LSI-A total score is .92 (Daughhete, 1993; Taylor, 1991). As mentioned previously, the four subscales of the LSI-A are: physical fitness/health maintenance (PF/HM), problem-solving/decision making (PS/DM), identity development/purpose in life (ID/PIL), and interpersonal communication/human relations (IPC/HR). The reliability coefficients of the four subscales are: PF/HM, .94; PS/DM, .79; ID/PIL, .79; and IPC/HR, .82, exhibited stability (Taylor, 1991). There were no significant effects for the number of days between the first and second administrations of the scale. In summary, these findings reveal adequate stability for the LSI-A total instrument and for each of its subscales.

Daughhete (1993) reported the internal consistency of the LSI-A. Using Cronbach alpha it was .95 for the total instrument, .82 for the IPC/HR subscale, .83 for the PF/HM subscale, and .85 for both the PS/DM and ID/PIL subscales. The LSI-A was found to have construct validity based on evidence of convergence with instruments measuring theoretically similar constructs as those measured by the LSI-A (Taylor, 1991). Taylor (1991) reported that there were moderate to strong, validity coefficients between the total score of the LSI-A and the Interactive Involvement Scale (IIS), ($r = .589$); the Problem-Solving Inventory (PSI), ($r = .683$); and the Purpose in Life Test (PIL test), ($r = .735$). There were also moderate to strong validity coefficients between the LSI-A scale scores and the IIS, PSI and PIL tests.

A copy of the instrument is provided in the Appendix. The 97 items of the LSI-A are answered in a 4-point Likert scale format. Responses can range from 1 (completely disagree) to 4 (completely agree) for each item. Certain items are reversed scored to overcome response set bias. The range of scores is 97-388. A higher total score reflects a higher level of life-skills.

The PS/DM subscale is comprised of 25 items. A sample item from the PS/DM subscale is "I have problems deciding what I should do and doing it." This subscale assesses skills needed when confronted by problems and then having to decide what to do. As mentioned previously, skills assessed by this category include information seeking, information assessment and analysis skills, problem identification, solution implementation and evaluation, goal setting, systematic planning and forecasting skills, time management, critical thinking, and conflict resolution skills (Brooks, 1984). The

range of scores on this subscale is 25-100. Higher scores on this subscale indicate higher levels of problem-solving/decision making skills.

The ID/PIL subscale is made up of 24 items. A sample item from the ID/PIL subscale is "I know who I am and life has meaning for me." This subscale taps into the skills necessary for ongoing development of personal identity and emotional awareness. As mentioned above, skills measured by this category include skills related to the development of personal values, self-esteem, emotional expression, capacity for interpersonal intimacy, career direction, and a sense of place and purpose in life (Gazda et al., 1987). The range of scores on this particular subscale is 24-96. Higher scores equate to higher levels of identity development/purpose in life skills.

The IPC/HR subscale is comprised of 22 items. In regards to the IC/HR subscale, a sample item is "I am able to have close relationships with someone and we are able to depend on each other." The skills measured by this subscale relate essentially to the ability to implement the core dimensions of empathy, respect, warmth, genuineness, appropriate self-disclosure, confrontation, and immediacy in relating to others. This item is tapping into personal psychosocial development. The subscale measures skills needed for effective communication, small and large group and community membership, management of interpersonal intimacy, clear expression of ideas and opinions, and giving and receiving feedback (Brooks, 1984). The range of scores for this subscale is 22-88. Higher scores reflect higher levels of interpersonal communication/human relations skills.

The PF/HM subscale is comprised of 26 items. A sample item from the PF/HM subscale is "I participate in physical activity at least 3 times per week for 20 minutes per

session.” This subscale taps into those skills necessary for motor development, physical fitness, and nutritional maintenance. Other skills measured by this category include: weight control, physiological aspects of sexuality, athletic participation, stress management, and selection of leisure activity. The total range of scores for this particular subscale is 26-104. Higher scores equate to higher levels of physical fitness/health maintenance skills.

Coopersmith Self-Esteem Inventory

The Coopersmith Self-Esteem Inventory (SEI) (Coopersmith, 1981) is a self-report instrument designed to measure self-regard or self-esteem. The SEI has established reliability (.73 alpha coefficient) and validity (Wells & Marwell, 1976). The SEI was found to have construct validity based on evidence of convergence with instruments measuring theoretically similar constructs as that measured by the SEI (Demo, 1985).

The items on the instrument are answered by respondents checking one of two boxes. One box is marked “like me” and the other “unlike me.” Respondents mark the box that is applicable depending on what the particular statement is. A point is assigned for each item connoting high self-esteem that the respondent identifies as “like me,” as well as, for each item connoting low self-esteem that is identified as “unlike me.” The composite score can range from 0 to 100. A higher score reflects a higher level of self-esteem.

General Well-Being Schedule

The General Well-Being Schedule (GWB) is a measure of subjective well-being that is widely used as an indicator of psychological health and dysfunction (Poston, Olvera, Yanez, Haddock, Dunn, Hanis, & Foreyt, 1998). The GWB was developed by

Dupuy (1978) to assess subjective quality of life. The scale reflects both positive and negative feelings and accordingly includes both positive and negative questions. Since the GWB is in the public domain, it is accessible at no charge.

The GWB has established reliability and validity (Poston et al., 1998). Both Fazio (1977) and Monk (1981) reported test-retest reliability of .85. Ware, Jonhston, Davies-Avery, and Brook (1979) reported internal consistency to be over .90. The GWB has construct validity based on evidence of convergence with instruments measuring theoretically similar constructs, such as .69 as the average correlation of the GWB and six independent depression scales, .78 with the Personal Feelings Inventory – Depression, and .80 with the Zung Self-Rating Depression Scale (Fazio, 1977; Simpkins & Burke, 1974).

The GWB has 18 items. The first 14 questions use 6-point Likert items representing intensity or frequency of distress. The remaining four questions use a 0 to 10 Likert scale, each defined by adjectives at either end. A sample question is “How have you been feeling in general during the past month?” The total range of scores is 1-110. Higher scores of 73-110 indicate positive well-being. Scores in the range of 61-72 indicate moderate distress with lessened well-being. Scores of 60 and below indicate severe distress. This instrument is also provided in the Appendix.

Design

A cross-sectional, correlational design was used in this study.

Procedures

Informed consent was first obtained. A copy of the form appears in the Appendix. College participants were tested at the end of class time on a date approved by the class

instructor. Regarding other participants, the researcher approached the director of activities and events at a senior outreach program, and the instructor of a university senior health and wellness course and solicited help in recruiting older adults for participation. Middle-aged adult participants were recruited from civic clubs around northern Louisiana and southern Arkansas.

Participants were given a research packet folder that contained an informed consent form (see Appendix A), a demographics survey (see Appendix B), the LSI-A scale (see Appendix C), the SEI, and the GWB (see Appendix D). Participants were asked to remove only the consent form from the research packet folder to protect their anonymity thereafter. The participants were then asked to read and sign the consent. Any of the assembled who did not wish to participate were free to do so.

Participants were asked if they had any questions or needed any clarifications. Once questions were answered and uncertainties clarified, participants were asked to remove only the demographic survey from the research packet folder. They were instructed to fill in the demographic information requested. It was stressed to all the participants that in order to participate fully, the demographics survey and all the instruments would have to be completed in their entirety. Participants were encouraged to ask for assistance if they did not understand an item. When asked, the researcher rephrased an item, employing commonly used words synonymous to the words in the item, if simply reading the item to the person did not clarify its meaning.

Participants were grouped. The informed consent form was always presented to the participants first. The demographics survey was always presented second. In presenting the instruments to participants, to control for order effects, the instruments

were counterbalanced. Thus, the instruments were presented in the same order to all individuals within a group, however, the ordering of the instruments was counterbalanced between the groups. The 6 possible orderings of the instruments are presented in Table 1. Following participation, each participant received a debriefing statement that explained the nature of the research (see Appendix E).

TABLE 1

Counterbalanced Order of Instruments

I	II	III	IV	V	VI
LSI	LSI	GWB	GWB	CEI	CEI
CEI	GWB	LSI	CEI	GWB	LSI
GWB	CEI	CEI	LSI	LSI	GWB

Analyses

Descriptive Statistics:

Within each age cohort, one-way analyses of variance was conducted to compare life-skills, self-esteem, and well-being across all demographic categories (e.g., age, gender, marital status, birth order, and educational level). Since no differences were found, categories were collapsed into a single data set for subsequent analyses. If differences had been found, separate analyses would have been performed for each category. Within each age cohort, one-way analyses of variance was used to compare life-skills, self-esteem and well-being according to the six counterbalanced orderings. No differences were expected. Means and standard deviations were calculated for all

continuous variables to check for range restrictions, and floor and ceiling effects.

Chronbach's alphas were calculated for each of the surveyed measures to verify their internal consistency. A correlation matrix was calculated for all variables in the study.

Hypotheses Tests:

Bonferroni's procedure was used to keep the experimenter-wise Type I error rate at $\alpha = .05$ for all statistical tests.

Hypothesis One

- a) Young adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.

To test hypothesis 1a-c, an attempt was made to predict self-esteem from each of the subscales of the LSI-A (IPC/HR, PS/DM, ID/PIL, PF/HM) using multiple regression. Each of the subscales was expected to account for unique variance in self-esteem such that higher subscale scores were associated with higher self-esteem.

Hypothesis Two

- a) Young adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

- c) Older adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

To test hypotheses 2a-c, an attempt was made to predict well-being from each of the subscales of the LSI-A (IPC/HR, PS/DM, ID/PIL, PF/HM) using multiple regression. Each of the subscales was expected to account for unique variance in self-esteem such that higher subscale scores were associated with higher self-esteem.

Hypothesis Three

- a) For young adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- b) For middle-aged adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.
- c) For older adults, a positive correlation will be observed between scores obtained on the Coopersmith Self-Esteem Inventory and scores obtained on the General Well-Being Schedule.

To test hypotheses 3a-c, a correlation coefficient was calculated between the scores on the Coopersmith Self-Esteem Inventory (SEI) and the scores on the General Well-Being Schedule (GWB) within each age cohort.

Hypothesis Four

Self-esteem will moderate the relationship between life-skills and well-being.

Heirarchical multiple regression analysis was used to predict General Well-Being scores within each age cohort. SEI scores served as moderating variables between the

independent and dependent variables. Demographic variables were first blocked against the components of well-being. Self-esteem was then blocked against the components of well-being. Next, the subscales of the LSI-A were blocked against the components of well-being. Lastly, the interaction between the subscales of the LSI-A and self-esteem were entered. If the interaction had been found to add significant incremental variance, then self-esteem as a construct would have been found to be moderating the effects of life-skills on well-being. To reduce possible multicollinearity among predictor variables, variables were standardized prior to use in regression analyses (Cohen & Cohen, 1983; Jaccard, Turrisi, & Wan, 1990). Additionally, prior to regression analysis, intercorrelations of the demographic, life-skills, and self-esteem variables were examined to ensure that problems of multicollinearity were not present.

