DEVELOPMENT OF WISDOM-RELATED KNOWLEDGE IN ADOLESCENCE AND YOUNG ADULTHOOD

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
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ABSTRACT

This study examined the development of wisdom-related knowledge over the transitional period extending from middle adolescence into early adulthood. Wisdom-related knowledge, as a form of "real-world" intelligence, was measured in two domains: (1) hypothetical scenarios about life problems of others and (2) one's own "real-life" problems. The sample consisted of 128 individuals distributed equally across four age groups (15-16 years, 17-18 years, 20-22 years, 25-27 years) which were balanced on the basis of gender, race (African-American and white), and social class (middle class and working class). Participants were administered a semi-structured interview in which they were asked to discuss (1) hypothetical scenarios about life problems of others and (2) their own stressful life events. Interview protocols were coded for level of wisdom-related knowledge. The coding system, which assessed general criteria (i.e., factual and procedural knowledge) as well as specific meta-level criteria (i.e., contextualism,
relativism, and uncertainty) for wisdom, was adapted from Staudinger, Smith, and Baltes’ (1994) wisdom coding system. Results of analyses revealed main effects of age and gender for both scenario and stressful life event protocols. The pattern of age effects for scenarios varied with the nature of the life problem. An important factor in the general age effect for stressful life events was an increase in “relativistic thinking” and “thinking about uncertainty” in the older age groups. Gender analyses indicated that wisdom scores averaged across scenarios and wisdom scores for stressful life events were higher for females than males. This gender difference resulted mainly from (1) higher scores for females on the scenario about making friends and (2) a greater focus on “self-issues” by females when discussing their own stressful life events. No race or social class differences were found. A main effect of problem type was found with wisdom-related knowledge about one’s own real-life problem exceeding wisdom-related knowledge about hypothetical life problems of others.
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CHAPTER 1
INTRODUCTION

Overview

Although wisdom has long been a topic of interest to philosophers, the scientific study of wisdom has only recently been undertaken by psychologists (Taranto, 1989). Sternberg (1990) has credited the recent interest in wisdom to its emergence as "a new paradigm within which to discuss intelligence and cognitive functions and their development over the course of life" (p. 52). One reason for the current interest in the nature of wisdom is the changing conception of intelligence. Until the past couple of decades, research on intelligence had primarily focused on cognitive abilities, such as logical reasoning, which are important for success in the academic world (Baltes & Smith, 1990). Recently however, research on the development of intelligence has begun to focus on forms of "real-world" intelligence such as social intelligence (Cantor & Kihlstrom, 1987; Ford & Tisak, 1983; Gardner, 1983; Keating, 1978), practical intelligence (Ceci & Liker, 1986; Cornelius & Caspi, 1987; Sternberg & Wagner, 1986), emotional intelligence (Goleman, 1995; Salovey & Mayer, 1990) and wisdom (Baltes & Smith, 1990). In particular, life-span psychologists interested in adult cognitive development have begun to examine the development of wisdom as a form of expertise in the social domain.

Much of the early research on wisdom was limited to the study of implicit theories about wisdom and wise people (Clayton & Birren, 1980; Holliday & Chandler, 1986; Sternberg, 1985b). Recently however, research has focused on testing explicit
theories of wisdom. Baltes and his colleagues have developed a theoretical and methodological framework in order to assess wisdom-related performance (Baltes & Smith, 1990; Baltes & Staudinger, 1993; Staudinger & Baltes, 1994). Their conceptual approach is based upon cultural-historical definitions, life-span theory, the study of adult cognitive development, and research on expertise (Baltes & Smith, 1990). Staudinger and Baltes (1994) have defined wisdom as “an expert knowledge system in the fundamental pragmatics of life permitting exceptional insight, judgment, and advice concerning complex and uncertain matters of the human condition” (p. 1147). The domain of “the fundamental pragmatics of life” encompasses knowledge about important existential and ontological features of life (Dittmann-Kohli & Baltes, 1990). The term, wisdom, has been reserved to denote only the highest levels of performance, with lower levels of performance being labeled as wisdom-related (Baltes & Smith, 1990).

The study of wisdom is of particular interest to life-span cognitive psychologists investigating the nature of knowing and of thinking. Wisdom can be viewed as a form of high-level functioning in the cognitive domain which generally emerges during the second half of life. Traditional theories of intelligence (i.e., psychometric, information-processing, and Piagetian) have predicted declining cognitive ability in adulthood (Dittmann-Kohli & Baltes, 1990). However, a dual-process psychometric conception of cognitive functioning predicts both losses and gains in intelligence across the lifespan (Baltes, Dittmann-Kohli, & Dixon, 1984; Baltes & Smith, 1990). This current dual-process model of intelligence has been influenced by Cattell and Horn’s model of fluid and crystallized intelligence (Cattell, 1971; Horn, 1970, 1982). Baltes’ (1987) distinction between the mechanics and the pragmatics of intelligence is similar to and extends the
distinction between fluid and crystallized intelligence. The first process, cognitive mechanics, like fluid intelligence, focuses on the basics of information processing. However, the second process, cognitive pragmatics, differs from Cattell and Horn’s crystallized intelligence by extending the focus beyond generalized systems of factual and procedural knowledge to include specialized systems of knowledge. Whereas performance in cognitive mechanics has been shown to peak in early adulthood and then decline with age, performance in some facets of cognitive pragmatics appears to remain stable or even increase with age (Staudinger, Smith, & Baltes, 1992). Thus, wisdom researchers are interested in studying cognitive pragmatics as a source of intellectual growth in adulthood.

Although wisdom was depicted in the form of female archetypes in early classical and religious literature, nowadays, when people are questioned about their beliefs concerning wisdom and wise people, males are more likely than females to be nominated as wise (Perlmutter, Adams, Nyquist, & Kaplan, 1988). Achenbaum and Orwoll (1991; Orwoll & Achenbaum, 1993) have developed a model of wisdom which links feminist theory and research to the psychological study of human development. This model integrates components in three domains (personality, cognition, and conation) and across three levels (interpersonal, intrapersonal, and transpersonal). They have suggested that self-knowledge may be the source of observed gender differences in development of wisdom and also that men and women, because of their different role patterns across the lifespan, may experience different opportunities and social contexts for the development of wisdom. However, they acknowledge that it is not possible to generalize the finding of
gender differences within particular components of their model to imply the existence of
global differences in wisdom on the basis of gender.

Research on wisdom to date has involved several limitations. First, wisdom-related knowledge has only been measured in protocols concerning hypothetical scenarios, thus limiting the generalization of results to "real world" situations. In addition, previous studies have focused on the measurement of wisdom-related performance in an older population, neglecting earlier periods of adult development. Further, the use of demographically restricted populations has limited the generalization of results across gender, race, and socioeconomic groups.

Three main objectives of this study addressed these limitations while a fourth objective was more exploratory in nature. The first objective was to investigate wisdom-related knowledge during "real-world" thinking, that is, in thinking about one's own stressful life event. The second objective was to investigate wisdom-related knowledge in thinking about hypothetical life problems of others. The third objective was to compare thinking about actual stressful life problems of one's own to thinking about hypothetical life problems of others. A fourth objective of this study was to examine the themes which emerge during a fine-grained analysis of wisdom-related thinking. These investigations were carried out over the period from middle adolescence into early adulthood and across the demographic variables of gender, race, and social class.

This research is unique in that the construct of wisdom has not previously been applied to the study of thinking about one's own "real