Hypothesis Five

Middle-aged adults will score higher in problem solving/decision making (PS/DM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

The fifth analysis examined the three age-related populations (young, middle-aged, and older adults) in relation to problem-solving/decision making life-skills. A one-way analysis of variance (ANOVA) with three levels (young, middle-aged, and older adults) was used to compare group means of the problem-solving/decision making (PS/DM) subscale scores. Had a significant model been observed, then Tukey's Honestly Significant Difference test (HSD) would have been used to compare the cell means and determine which group means were significantly different.

Hypothesis Six

Middle-aged adults will score higher in interpersonal communication/human relations (IPC/HR) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

The sixth analysis examined the three age-related populations (young, middle-aged, and older adults) in relation to interpersonal communication/human relations life-skills. A one-way analysis of variance (ANOVA) with three levels (young, middle-aged, and older adults) was used to compare group means of the interpersonal communication/human relations (IPC/HR) subscale scores. Had a significant model been observed, then Tukey's HSD would have been used to compare the cell means and determine which group means were significantly different.

Hypothesis Seven

Middle-aged adults will score higher in identity development/purpose in life (ID/PIL) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

The seventh analysis examined the three age-related populations (young, middle-aged, and older adults) in relation to identity development/purpose in life life-skills. A one-way analysis of variance (ANOVA) with three levels (young, middle-aged, and older adults) was used to compare group means of the identity development/purpose in life (ID/PIL) subscale scores. A marginally significant model was observed, and Tukey's

HSD was used to compare the cell means and determine which group means were significantly different.

Hypothesis Eight

Middle-aged adults will score higher in physical fitness/health maintenance (PF/HM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

The eighth analysis examined the three age-related populations (young, middle-aged, and older adults) in relation to physical fitness/health maintenance life-skills. A one-way analysis of variance (ANOVA) with three levels (young, middle-aged, and older adults) was used to compare group means of the physical fitness/health maintenance (PF/HM) subscale scores. A significant model was observed and Tukey's HSD was used to compare the cell means and determine which group means differed significantly.

CHAPTER 3

Results

The present study investigated the relationships among life-skills, self-esteem, and well-being. Data was obtained through a demographic survey and three instruments: (a) the Life-Skills Inventory-Adult Form (LSI-A), (b) the Coopersmith Self-Esteem Inventory (SEI), and (c) the General Well-Being Schedule (GWB). SPSS for Windows (1998) was used to analyze the data. Descriptive data are first reviewed. Next, inferential statistical procedures are reported where relevant to testing the research hypotheses. An alpha (α) of .05 is assumed for all inferential tests of significance. In order to keep the experiment wide probability of making a Type I error at $\alpha = .05$. Bonferroni's inequality was used. The number of overall tests (regression models and one-way ANOVAs) was 16 (j). According to Hays (1994), the appropriate significance level to use for each test is $.05/16$ (α/j) or .003125. This p value was used in all subsequent tests.

Demographic Data

Two hundred seventy-eight individuals participated in this study; 96 of these participants (34.5%) were classified as young adults; 92 participants (33.1%) were middle-aged; 90 participants (32.4%) were older-adults. The youngest participant in the study was 19 years of age. The oldest participant was 88.

Demographic characteristics, including frequencies and percentages of nominal variables for each age group, are presented in Table 2.

Table 2.

Frequencies of Nominal Variables

Variable	Young		Middle-Aged		Older	
	N	%	N	%	N	%
Gender						
Male	70	72.9	69	75.0	56	62.2
Female	26	27.1	23	25.0	34	37.8
Marital Status						
Single, never married	49	51.0	5	05.4	1	1.1
Single, previously married	4	4.2	17	18.5	36	40.0
Married	42	43.8	70	76.1	50	55.6

Females outnumbered males in each age group by a ratio of about 2:1. It is also evident that a preponderance of middle-aged adults of the sample population is married. The young adults in the sample were mostly single, although a significant number are married. The majority of the older adults in the sample are married, however, a significant portion of this group has experienced widowhood or divorce. Santrock (1999) found similar results among various age groups.

Descriptive Statistics

Means and standard deviations of age, birth order, and years of education are provided in Table 3 by age group. The table also provides the means and standard

deviations of scores on the measures of self-esteem (SEI), well-being (GWB), and total life-skills (LSI-A) and subscales: interpersonal communication/human relations (IPC/HR), problem-solving/decision making (PS/DM), identity development/purpose in life (ID/PIL), and physical fitness (PF/HM).

Years of education means indicate that participants across age groups had achieved education well-beyond high school. Young adults represented the group with the most education. They had an average 15.81 years of formal education. The middle-aged group had 15.25 years of education. The older adults represented the group with the least amount of formal education. They had 14.81 years of education.

Self-Esteem Inventory (SEI)

Sample means and standard deviations for each age group appear in Table 3. A reliability coefficient, Cronbach's alpha, was calculated for this instrument within each age group. The Cronbach's α for the Self-Esteem Inventory with the young adult sample was .46. The SEI had reliability coefficients of .38 with the middle-aged adults, and .89 for older adults. This is comparable to that reported by Wells and Marwell (1976) for their sample of adults.

General Well-Being Schedule (GWB)

Sample means and standard deviations for each age group are provided in Table 3. Cronbach α was calculated within each age group. The Cronbach's α for the General Well-Being Schedule in the young adult sample was .93. The GWB had reliability coefficients of .86 for the middle-aged group and .87 for older adults. These coefficients are consistent with Ware et al. (1979), who reported internal consistency of .90 with their sample.

Life-Skills Inventory-Adult Form

Life-skills were measured using the LSI-A (Gazda et al., 1991). As noted previously, this instrument yields a total score and scores on four subscales (IPC/HR, PS/DM, ID/PIL, PF/HM). Sample means and standard deviations for each age group can also be found in Table 3.

A Cronbach's α of .95 was observed in the young adults on the total LSI-A. Cronbach α 's for the subscales of the LSI-A were: IPC/HR, .80, PS/DM, .87, ID/PIL, .88, and PF/HM, .84. A Cronbach's α of .95 was observed for the group of middle-aged adults on the total LSI-A. Cronbach α 's for the subscales of the LSI-A were: IPC/HR, .77, PS/DM, .89, ID/PIL, .90, and PF/HM, .78. A Cronbach α of .94 was observed in older adults on the total LSI-A. Cronbach α 's for the subscales of the LSI-A were: IPC/HR, .81, PS/DM, .82, ID/PIL, .83, and PF/HM, .77.

Taylor (1991) reported Cronbach's alphas for the subscales as: IPC/HR, .82, PS/DM, .85, ID/PIL, .85, PF/HM, .83. There is excellent agreement between those observed by Taylor and those reported herein. The coefficients of both studies are considered well above the generally accepted standards for adequate internal consistency reliability (Anastasi & Urbina, 1997).

Tests of Demographic Data

Before data could be collapsed across demographic categories, appropriate analyses were conducted. Examining the data for gender differences, independent samples *t*-tests were used to compare males and females within each age group on each of the dependent variables: (a) self-esteem scores, (b) well-being scores, (c) total life-

skills score, and (d) life-skills subscales scores. No significant differences were found. Consequently data were collapsed across gender in all subsequent analyses.

An one-way ANOVA was used to compare marital statuses (single- never married, single- previously married, and married) within each age group on each of the dependent variables of the study. There was no significant main effect. Consequently, data were collapsed across marital categories in subsequent analyses.

Pearson product-moment correlation coefficients (hereafter referred to as correlation coefficients) were computed by age group to assess whether a linear relationship exists between birth order and the dependent variables of the study. No significant correlations were found. Consequently data were collapsed across levels of birth order in subsequent analyses.

Correlations Among Variables in Study

Tables 4, 5, and 6 present correlation coefficients among the four subscales of the LSI-A (IPC/HR, PS/DM, ID/PIL, PF/HM), self-esteem, and well-being for each of the three age-groups.

Table 3

Summary Statistics of all Measures by Age Group

Variable	Young N = 96			Middle-Aged N = 92			Older N = 90		
	<i>M</i>	<i>SD</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>α</i>
Average Age	26.86	6.71		50.69	6.96		74.20	6.20	
Birth Order									
Total Number of Siblings	2.00	1.70		3.06	2.79		3.01	2.41	
Total Number of Younger Siblings	2.00	1.47		1.80	1.61		1.41	1.49	
Total Number of Older Siblings	0.81	1.12		1.26	1.92		1.59	1.81	
Years of Education	15.81	2.05		15.25	3.27		14.81	3.13	
Self-Esteem Inventory	74.88	24.27	0.46	79.44	18.01	0.38	82.59	14.38	0.89
General Well-Being Schedule	69.19	21.18	0.93	77.16	15.95	0.86	84.34	14.47	0.87

Table 3 (continued)

Variable	<i>M</i>	<i>SD</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>α</i>
LSI-A Total	311.47	33.36	0.95	316.83	33.77	0.95	326.63	30.51	0.94
IPC/HR	74.12	7.54	0.80	74.69	7.66	0.77	74.57	8.35	0.81
PS/DM	81.96	9.16	0.87	82.31	10.65	0.89	82.26	9.42	0.82
ID/PIL	78.16	9.39	0.88	79.64	10.45	0.90	81.43	8.19	0.83
PF/HM	77.21	10.93	0.84	80.17	9.76	0.78	88.35	8.43	0.77

Note. IPC/HR = Interpersonal Communication/Human Relations; PS/DM = Problem-Solving/Decision Making;

ID/PIL = Identity Development/Purpose in Life; PF/HM = Physical Fitness/Health Maintenance.

Table 4.

Correlations Among Variables for Young Adults.

Variable	GWB	IPC/HR	PS/DM	ID/PIL	PF/HM
SEI	0.779**	0.693**	0.631**	0.694**	0.728**
GWB		0.565**	0.559**	0.660**	0.646**
IPC/HR			0.748**	0.788**	0.651**
PS/DM				0.897**	0.704**
ID/PIL					0.711**

Note. GWB = General Well-Being Schedule; SEI = Self-Esteem Inventory;

IPC/HR = Interpersonal Communication/Human Relations;

PS/DM = Problem-Solving/Decision Making; ID/PIL = Identity

Development/Purpose in Life; PF/HM= Physical Fitness/Health

Maintenance

** $p < .01$

Table 5.

Correlations Among Variables for Middle-Aged Adults.

Variable	GWB	IPC/HR	PS/DM	ID/PIL	PF/HM
SEI	0.575**	0.641**	0.545**	0.576**	0.537**
GWB		0.337**	0.249*	0.311**	0.393**
IPC/HR			0.690**	0.703**	0.512**
PS/DM				0.899**	0.640**
ID/PIL					0.627**

Note. GWB = General Well-Being Schedule; SEI = Self-Esteem Inventory;

IPC/HR = Interpersonal Communication/Human Relations;

PS/DM = Problem-Solving/Decision Making; ID/PIL = Identity

Development/Purpose in Life; PF/HM = Physical Fitness/Health

Maintenance.

** $p < .01$

Table 6.
Correlations Among Variables for Older Adults.

Variable	GWB	IPC/HR	PS/DM	ID/PIL	PF/HM
SEI	0.450**	0.459**	0.401**	0.307**	0.462**
GWB		0.459**	0.534**	0.544**	0.523**
IPC/HR			0.678**	0.672**	0.672**
PS/DM				0.827**	0.707**
ID/PIL					0.724**

Note. GWB = General Well-Being Schedule; SEI = Self-Esteem Inventory;

IPC/HR = Interpersonal Communication/Human Relations;

PS/DM = Problem-Solving/Decision Making; ID/PIL = Identity

Development/Purpose in Life; PF/HM = Physical Fitness/Health

Maintenance.

** $p < .01$

All correlations were significant at $p < .01$, except for that one between the measures of well-being and the problem-solving/decision making subscale for middle-aged adults, which correlation was significant at $p < .05$. It was expected that self-esteem would be highly correlated with well-being since self-esteem is postulated to be a component of well-being (Blascovich & Tomaka, 1991). The correlations between the measure of self-esteem with each of the four subscales of the LSI-A are large in

magnitude across age groups. The correlations between the measure of well-being with each of the four subscales of the LSI-A are also large in magnitude. It is disconcerting that the four subscales are highly intercorrelated across age groups. These data raise the possibility that the subscales are assessing a single construct, rather than separate constructs that the originators of this instrument had thought (Gazda et al., 1991). They also suggest a problem of multicollinearity if the four life-skills subscores are used as predictors in regression analysis.

Tests of Hypotheses

Hypothesis One

This hypothesis has three parts which are:

- a) Young adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.

Multiple regression analysis was used to explore whether life-skills predict self-esteem within each age group. The independent variables included the four generic life-skills areas: (a) interpersonal communication/human relations (IPC/HR), (b) problem-solving/decision making (PS/DM), (c) identity development/purpose in life (ID/PIL), and (d) physical fitness/health maintenance (PF/HM). The dependent variable was self-esteem. For young adults the model was significant, $F(4, 88) = 27.537, p < .01, R^2 =$

.556. Identity development/purpose in life ($B = .369, p < .05$) and interpersonal communication/human relations ($B = .334, p < .01$) were found to be significant predictors of self-esteem for young adults after controlling for the effects of the other variables. For middle-aged adults the model was also significant, $F(4, 82) = 18.862, p < .01, R^2 = .479$. Interpersonal communication/human relations ($B = .448, p < .01$) and physical fitness/health maintenance ($B = .274, p < .01$) were found to be significant predictors of self-esteem for middle-aged adults after controlling for the effects of the other variables. For older adults the model was also significant, $F(4, 84) = 8.314, p < .01, R^2 = .284$. Interpersonal communication/human relations ($B = .288, p < .05$) and physical fitness/health maintenance ($B = .329, p < .05$), just as they had been with the middle-aged group, were found to be the significant predictors of self-esteem for the older adults. The beta weights and the t values for these can be found in Table 7. That the beta weights are generally positive indicates positive associations. IPC/HR appears to influence self-esteem across stages of adulthood.

Table 7.

Summary of Multiple Regression Analysis for Life-Skills Subscales Predicting Well-Being by Age Group

	Young			Middle-Aged			Older		
	<i>B</i>	<i>T</i>	<i>p</i>	<i>B</i>	<i>T</i>	<i>p</i>	<i>B</i>	<i>T</i>	<i>p</i>
IPC/HR	0.33	2.89	0.01	0.45	3.59	0.00	0.29	2.15	0.03
PS/DM	-0.10	-0.06	0.55	-0.01	-0.05	0.96	0.23	1.36	0.18
ID/PIL	0.37	2.06	0.04	0.09	0.51	0.61	-0.31	-1.77	0.08
PF/HM	0.20	1.90	0.06	0.27	2.75	0.01	0.33	2.28	0.03

Note. N = 266. For young adults, n = 92. For middle-aged adults, n = 86. For older adults, n = 88. IPC/HR = Interpersonal Communication/Human Relations; PS/DM = Problem-Solving/Decision Making; ID/PIL = Identity Development/Purpose in Life; PF/HM = Physical Fitness/Health Maintenance

Hypothesis Two

This hypothesis has three parts which are:

- a) Young adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

- b) Middle-aged adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

Multiple regression analysis was used to explore whether life-skills predict well-being across age groups. The independent variables once again were the four life-skills subscales: (a) interpersonal communication/human relations, (b) problem-solving/decision making, (c) identity development/purpose in life, (d) physical fitness/health maintenance. The dependent variable was well-being. For young adults the model was significant, $F(4, 91) = 24.307, p < .01, R^2 = .517$. Identity development/purpose in life ($B = .617, p < .01$) and physical fitness/health maintenance ($B = .387, p < .01$) were found to be significant predictors of well-being for young adults after controlling for the effects of other variables. For middle-aged adults the model was also significant, $F(4, 86) = 6.225, p < .01, R^2 = .225$. Interpersonal communication/human relations ($B = .310, p < .05$) and physical fitness/health maintenance ($B = .339, p < .01$) were found to be significant predictors of well-being for middle-aged adults after controlling for the effects of other variables. For older adults the model was also significant, $F(4, 85) = 11.095, p < .01, R^2 = .343$. Interpersonal communication/human relations was found to be a marginally significant predictor of well-being for older adults. The beta weights and t values for these can be found in Table 8.

Table 8.

*Summary of Multiple Regression Analysis for Life-Skills Subscales**Predicting Well-Being by Age Group*

	Young			Middle-Aged			Older		
	<i>B</i>	<i>T</i>	<i>p</i>	<i>B</i>	<i>T</i>	<i>p</i>	<i>B</i>	<i>T</i>	<i>p</i>
IPC/HR	0.06	0.49	0.62	0.31	2.27	0.02	0.06	0.47	0.63
PS/DM	-0.31	-1.83	0.07	-0.38	-1.71	0.09	0.16	1.01	0.31
ID/PIL	0.61	3.37	0.00	0.22	1.00	0.31	0.21	1.23	0.21
PF/HM	0.38	3.59	0.00	0.33	2.70	0.00	0.21	1.50	0.13

Note. N = 274. For young adults, n = 95. For middle-aged adults, n = 90. For older adults, n = 89. IPC/HR = Interpersonal Communication/Human Relations; PS/DM = Problem-Solving/Decision Making; ID/PIL = Identity Development/Purpose in Life; PF/HM = Physical Fitness/Health Maintenance

Hypothesis Three

This hypothesis has three parts which are:

- a) For young adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule.

- b) For middle-aged adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule
- c) For older adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule.

Pearson product-moment correlations were calculated in order to determine if there are significant associations between self-esteem and well-being. Analyses revealed that there is in young adults, $r = .779, p = .01$, middle-aged adults, $r = .575, p = .01$, and older adults, $r = .450, p = .01$. The fact that the observed correlations are smaller with advancing age may be due to the attenuation in variability evident in both self-esteem and well-being (see Table 3). Thus, hypothesis three was well supported across age groups.

Hypothesis Four

This hypothesis asserts:

Self-esteem will moderate the relationship between life-skills and well-being.

To assess the relative contributions of life-skills and self-esteem and the possible moderating effect of self-esteem on well-being, hierarchical regressions were conducted with well-being as the dependent variable. As recommended by Nunally and Bernstein (1994), well-being was regressed onto a series of hierarchical blocks for each age group. The initial block consisted of dummy-coded demographic variables (gender, marital status, level of education, and birth order). The second block consisted of the measure of self-esteem. The third block consisted of the four subscales (IPC/HR, PS/DM, ID/PIL, PF/HM) of the life-skills measure. The final block tested the interaction effects by

simultaneously entering all possible interaction terms between the life-skills subscales and the measure of self-esteem. The results for the young adults will be presented first, followed by the middle-aged group's results, and finally, older adults.

In the initial step, the demographics were significant, $F(4, 90) = 3.047, p < .05, R^2 = .124$. Years of education was a significant predictor ($B = .243, p < .05$). The second step incrementally added self-esteem. That model was found to contribute significantly. $F(5, 90) = 27.462, p < .01$, to the variance in well-being beyond the effects of demographic variables. The examination of incremental variance in the second model indicated $R^2 = .618$, which is an improvement over the .124 of the first model.

The standardized beta weights provide a means of assessing the relative contribution for each of the predictor variables on the dependent variables. Self-esteem was a significant predictor ($B = .773, p < .01$).

The third model determined the effect of life-skills on well-being, while holding constant the factors previously entered. This model was significant, $F(9, 90) = 18.910, p < .01$, and the $R^2 = .678$, which is larger than that of the previous two models. Standardized beta weights suggest that the strongest predictor was self-esteem ($B = .574, p < .01$). The other two significant predictors were identity development/purpose in life ($B = .385, p < .05$) and physical fitness/health maintenance ($B = .242, p < .05$).

In the fourth model the results of adding the interaction of life-skills and self-esteem produced a significant model, $F(13, 90) = 12.816, p < .01$. The $R^2 = .684$ is larger than the three previous models. Although there were no significant beta weights for the interaction terms, the model is significant for young adults in that it is answering a

theoretical question involving a moderating effect rather than an empirical one. Results appear in Table 9.

The results were somewhat different for middle-aged adults. In the initial step, the demographics were not significant, $F(4, 85) = 1.403$. The second step incrementally added self-esteem. That model was found to contribute significantly $F(5, 85) = 8.971, p < .01$, to the variance in well-being beyond the effects of demographic variables. The examination of incremental variance in the second model indicated $R^2 = .359$, which is an improvement over the .065 of the first model. In reviewing the standardized beta weights, self-esteem was found to be a significant predictor for the dependent variable in the second model, ($B = .609, p < .01$).

The third model determined that the effects of the life-skills on the dependent variable was significant, $F(9, 85) = 5.609, p < .01$. The examination of the incremental variance indicated $R^2 = .399$, which is larger than that of the previous two models. Standardized beta weights suggest that the strongest, indeed the only, significant predictor in the third model was self-esteem ($B = .485, p < .01$).

In the fourth model the results of adding the interaction of life-skills and self-esteem produced a significant model, $F(13, 85) = 4.058, p < .01$. The $R^2 = .423$, is larger than the three previous models. Again, although there were no significant beta weights for the interaction terms, the model is significant for middle-aged adults in that it is answering a theoretical question involving a moderating effect. Results are provided in Table 10.

The results for older adults were similar to those of the middle-aged adults. In the initial step, the demographics were not significant, $F(4, 77) = 1.032$. The second step

incrementally added self-esteem. That model was found to contribute significantly, $F(5, 77) = 4.413, p < .01$, to the variance in well-being beyond the effects of demographic variables. The examination of incremental variance in the second model indicated $R^2 = .235$, which is an improvement over the .054 of the first model. In reviewing the standardized beta weights, self-esteem was found to be a significant predictor for the dependent variable in the second model, ($B = .456, p < .01$).

The third model which determined the effects of the life-skills on the dependent variable was significant $F(9, 77) = 5.574, p < .01$. The examination of the incremental variance indicated $R^2 = .425$, which is larger than that of the previous two models. Standardized beta weights reveal the only significant predictor in the third model was self-esteem ($B = .268, p < .05$).

In the fourth model the results of adding the interaction of life-skills and self-esteem produced a significant model, $F(13, 77) = 4.416, p < .01$. The $R^2 = .473$, is larger than the three previous models. Again, although there were no significant beta weights for the interaction terms, the model is significant for older adults in that it is answering a theoretical question involving a moderating effect. Results are summarized in Table 11.

Intercorrelations of the demographic, life-skills, and self-esteem variables were examined to ensure that problems of multicollinearity were not present. Analyses revealed that correlation coefficients between the subscales of the life-skills measure and between the individual subscales and the measure of self-esteem were high. While slight collinearity is unavoidable in most regression, the degree of multicollinearity herein is such that it violates an important assumption of the multivariate technique of multiple regression (Hair, Anderson, Tatham, & Black, 1995). The models in the regression

equations were usually significant. The degree of multicollinearity among the predictor variables preclude the possibility of identifying which variables are the best predictors of the dependent variable, well-being.

Table 9

Hierarchical Regression for Well-Being onto Demographics, Self Esteem, Life-Skills and Self-Esteem X Life-Skill for Young Adults.

	r^2	Δ^2	B
Step 1- Demographics	0.124	0.124	
Gender			-0.149
Birth Order			0.146
Years of Education			0.243*
Marital Status			0.108
Step 2 Self-Esteem	0.618	0.494	0.773**
Step 3 - Life Skills	0.678	0.060	
IPC/HR			-0.113
PS/DM			-0.238
ID/PIL			0.385*
PF/HM			0.243*
Step 4-Interaction of Self-Esteem And Life-Skills	0.684	0.006	
Self-Esteem X IPC/HR			
Self-Esteem X PS/DM			
Self-Esteem X ID/PIL			
Self-Esteem X PF/HM			

Table 10

Hierarchical Regression for Well-Being onto Demographics, Self Esteem, Life-Skills and Self-Esteem X Life-Skill for Middle-Aged Adults.

	r_a^2	Δ^2	<i>B</i>
Step 1- Demographics	0.124	0.124	
Gender			0.064
Birth Order			0.072
Years of Education			0.129
Marital Status			0.215
Step 2 Self-Esteem	0.359	0.294	0.609*
Step 3 – Life-Skills	0.339	0.040	
IPC/HR			0.037
PS/DM			-0.171
ID/PIL			0.150
PF/HM			0.222
Step 4-Interaction of Self-Esteem and Life-Skills	0.684	0.006	
Self-Esteem X IPC/HR			2.563
Self-Esteem X PS/DM			0.673
Self-Esteem X ID/PIL			-1.044
Self-Esteem X PF/HM			-1.200

Table 11

Hierarchical Regression for Well-Being onto Demographics, Self Esteem, Life-Skills and Self-Esteem X Life-Skill for Older Adults.

	r_a^2	Δ^2	B
Step 1- Demographics	0.054	0.054	
Gender			0.064
Birth Order			0.068
Years of Education			0.211
Marital Status			0.063
Step 2 Self-Esteem	0.235	0.181	0.456*
Step 3 – Life- Skills	0.425	0.190	
IPC/HR			0.029
PS/DM			0.148
ID/PIL			0.282
PF/HM			0.087
Step 4-Interaction of Self-Esteem and Life-Skills	0.473	0.048	
Self-Esteem X IPC/HR			-3.707
Self-Esteem X PS/DM			1.556
Self-Esteem X ID/PIL			-2.197
Self-Esteem X PF/HM			3.980

Hypothesis Five

This hypothesis asserts:

Middle-aged adults will score higher in problem-solving/decision making

(PS/DM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

The differences among young, middle-aged, and older adults in relation to PS/DM life-skills were compared using a one-way ANOVA. The independent variable of age had three levels: young, middle-aged, and older. The dependent variable was level of problem-solving/decision making skills. Results of the ANOVA, $F(2, 274) = .035$, $Mse = 95.30$, $p = .965$, indicate that no significant relationship was found between age group and problem-solving/decision making life-skills. Thus, the research hypothesis was not supported by the data. Results are presented in Table 12.

Table 12.

Analysis of Variance for Problem-Solving/Decision Making Life-Skills and Age

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	p value
Between Groups	2	6.71	3.35	0.035	0.965
Within Groups	274	26112.26	95.30		
Total	276	26118.97			

Hypothesis Six

This hypothesis asserts:

Middle-aged adults will score higher in interpersonal communication/human relations (IPC/HR) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

ANOVA was utilized to compare the young, middle-aged, and older adults on interpersonal communication/human relations life-skills scores. Age group, the independent variable, had three levels: young, middle-aged, and older. The dependent variable was level of interpersonal communication/human relations skills. Results of the ANOVA, $F(2, 274) = .137$, $Mse = 61.69$, $p = .872$, indicated that no significant

relationship was found between age group and IPC/HR life-skills. Thus, the data did not support this research hypothesis. Results appear in Table 13.

Table 13.

Analysis of Variance for Interpersonal Communication/Human Relations Life-Skills and Age

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	p value
Between Groups	2	16.93	8.46	0.137	0.872
Within Groups	274	16903.84	61.69		
Total	276	16920.77			

Hypothesis Seven

This hypothesis asserts:

Middle-aged adults will score higher in identity development/purpose in life (ID/PIL) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

The differences among young, middle-aged, and older adults in identity development/purpose in life life-skills were compared using a one-way ANOVA. The independent variable was age. The dependent variable was level of identity development/purpose in life skills. Results of the ANOVA, $F(2, 274) = 2.809$, $MSe =$

88.32, $p = .062$, reveal that the relationship between ID/PIL and age was marginally significant. Tukey's post-hoc analysis revealed that the only significant difference was between older ($M = 81.43$) and young adults ($M = 78.16$). Older adults scored higher on this dimension. Thus, the hypothesis was not supported by the data. Results are provided in Table 14.

Table 14.

Analysis of Variance for Identity Development/Purpose in Life Life-Skills and Age

Source	Degrees of Freedom	Sum of Squares	Mean Squares	<i>F</i> Ratio	<i>p</i> value
Between Groups	2	496.28	248.14	2.809	0.062
Within Groups	274	24202.18	88.32		
Total	276	24698.46			

Hypothesis Eight

This hypothesis asserts:

Middle-aged adults will score higher in physical fitness/health maintenance (PF/HM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

An one-way ANOVA was utilized to compare young, middle-aged, and older adults in physical fitness/health maintenance life-skills. The independent variable was age group. The dependent variable was level of physical fitness/health maintenance. Results of the ANOVA, $F(2, 274) = 31.913$, $MSe = 95.92$, $p = .000$ conveyed a significant relationship between age group and PF/HM. Post-hoc analyses (Tukey's HSD) revealed a significant difference between young and older adults, with older adults ($M = 88.35$) scoring higher on this dimension than the young ($M = 77.21$). Older adults scored significantly higher than middle-aged adults as well ($M = 80.17$). The difference between young and middle-aged adults was not significant. The research question, however, as stated, was not supported. Thus, this hypothesis is partially supported in that there is a difference in the physical fitness/health maintenance life-skills of adults, however, it was not in the direction that was predicted. Results appear in Table 15.

Table 15.

Analysis of Variance for Physical Fitness/Health Maintenance Life-Skills and Age

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	p value
Between Groups	2	6122.64	30.61	31.913	.000
Within Groups	274	26284.21	45.92		
Total	276	32406.85			

CHAPTER 4

Discussion

Summary of Research Problem

The main problem addressed in this investigation was the exploration of whether there are age-related differences in life-skills across adulthood. Previous research has suggested that developmental improvements in life-skills may occur over the life span (Bickham, 1993; Ginter & Gazda, 1997; Picklesimer, 1991; Taylor, 1991).

Developmental theorists suggested that life-experiences and emotional maturity accumulate over time for most adults (Gazda, 1989). While comparisons among the life-skills of children, adolescents, and adults have been thoroughly studied, differences in life-skills among individuals at various adult developmental stages have never been examined. This was an empirical shortcoming of the Life-Skills Model at its inception that Gazda conceded (1992). This gap in the literature was addressed by the present research. Specifically, this study sought to understand how life-skills change throughout adult development.

Self-esteem is considered to be a component of well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Diener, 1985b). Gazda et al., 1987 theorized a relationship among life-skills, self-esteem, and well-being. Consistent with this view, life-skills deficits have been linked to low self-esteem (Bickham, 1993;

Daughhete, 1993; Percell et al., 1974; Taylor, 1991). Moreover, research has linked low self-esteem to maladaptive functioning, resulting in feelings of dysfunction, distress, and lessened well-being (Blacovich & Tomaka, 1991). Thus, life-skills appear to influence self-esteem, and, by extension, well-being. In other words, self-esteem is posited to be a moderator between life-skills and well-being (Gazda et al., 1987). Higher life-skills will promote greater success in life situations that will promote greater self-esteem that will promote greater well-being. Thus, adults possessing more life-skills should have higher self-esteem and higher well-being.

While the linkages among these constructs have been postulated, up until now there has not been a study that specifically interrelated all three constructs across stages of adulthood. Due to the aforementioned relationships among life-skills, self-esteem, and well-being, it was expected that, not only would there be positive correlations among life-skills, self-esteem, and well-being, but also that self-esteem would moderate the relationship between life-skills and well-being.

Summary of Results

Descriptive Data

Analyses of demographic data revealed no highly unusual or unexpected findings. A fact of the sample that caused initial concern was the issue of its gender composition. Females outnumbered males by a ratio of about 2 to 1 in the study. This might potentially have skewed the results, thereby limiting their generalizability to adults generally. However, independent samples *t*-tests conducted within each age group on all the dependent variables revealed no significant gender differences. As a result, the data were

collapsed across gender in all subsequent analyses, and the concern over the generalizability of the results was mitigated.

An interesting relationship was observed between years of education and participants' scores on the measure of life-skills. Gazda (1989) argued that formal education advances life-skills attainment. The more education received, the more highly developed life-skills should be. Taylor (1991) reported supportive findings. It should be noted, however, that Taylor's sample did not include as broad a cross-section of age as this one. However, in this study, the opposite was found. The group with the highest observed level of education, the young adults, reported having the lowest level of life-skills, while the group of older adults, who reported having the lowest level of formal education, reported having the highest level of life-skills. That the group with lowest educational attainment had the highest level of life-skills is significant. Such indicates that the cumulative effects of life long experiences and emotional maturity may have enhanced life-skills development in the older adults despite their comparative lack of formal education

A significant relationship was found between age group and self-esteem and age group and well-being. In examining how the three age groups compared on these variables, it was found that older adults' scores were significantly higher than the other two groups. Older adults were also highest in well-being, followed by middle-aged adults, and then younger adults. This is consistent with what Stacey and Gatz (1991) observed, but at odds with what others have reported (Gatz & Hurwicz, 1990; Gatz et al., 1993). Prior research has established that attaining a sense of identity is an important task for healthy adult functioning (Waterman, 1984, 1990; Marcia, 1987). Since self-esteem is

shaped by identity (Blascovich & Tomaka, 1991), it was proposed herein that, because young adults are still grappling with forming their identity (Santrock, 1999), they will experience lower levels of self-esteem and lower levels of well-being. This is plausible given the current findings. However, this author also proposed that, because the older adults have several threats to their identity, including retirement from work, the bodily ravages of aging (Botwinick, 1984), and the loss of loved ones and friends, they would have lower self-esteem and well-being than middle-aged adults. This was not supported by the current findings. It may be that the assaults to the identity that occur with advanced age are not as powerful as once believed. On the other hand, the high functioning senior citizens polled in the research may be atypical of senior citizens generally.

Marital status was another demographic variable assessed. Analyses correlated marital statuses within each age group with the dependent variables. No significant differences were found. The same is true with the demographic variable of birth order. Finally, race was not included as a demographic variable, an oversight of the author and his committee. There is a high probability that, had it been included, significant differences would not have been found. For instance, Daughhete (1993) and Taylor (1991) found no significant differences due to race and found the Life-Skills Inventory – Adult Form to be relatively free from racial bias. Notwithstanding, differences in scores as a function of race should have been checked.

Interpretation of the Results of Hypothesis One

- a) Young adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.

- b) Middle-aged adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the Coopersmith Self-Esteem Inventory than those with lower life-skills scores.

The first set of hypotheses investigated the effects of life-skills on self-esteem. In this study, this hypothesis was tested by predicting scores on the Coopersmith Self-Esteem Inventory from the four life-skills subscales in each age group using multiple regression. Regression models were significant across all three age groups. The results indicated that for young adults there were two dimensions of life-skills that significantly predicted self-esteem. They were identity development/purpose in life and interpersonal communication/human relations. For middle-aged adults, the dimensions that significantly predicted self-esteem were physical fitness/health maintenance and interpersonal communication/human relations. For older adults, physical fitness/health maintenance and interpersonal communication/human relations were the significant predictors of self-esteem.

It is not surprising that identity development/purpose in life and interpersonal communication/human relations were found to be significant predictors for young adults. Of the entire sample population, young adults are at a time in life when the prominent psychosocial tasks are *identity vs. identity confusion* and *intimacy vs. isolation* (Erikson, 1950, 1963). Young adults wish to achieve an identity through exploration followed by commitment (Marcia, 1987). Successful identity achievement leads to healthy psychosocial development (Erikson, 1950, 1963). Additionally, young adults are

typically beginning to establish mutually satisfying and close relationships with peers, colleagues, and lovers. Accomplishing this leads to further psychological health and psychosocial development (Erikson, 1950, 1963).

Physical fitness/health maintenance and interpersonal communication/human relations were significant predictors in middle-aged and older adults. That physical fitness/health maintenance was a significant predictor for these groups and not young adults makes intuitive sense. Young adults typically are not as concerned with physical fitness and health maintenance due to a sense of immortality (Levinson et al., 1978), attributable to the fact that they are at a time in life with the greatest physical abundance and robustness (Craig, 1992). Unlike young adults, middle-aged and older adults developmentally are at times in life of declining strength and physical stamina (Santrock, 1999) and the realization of mortality abounds, especially in later adulthood (Levinson et al., 1978) as health progressively declines. Thus, it is at these times in life that individuals turn more attention to physical health and well-being (Santrock, 1999) in order to stave off the process of decline and remain healthy. Success in doing so likely leads to better emotional health and well-being (Young & Ismail, 1977).

The fact that the life-skills dimension of interpersonal communication/human relations was a consistent predictor of self-esteem for all three age groups implies that this dimension, which concerns individuals' relationships with others, their ability to communicate needs, and reciprocate those with others (Brooks, 1984), contributes throughout adulthood to self-worth and self-esteem. This supports Erikson's contention that individuals strive throughout adulthood to engage life actively through their relationships with others. Doing so maintains ego integrity and avoids the despair that

stagnation brings (Erikson, 1950, 1963) and enhances emotional health and well-being (Lazarus & Folkman, 1984; Rogers, 1980).

Neistadt and Marques (1984) studied “psychosocially deprived” individuals with poor psychosocial development. These people had never had good interpersonal skills, typically because of poor learning histories involving inadequate role models or negative experiences, or had at one point functioned effectively interpersonally but, because of a psychological crises, no longer did so. For psychosocially deprived individuals, various psychopathologies resulted: the inability to manage functioning one on one or within the larger community or society. A treatment program that trained these individuals in interpersonal and human relations skills was effective for participants of all ages. The researchers noted that increased ability to relate interpersonally resulted in decreased psychopathology, increased confidence, self-esteem, and improved functioning in society for adults of all ages. This study underscores the contribution of interpersonal communication/human relations to happy and successful adult functioning.

Powell and Clayton (1980) also found that a program focused on interpersonal communication and human relations boosts coping behaviors. Recipients of the training reported an enhanced ability to cope with life stressors involving their families and friends. They had less frequent hospitalizations and higher self-esteem than those who did not receive the training. Recipients believed that the program increased their success at job acquisition, retention, and their success in fulfilling personal professional goals.

As the interpersonal communication/human relations dimension concerns psychosocial development, the findings of this study, along with those discussed above,

attest to the importance of having the skills necessary to resolve the psychosocial conflicts described by Erikson (1950, 1963).

Interpretation of the Results of Hypothesis Two

- a) Young adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- b) Middle-aged adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.
- c) Older adults with higher life-skills scores will have higher scores on the General Well-Being Schedule than those with lower life-skills scores.

The second set of hypotheses examined the effects of life-skills on well-being. This hypothesis was tested by predicting scores on the General Well-Being Schedule from the four life-skills subscales by means of multiple regression within each age group. Significant models resulted in all three cases. For young adults, identity development/purpose in life and physical fitness/health maintenance were both significant predictors. Interpersonal communication/human relations and physical fitness/health maintenance were significant predictors of well-being for middle-aged adults. For older adults, the interpersonal communication/human relations dimension was marginally significantly predictive of well-being.

Why were physical fitness/health maintenance and identity development/purpose in life predictive of well-being in young adults? As noted previously, developing a sense of identity is an important developmental task of psychosocial development in early adulthood (Erikson, 1950, 1963). Comfort with self-definition and discovery of paths leading to fulfillment is paramount in young adults' lives and, when achieved, contributes

to life satisfaction and well-being (Loevinger, 1976). In a similar vein, being fit physically and having good health has been shown to contribute to life-satisfaction and well-being (Barnas et al., 1991; Young & Ismail, 1977).

While physical fitness predicted well-being for the young adults and middle-aged adults, the dimension of interpersonal communication/human relations was a significant predictor for the middle-aged and older adults only. That the interpersonal communication/human relations dimension is significant in predicting well-being for middle-aged and older adults makes theoretical sense in a psychosocial context. Middle-aged and older adults are faced with the psychosocial conflicts of *generativity vs. stagnation* and *integrity vs. despair*, respectively (Erikson, 1950, 1963). Erikson believed that in middle-age adults are most concerned about what they will leave behind, in other words, their legacy. Middle-aged individuals can be generative in several ways, such as nurturing children, providing support to their parents and friends, and serving as a mentor to peers and co-workers. The chief concern of this stage is to assist others in developing and leading useful lives (Santrock, 1999). Stagnation, on the other hand, involves self-absorption. This connotes lack of meaningful and reciprocal interactions with others (Erikson, 1950, 1963; Santrock, 1999). Erikson believed that if individuals are generative they experience positive interactions leading to happiness, well-being, and integrity as they enter older adulthood. Erikson also believed that self-absorption in middle-aged individuals would eventually culminate in disappointment, feelings of alienation, and despair as they entered older adulthood.

The preceding underscores the importance of interpersonal communication/human relations skills to accomplishing healthy psychosocial

development and resolution of the psychosocial tasks of these developmental periods (Erikson, 1950, 1963). For middle-aged adults, well-being is best predicted by their state of fitness and the sense of generativity garnered from their relationships with family, friends, and colleagues. It is likely that older adults who are faced with declining physical health depend on the quality of their relationships with family and friends and derive significance by engaging in meaningful ways. Indeed, the results of analyses for hypothesis two highlight the significance of both physical fitness (Barnas et al., 1991; Bassey, 1998; Young & Ismail, 1977) and interpersonal communication/human relations (Neistadt & Marques, 1984; Powell & Clayton, 1980) in well-being. Thus, as in the previous section on the life-skills predictors of self-esteem, these findings indicate that certain life-skills are predictive of well-being in particular developmental periods in a pattern largely supportive of Erikson's adult stages of psychosocial development (Erikson, 1950, 1963).

Nonetheless, some inconsistencies are evident when comparing the results of the first two hypotheses. While physical fitness/health maintenance was a significant predictor of well-being for young adults, this was not the case with self-esteem. Likewise, interpersonal communication/human relations was a significant predictor of self-esteem for young adults but not well-being. Additionally, physical fitness/health maintenance was a significant predictor of self-esteem for older adults but not well-being. Self-esteem is a component of well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Diener, 1985b). Thus, it seems that any predictor of self-esteem for a particular age group should also be a significant predictor of well-being within that age group. That this is not the case is both interesting and an impetus for further research.

Perhaps self-esteem is only a small piece of the well-being puzzle. In other words, well-being may be a much broader concept influenced by multiple factors. This question should be addressed by future research.

Interpretation of the Results of Hypothesis Three

- a) For young adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule.
- b) For middle-aged adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule.
- c) For older adults, a positive correlation will be observed between scores on the Coopersmith Self-Esteem Inventory and scores on the General Well-Being Schedule.

The third set of hypotheses investigated the relationship between self-esteem and well-being. Hypothesis three was tested using Pearson product-moment correlations. A significant correlation was observed between self-esteem and well-being for each age group.

Theory suggests that self-esteem should correlate positively with well-being inasmuch as it is thought to be a component of the latter (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Diener, 1985b). Across all three age groups, significant correlations were found between the two constructs. Thus, the present data replicate previous studies linking self-esteem and well-being. This has clinical significance. If clients have presenting symptoms characterized by distress, often they are

low in life-satisfaction and low in well-being (Gazda, 1992). Clinicians might strive to bolster self-esteem in order to improve well-being which can be accomplished in a number of ways that typically involve increasing clients' life-skills (Neistadt & Marques, 1984; Powell & Clayton, 1980).

Interpretation of the Results of Hypothesis Four

Self-esteem will moderate the relationship between life-skills and well-being.

The fourth hypothesis examined the moderating role of self-esteem between life-skills and well-being. It has been argued above that life-skills boosts self-esteem, which then boosts well-being. Because factors other than self-esteem also contribute to well-being, it is a moderator, not mediator. To test this hypothesis, hierarchical regressions were used.

Results indicated four significant regression models for young adults. In the first model, years of education, a demographic variable, was found to be a significant predictor. In the second regression model, self-esteem was found to contribute significantly to the variance in well-being. The significant predictors in the third model were self-esteem and the two life-skills dimensions of identity development/purpose in life and physical fitness/health maintenance. While the fourth regression model was significant, likely due to problems of multicollinearity with the life-skills instrument, it was not determined which of the combination or combinations of interaction terms of self-esteem and life-skills were significant.

For middle-aged adults results differed from the young adults. The first model was not significant. The second regression model was significant and only self-esteem was found to contribute significantly to the variance. The third model was also significant

and self-esteem was the only significant predictor for well-being after controlling for the effects of the other predictors. While the fourth regression model was significant, because of problems of multicollinearity with the life-skills instrument, it was not determined which of the combination or combinations of interaction terms of self-esteem and life-skills were significant.

For older adults, the results were similar to those for middle-aged adults. The first model was not significant. The second regression model was significant with self-esteem as a significant predictor. The third model was significant with self-esteem as the only significant predictor in the model after controlling for the effects of the other predictors. While the fourth regression model was significant, as a result of problems related to multicollinearity with the life-skills instrument, it was not determined which of the combination or combinations of interaction terms of self-esteem and life-skills were significant.

Researchers have reported that life-skills deficits can lower self-esteem (Bickham, 1993; Daughhete, 1993; Percell et al., 1974; Taylor, 1991) and that low self-esteem is associated with more maladaptive functioning, producing feelings of dysfunction, and distress (Blascovich & Tomaka, 1991). Theory suggests that self-esteem directly impacts well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Diener, 1985b). The results indicated that for young adults, the life-skills of identity development/purpose in life and physical fitness/health maintenance along with self-esteem are significant predictors of well-being. For both middle-aged and older adults, only self-esteem was a significant predictor for well-being after controlling for the effects of the other predictors. Within each age group, a significant model was found in regards

to the fourth regression, which examined the interaction of life-skills and self-esteem on well-being. Thus was addressed the theoretical question of the moderating effects of self-esteem. This research demonstrated that self-esteem is a moderator between life-skills and well-being. However, the beta weights for the interactions of self-esteem and the life-skills were not significant. Thus, it was not discernible exactly which combination or combinations of life-skills and self-esteem were significant in predicting well-being. Psychometric problems with the life-skills instrument may be at the route of the problem.

The LSI-A yielded subscales that were highly intercorrelated, and highly correlated with the other predictors, self-esteem and well-being. This is a violation of an important assumption of multiple regression (Hair et al., 1995): multicollinearity. Problems of multicollinearity not only limit the estimates of parameters, but also call into question the validity of the life-skills instrument. As noted above, the LSI-A was created using the Delphi technique (Dalkey, 1967, 1969) whereby experts from various developmental fields rated items for inclusion as descriptors and then categorized them into various domains, such as problem-solving/decision making or identity development/purpose in life (Brooks, 1984). Hence, the instrument and the model on which it is based were derived theoretically not psychometrically (E.J. Ginter, personal communication, September 18, 2002). The subscales of the life-skills instrument may be assessing a single construct, not four. In retrospect, this led to inherent statistical problems with the instrument, particularly multicollinearity. There is a clear need to explore further the factor structure of the life-skills instrument. Though there is evidence cited pointing to both the reliability and validity of the instrument (Daughhete, 1993;

Taylor, 1991), the current findings suggest that it's distinct subscale constructs are nothing of the kind.

Interpretation of the Results of Hypothesis Five

Middle-aged adults will score higher in problem-solving/decision making (PS/DM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

The fifth hypothesis compared the means of the problem-solving/decision making dimension of life-skills by age group. One-way analysis of variance (ANOVA) was used to investigate the differences among the three age groups. Results indicated a lack of significant differences in problem-solving/decision making.

Goal setting, judgment, reasoning, critical thinking, and solution implementation are cognitive tasks that are characteristic of problem-solving and decision making. Researchers have shown that the crystallized knowledge necessary for meeting these cognitive tasks tends to accumulate throughout life (Cattell, 1963; Craig, 1992; Horn & Donaldson, 1980; Neugarten, 1976; Santrock, 1999). For instance, Schaie (1990) reported that educational levels are positively correlated with problem-solving and decision making. However, it has also been suggested that skills facilitative of problem-solving and decision making may decline in later adulthood due to disuse or dementia (Schaie, 1990). In other words, older adults may have failing health, insufficient cognitive stimulation, and insufficient social interactions that might hamper the acuity of their problem-solving skills (Schaie, 1990). Accordingly, based on previous research, it appeared that problem-solving/decision making life-skills are likely to be strongest

during middle age and that significant differences would be found among the three age groups.

Hypothesis five was not supported based on the results. Results for this particular population of adults showed no significant differences. Scores for the groups were remarkably similar. The middle-aged group ($M = 82.31$) scored slightly higher than older adults ($M = 82.26$) who scored slightly higher than young adults ($M = 81.96$).

The present findings are consistent with what Hartley and Anderson (1984) reported. However, others (Cattell, 1963; Berg et al., 1999; Horn & Donaldson, 1980; Neugarten, 1976) have found age differences in problem-solving tasks. Crystallized intelligence, including, accumulated information and verbal knowledge, increases with age. For example, older adults, as a result of their breadth and depth of knowledge, are much better than the young at doing difficult crossword puzzles. The older person's higher level of crystallized intelligence gives greater wisdom as well. Horn and Donaldson (1980) reported that fluid intelligence, or the ability to reason abstractly and quickly, steadily declines from middle adulthood on. The block design subtest of the Wechsler Intelligence Test for Adults requires fluid abilities. Younger and middle-aged adults tend to score higher on this subtest than older adults (Cattell, 1963; Horn & Donaldson, 1982). Notwithstanding, the present results, much research suggest that age-related differences exist.

What follows are some plausible explanations why no differences were found. There may not have been a sharp decline in this dimension for older adults as expected because, as a whole, they reported working hard at staying healthy and fit, were better educated than most older adults, and were actively involved in activities that were

stimulating to both mind and body. The majority of the sample of older adults were enrolled in a health and wellness program at a university. The rest were involved in a senior outreach program where they worked on projects, sought out ways to help other seniors, and had social activities that promoted interpersonal contact. Schaie (1985) reported that problem-solving performance remains high for older adults who continue to experience good health, maintain a flexible attitude, practice problem-solving abilities, and maintain an active lifestyle that includes a broad spectrum of intellectually stimulating activities. In addition, while younger adults were expected to perform significantly lower on this dimension than middle-aged adults, this also was not the case. The fact that the younger adults of this study were more highly educated than the middle-aged group may have compensated for middle-aged adults' greater life experiences. Again, it has been reported that education levels greatly influence problem-solving and decision making (Schaie, 1990). Finally, the LSI-A may not be sensitive to subtle differences in life-skills. Indeed, the LSI-A may not measure problem-solving life-skills at all. It may simply measure one's perceptions of life-skills.

Interpretation of the Results of Hypothesis Six

Middle-aged adults will score higher in interpersonal communication/human relations (IPC/HR) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than young adults who will score higher than older adults.

The sixth hypothesis compared the means of the interpersonal communication/human relations dimension of life-skills by age group. One-way analysis of variance (ANOVA) was used to investigate the differences among the three age

groups. Results indicated a lack of significant differences in interpersonal communication/human relations.

Research indicates that the social world of adults expands throughout middle-adulthood, typically peaking during late middle-age (Santrock, 1999). Through their expanded social worlds, adults are forming long lasting interpersonal relationships through contacts at home, work, and in other social arenas (Craig, 1992). Of necessity skills must develop to grapple with more diverse relations and interpersonal situations. During late adulthood, due to retirement and declines in physical health, which limit individuals' ability to interact, the social world of older adults constricts and skills may lessen out of disuse (Santrock, 1999). Moreover, Lester (1995) reported that age-related differences in human relations development and interpersonal communication are implicated in mental illness. Thus, based on this previous research, it appeared that middle-aged adults would be highest on the interpersonal communication/human relations dimension of life-skills and that differences would be found among the three age groups.

Hypothesis six was not supported as no significant differences were found among the three groups. Possible reasons are now considered. It could be that the declines in social contacts and interactions predicted to occur in older adults have not been realized for the majority of this sample group who were actively engaged in maintaining their physical well-being through involvement with health and wellness programs, or by taking part in senior outreach programs that fostered continued affiliations with others. Staying actively engaged in the world through programs and activities that promote affiliation fosters continued interpersonal development and the maintenance of human relations

skills (Neistadt & Marques, 1984). The fact that the older adults in this study were observed during data collection to be enjoying such affiliations attests that they are not shrinking back from the social world but actively engaging it but may be atypical. The younger adults, all of whom were college students, have affiliations through the campus setting that encourage and enhance their interpersonal communication and human relations skills and may have led to them measuring higher than what was expected. Again, it may also be that the LSI-A is not sensitive to subtle differences on this dimension of life-skills. It may be tapping perceptions of life-skills rather than life-skills levels themselves.

Interpretation of the Results of Hypothesis Seven

Middle-aged adults will score higher in identity development/purpose in life (ID/PIL) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

The seventh hypothesis compared the means of the identity development/purpose in life dimension of life-skills by age group. One-way analysis of variance (ANOVA) was used to investigate the differences among the three age groups. Results indicated a marginally significant difference in identity development/purpose in life.

Identity development is a primary issue of early adulthood (Loevinger, 1976; Marcia, 1987). While much of younger adulthood is spent grappling with this issue, researchers contend that by middle-age, most are typically identity achieved (Loevinger, 1976, Marcia, 1987; Santrock, 1999). Assaults on identity and purpose in life occur as individuals enter retirement (Super et al., 1996), experience declining physical health.

and lose family members and friends. Thus, these considerations point to identity achievement peaking in middle-age and that differences would be found among the three age groups.

Hypothesis seven was partially supported since significant differences were found in identity development/purpose in life. However, the differences were not in the hypothesized direction. This is a puzzling finding since research typically indicates that young adults report significantly lower level of identity development (Santrock, 1999). One possible explanation is that in many studies of developmental differences in identity development, young adulthood is defined as a shorter time span. The cut off for young adulthood in many studies is much younger than the age of 39, the operational definition of this study. Craig (1992) and Loevinger (1976) reported that identity development is usually well established by the time individuals reach their thirties. The fact that many of the young adults in this sample were in their thirties and might already have a well defined identity and a well established purpose in life likely increased the overall score for young adults, making the present data atypical of studies generally in this area. Additionally, for the older adults, it may be that, since this sample included those who appeared committed to their health by enrolling in a health maintenance and wellness program and those who actively engaged life post-retirement through affiliation with a senior outreach program, they have not experienced the assaults to their identity as harshly as other older adults not so engaged.

As above, another possibility is that the LSI-A is not measuring actual skill but only perceptions of life-skills or behaviors. For example, an item from the instrument from the subscale purporting to measure identity development/purpose in life reads: "I

can deal with the frustration and failure I have to face.” Individuals reading this statement may agree with it strongly but be deluded. There are no independent validation data of which the author is aware that show that this or any of the other subscales of the LSI-A predict success in actual problem-solving situations.

Interpretation of the Results of Hypothesis Eight

Middle-aged adults will score higher in physical fitness/health maintenance (PF/HM) life-skills, as reflected by a higher cumulative score for this age group on this subscale of the Life-Skills Inventory-Adult Form, than older adults who will score higher than young adults.

The eight hypothesis compared the means of the physical fitness/health maintenance dimension of life-skills by age group. One-way analysis of variance (ANOVA) was used to investigate the differences among the three age groups. Results indicated significant differences exist in physical fitness/health maintenance.

Young adults are generally portrayed in the literature as taking a less active attitude with regards to physical fitness and health maintenance than other age groups (Santrock, 1999). This makes intuitive sense given that young adults are at a time in their lives of physical robustness (Santrock, 1999). A different picture characterizes middle-aged adults and older adults (Craig, 1992). Middle-aged individuals begin to realize their mortality and become more concerned with health issues (Erickson, 1950, 1963; Santrock, 1999). In a similar vein, older adults are faced with the ravages of aging, including chronic illness and disease (Botwinick, 1984). Many become acutely aware of the need to stay fit in order to mitigate these assaults on their physical vitality. Based on previous findings, it appeared as though physical fitness/health maintenance skills would

be strongest for middle-aged adults and that significant differences would be found among the three age groups.

Findings partially supported hypothesis eight, indicating a significant relationship between age and physical fitness/health maintenance. Older adults were significantly more skilled than the other two groups. The reader should bear in mind that older adults also scored significantly higher on well-being. This is consistent with theory suggesting a positive relationship between physical fitness and well-being according to which better physical fitness and health maintenance lead to life satisfaction and well-being (Bassey, 1998; Barnas et al., 1991; Young & Ismail, 1977).

Once again, an important caveat is that the majority of older adults in this sample were involved in a health and wellness program. This may have significantly impacted the results in this group's favor, causing them to score better than the middle-aged group, who was predicted to score highest on this dimension. Since the sample may have not been representative of old aged people in general, this raises a concern regarding the external validity of these data.

Implications for Theory and Practice

As global organizations of general coping skills, life-skills are developmental in nature (Gazda, 1992; Ginter, 1997). Researchers have long suggested that age-related differences in coping skills exist (Barnas et al., 1991; Bassey, 1998; Berg et al., 1999; Bream, 1997; Hartley & Little, 2000; Jagacinski, 1997; Sommers, 1997; Steptoe et al., 1990; Widagdo et al., 1999). Prior to this investigation no research had compared life-skills across stages of adulthood. Thus, the present data fill an empirical void.

The results of this study support developmental improvement in the case of physical fitness/health maintenance. Older adults reported being significantly more skilled in this domain, and significantly higher in self-esteem and well-being. This is interesting and is potentially of applied importance. Research has deemed medication, therapy, and exercise as the three most effective treatments for mental disorders (Long, 1997). Hence, the present data suggest that physical fitness/health maintenance may be lifelong contributors to mental health. Researchers need to continue to explore the relationships among physical fitness/health maintenance, self-esteem, and well-being, especially regarding causal relationships. This could lead to the development of intervention, prevention and treatment modules geared at promoting life-skills in those lacking them. Providing those lacking them with life-skills may boost self-esteem (Neistadt & Marques, 1984; Powell & Clayton, 1980). The finding that the life-skills dimension of interpersonal communication/human relations appears central across stages of adulthood in influencing self-esteem could have implications for theory and practice. Adults may equate positive self-worth with the quality of their social, interpersonal relationships. The three age groups diverged over which other life-skills dimensions contributed to self-esteem. For young adults, for instance, identity development/purpose in life predicted self-esteem, corresponding to their need for identity achievement, consistent with Erikson's theory (Erikson, 1950, 1963). If these findings are replicated and confirmed, clinicians can tailor intervention and treatment approaches that provide the life-skills clients need according to their developmental period.

The same is true for well-being. For young adults, physical fitness/health maintenance and identity development/purpose in life predicted well-being. For middle-

aged adults, physical fitness/health maintenance and interpersonal communication/human relations predicted well-being. Interpersonal communication/human relations was a marginally significant predictor for the older adults. If replicated and confirmed, this pattern of results might inform prevention, intervention, and treatment approaches geared to clients according to their developmental levels.

Additionally, while these results confirmed findings from earlier studies linking self-esteem to well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Diener, 1985b), they also suggest that self-esteem moderates between living-skills and well-being. This supports the Life-Skills Model. However, there were serious psychometric issues with the life-skills instrument that warrant concern and call these findings into question. So, while it appears that self-esteem moderates between life-skills and well-being it is not possible to generate serious theoretical and practical implication at this time. More research is needed.

The Life-Skills Model has been around since the late 1980s (Gazda et al., 1987). The instruments for measuring life-skills are less well established. When developing an instrument in the psychometric tradition, numerous reliability and validity checks must be met in order to produce a theoretically and empirically sound instrument (Anastasi & Urbina, 1997). The findings of this study call into question the current version of the Life-Skills Inventory-Adult Form. The originators of this instrument (Gazda et al., 1991) intended the items to measure the four theoretically distinct life-skills dimensions. They did not take a psychometric approach to test development, however, which would have included factor analytic studies. The present analyses revealed high intercorrelations between the subscale scores, indicating that it may be tapping a single construct, not four.

Factor analytic studies of the items are needed along with validation studies (E.J. Ginter, personal communication, September 18, 2002).

Limitations of Current Study

Despite confirmation of some hypotheses, other issues regarding the research need to be addressed. There are limitations pertaining to the sample characteristics, the use of self-report data, and the life-skills instrument. First, the sample of participants was restricted in age, ethnic diversity, educational level, as well as, geographic location. The results can be considered to apply to primarily white, educated, middle-class adults. Not only does this limit the external validity of these data, but may also restrict variability in scores on the measures, thereby attenuating the magnitudes of the correlations observed. For example, it may be that greater differences would be observed on the physical fitness/health maintenance dimension of life-skills had some of the older adults not been involved in a health and wellness program, or senior outreach program.

Secondly, as noted previously, there are issues regarding the construct validity of the LSI-A. It is possible that such factors as denial and naivete' may bias self-reports such that individuals are presenting themselves in a socially desirable light. In retrospect, there was no measure of social desirability with the sample. Thus, social desirability cannot be ruled out as a source of bias. Also, the life-skills instrument may not be measuring life-skill levels at all. There are no validation data to show that those scoring high on the LSI-A, in fact, are more adept when confronted with real-life situations.

Again, it is necessary to refer to the psychometric problems of the life-skills instrument. The LSI-A yielded subscales that were highly intercorrelated. It could be that the subscales of the LSI-A are actually assessing a single construct as opposed to four

distinct constructs. The psychometric problems with the instrument call into question the validity of the instrument. This impacts findings derived by use of the instrument.

Recommendations for Future Research

Future studies might further refine the connection between physical fitness/health maintenance, self-esteem, and well-being. While physical fitness has been implicated as an effective treatment intervention for emotional distress, it is not often prescribed as a part of the treatment plan (Long, 1997). If findings are replicated, then modules for use in clinical practice might emerge. Future studies should also unravel reasons for the impact of interpersonal communication and human relations skills on self-esteem.

Physical fitness/health maintenance was a predictor of well-being for young adults but not a predictor of self-esteem for this same age group. Also, while interpersonal communication/human relations was a significant predictor of self-esteem, it was not predictive of well-being for young adults. Additionally, physical fitness/health maintenance was predictive of self-esteem but not well-being for older adults. What might account for these data? It has been discussed previously that self-esteem is a component of well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Deiner, 1985b). If so, then should not the same predictors of self-esteem for an age group also be predictive of their well-being? It has been argued that self-esteem is a facet of the construct of well-being. Indeed, research indicates that well-being is broader and that self-esteem is only one of several social psychological components of well-being (Andrews & Robinson, 1991; Blascovich & Tomaka, 1991; Emmons & Deiner, 1985b). The relationship between self-esteem and well-being is an area that warrants further consideration and exploration.

Finally, research should focus on developing a better life-skills instrument. It should then identify what life-skills are crucial at different stages of development in terms of promoting self-esteem and well-being. Once this is done then intervention studies designed to promote life-skills, thereby improving self-esteem and well-being, can follow.

APPENDIX A

Human Subjects Consent Form

HUMAN SUBJECTS CONSENT FORM

The following is a brief summary of the project in which you have been asked to participate. Please read the information before signing the statement below.

TITLE: An Investigation of the Relationship Between Life-Skills, Self-Esteem, and Well-Being in Young, Middle-Aged, and Older Adults.

PURPOSE OF STUDY/PROJECT: To determine if differences exist between young, middle-aged, and older adults in life-skills as measured by the Life-Skills Inventory – Adult Form. Another purpose is to determine if individuals with higher self-esteem and higher levels of well-being as measured by the Coopersmith Self-Esteem Inventory and General Well-Being Schedule, respectively.

PROCEDURE: Participants will voluntarily complete the Life-Skills Inventory – Adult Form, the Coopersmith Self-Esteem Inventory, the General Well-Being Schedule, and a demographics questionnaire. Data will then be analyzed to determine the relationship among these variables.

INSTRUMENTS: Life-Skills Inventory – Adult Form, the Coopersmith Self-Esteem Inventory, the General Well-Being Schedule, and a demographics questionnaire.

RISKS/ALTERNATIVE TREATMENTS: There are no risks associated with participation in this study. Participation is voluntary.

BENEFITS/COMPENSATION: None.

I _____, attest with my signature that I have read and understood the description of the study, “An Investigation of the Relationship Between Life-Skills, Self-Esteem, and Well-Being in Young, Middle-Aged and Older Adults”, and its’ purposes and methods. I understand that my participation in this research is strictly voluntary and my participation or refusal to participate in this study will not lead to my being penalized in anyway. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon my request. I understand that the results of my survey will be anonymous and confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participation in this study.

Signature of Participant

Date

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, participants' rights, or related matters:

Dr. Jeffery J. Walczyk	318-257-4315
Scott D. Meche	318-251-1723

The Human Subjects Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the researcher.

Dr. Mary Livingston	318-257-4315
Dr. Terry McConathy	318-257-2924

APPENDIX B
Demographic Survey

DEMOGRAPHICS SURVEY

Please mark your response by filling in the appropriate circle. Do not use X's or Check marks.

Gender Male Female

Age in Years _____

Years of Education _____

Number of Older Siblings (brothers or sisters)

none 1 2 3 4 5 6 7 8 9 more than 9

Number of Younger Siblings (brothers and sisters)

none 1 2 3 4 5 6 7 8 9 more than 9

Marital Status Single, never married Single, previously married Married

APPENDIX C

Life-Skills Inventory – Adult Form

LIFE-SKILLS INVENTORY – ADULT FORM**George M. Gazda****Michael E. Illovsky****Pamela A. Taylor**

1991

The authors of the LSI-A acknowledge the contributions of Dr. David K. Brooks, Jr. and Mildred Powell, RN., M.S. to the development of this instrument.

Permission to use this instrument must be obtained from Dr. George M. Gazda, Dr. Michael E. Illovsky, or Pamela A. Taylor.

LSI-A

Directions

Read each statement and decide whether you 1) completely disagree, 2) mostly disagree, 3) mostly agree, or 4) completely agree. Once you have made your decision, darken the appropriate number on the answer sheet and begin at number 1.

Response Key

- 1 Completely disagree
- 2 Mostly disagree
- 3 Mostly agree
- 4 Completely agree

1. I give and take when I am with people.
2. As a passenger or driver in an automobile, I wear my seat belt regularly.
3. I contribute to the welfare of others.
4. When I take prescription or over-the-counter drugs, I don't read the label or find out from the doctor or pharmacist what foods or other drugs I should not take at the same time.
5. I know who I am and life has meaning for me.
6. I do not get along with the people I work with.
7. I know my weaknesses.
8. I have problems deciding what I should do and doing it.
9. I really cannot handle the differences between what I believe and what society expects.
10. I use my social skills to make new friends.
11. I have confidence in my decisions.
12. When I listen to someone else, I don't know what they are saying and feeling.
13. My exercise routine includes stretches.
14. I feel comfortable with my physical, mental, and emotional capabilities.

Response Key

- 1 **Completely disagree**
- 2 **Mostly disagree**
- 3 **Mostly agree**
- 4 **Completely agree**

- 15. I am who I am because of my beliefs and values.
- 16. As I grow older, I do not like the way I look.
- 17. I could relate effectively to aging parents.
- 18. Life is boring for me.
- 19. I eat fresh fruit and vegetables daily.
- 20. I have plans for completing my goals for the remainder of my life.
- 21. I have difficulty forming relationships with people who could teach me.
- 22. I can understand issues from different points of view.
- 23. I am able to like people even if they look and act different from me.
- 24. I am not able to deal with illness that comes with getting older.
- 25. I know several ways to relax my mind and body without using drugs or alcohol.
- 26. I understand how my feelings influence my decisions and actions
- 27. I get support from my friends, but I still make my own decisions.
- 28. I can accept changing responsibilities as I grow older.
- 29. My values are involved in the work I do.
- 30. I don't have any close friends.
- 31. I could balance my needs with my partner's in making plans.
- 32. I have difficulty teaching others who could learn from me.

Response Key

- 1 Completely disagree
- 2 Mostly disagree
- 3 Mostly agree
- 4 Completely agree

33. I have adjusted to the changes and losses in relatives and friends.

34. I take risks and look for new ways to improve myself.

35. If I had children, I could get along with them.

36. On occasion, I misuse or abuse alcohol or drugs.

37. I live by my values.

38. The way I express my anger either hurts me or somebody else.

39. I do not feel that I can compete with younger workers.

40. I like having time on my hands and I use the time well.

41. I know how to strike a balance between my need for independence and dependence.

42. I don't know what nutrients my body needs or how to balance my food intake to meet these needs.

43. In terms of my work career, I look at where my job may lead me, taking into account the work I have done in the past.

44. I can make good decisions when dealing with new situations

45. I can think of new and different ways of doing things.

46. Sometimes I drive when I am under the influence of alcohol or other drugs that impair my judgement and reaction time.

47. I can deal with the frustration and failure I have to face.

48. I am able to have a close relationship with someone and we are able depend on each other.

Response Key

- 1 Completely disagree
- 2 Mostly disagree
- 3 Mostly agree
- 4 Completely agree

- 49. I understand how changes in my body and my emotions may come together to influence the way I behave.
- 50. I cannot think clearly and solve problems in a crisis.
- 51. I do not know my strengths.
- 52. I am able to solve conflicts.
- 53. When I think of my health, I think of how well I am rather than how sick I am.
- 54. I consider my partner's needs in making plans.
- 55. I participate in physical activity at least 3 times per week for 20 minutes per session.
- 56. I avoid the use of "mood changing" substances (alcohol, tobacco, caffeine, medicines, other drugs) to relieve stress or to "get me going."
- 57. The choices I make help me increase my satisfaction with the way I live.
- 58. I have some idea of what my future will be like.
- 59. I am not able to share my thoughts and feelings with others.
- 60. I find it hard to meet my needs and still be a good citizen.
- 61. I make the right educational and occupational decisions.
- 62. Throughout life, I have found satisfying things to do.
- 63. I study and change my responsibilities, commitments, priorities, and goals.
- 64. When it comes to taking risks with my job or career, I consider my goals and family.
- 65. I can't seem to maintain my ideal body weight.

Response Key

- 1 Completely disagree
- 2 Mostly disagree
- 3 Mostly agree
- 4 Completely agree

- 66. I am living my life different from what I believe.
- 67. I could give and take in a marriage.
- 68. I choose my friends by the way they look.
- 69. I do not get along well in social situations.
- 70. I understand how others influence me.
- 71. I rarely take time to pursue my interests or hobbies.
- 72. I do what I say I am going to do.
- 73. I have several different plans for my retirement.
- 74. I enjoy playing
- 75. I know how to prevent many of the communicable diseases that are common today.
- 76. I can handle situations even when things are unclear.
- 77. I think about what might happen if I succeed with my plans.
- 78. I don't know how to get information to help me find work.
- 79. I am a responsible worker on the job.
- 80. I exercise regularly to relieve stress and improve my sense of well-being.
- 81. I can ask for help when I need it.
- 82. My partner and I feel satisfied with our sexual relationship.
- 83. I cannot manage the pressures of work and home.
- 84. My values are sensible and consistent.
- 85. I know how I want to be involved with children.

Response Key

- 1 **Completely disagree**
- 2 **Mostly disagree**
- 3 **Mostly agree**
- 4 **Completely agree**

86. I could not commit myself to a long-term relationship with a partner.

87. I am an OK person.

88. I have satisfying leisure-time activities.

89. I understand how the normal changes in my body associated with aging affect my sexual functioning.

90. I often feel ill and tired.

91. I adjust my diet to the changing needs of my body.

92. I can tell people what I need and want.

93. I am a responsible person.

94. I rarely get the amount of sleep I need to feel good.

95. I am aware of the importance of reducing fat in my diet.

96. In making decisions, I do not consider how they will affect me later in life.

97. I get a physical checkup as often as recommended for my age group.

APPENDIX D
General Well-Being Schedule

GENERAL WELL-BEING SCHEDULE

This instrument contains questions about how you feel and how things have been going with you. Please respond to each question. Write your answers on the lines provided beside each question or put a check mark in the blanks. Mark only one answer per question. Thank you for completing this questionnaire.

1. How have you been feeling in general? **(DURING THE PAST MONTH)**
 - In excellent spirits
 - In very good spirits
 - In good spirits mostly
 - I have been up and down in spirits a lot
 - In low spirits mostly
 - In very low spirits

2. Have you been bothered by nervousness or your "nerves?" **(DURING THE PAST MONTH)**
 - Extremely so – to the point where I could not work or take care of things
 - Very much so
 - Quite a bit
 - Some – enough to bother me
 - A little
 - Not at all

3. Have you been in firm control of your behavior, thoughts, emotions or feelings? **(DURING THE PAST MONTH)**
 - Yes definitely so
 - Yes, for the most part
 - Generally so
 - Not too well
 - No, and I am somewhat disturbed
 - No, and I am very disturbed

4. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if everything was worthwhile? **(DURING THE PAST MONTH)**
 - Extremely so – to the point that I have just about given up
 - Very much so
 - Quite a bit
 - Some – enough to bother me
 - A little bit
 - Not at all

5. Have you been under or felt you were under any strain, stress or pressure? **(DURING THE PAST MONTH)**
- Yes – almost more than I could bear or stand
 - Yes – quite a bit of pressure
 - Yes – some, more than usual
 - Yes – some, but about usual
 - Yes – a little
 - Not at all
6. How happy, satisfied, or pleased have you been with your personal life? **(DURING THE PAST MONTH)**
- Extremely happy – could not have been more satisfied or pleased
 - Very happy
 - Fairly happy
 - Satisfied – pleased
 - Somewhat dissatisfied
 - Very dissatisfied
7. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory? **(DURING THE PAST MONTH)**
- Not at all
 - Only a little
 - Some – but not enough to be concerned or worried about
 - Some and I have been a little concerned
 - Some and I am quite concerned
 - Yes – very much so and I am very concerned
8. Have you been anxious, worried, or upset? **(DURING THE PAST MONTH)**
- Extremely so – to the point of being sick or almost sick
 - Very much so
 - Quite a bit
 - Some – enough to bother me
 - A little bit
 - Not at all
9. Have you been waking up fresh and rested? **(DURING THE PAST MONTH)**
- Every day
 - Most every day
 - Fairly often
 - Less than half the time

Rarely

10. Have you been bothered by any illness, bodily disorder, pain or fears about your health? **(DURING THE PAST MONTH)**

All the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 None of the time

11. Has your daily life been full of things that were interesting to you? **(DURING THE PAST MONTH)**

All the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 None of the time

12. Have you felt down-hearted and blue? **(DURING THE PAST MONTH)**

All the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 None of the time

13. Have you been feeling emotionally stable and sure of yourself? **(DURING THE PAST MONTH)**

All the time
 Most of the time
 A good bit of the time
 Some of the time
 A little of the time
 None of the time

14. Have you felt tired, worn out, used up, or exhausted? **(DURING THE PAST MONTH)**

All the time
 Most of the time
 A good bit of the time

APPENDIX E
Debriefing Statement

DEBRIEFING

This experiment is designed to investigate several proposed relationships. There is an interest in determining the effect that age has on individuals' life-skills. Specifically, I am interested in whether or not there is a significant difference in the life-skills of young, middle-aged, and older adults. Other relationships being investigated include that of life-skills and self-esteem, and life-skills and well-being as moderated by self-esteem. Here, I am interested in whether or not those individuals with higher levels of life-skills will evidence higher levels of self-esteem and well-being. The hypotheses that I have generated state that middle-aged adults will have the highest levels of life-skills and that those with higher levels of life-skills will have higher self-esteem and a heightened level of well-being. The results of this study may be beneficial in allowing psychologists and other helping professionals to aid those suffering from mental illness, as well as, using this information for the promotion of prevention efforts. If you have further questions about this research, then contact Scott Meche at 318-257-4315.

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VITA

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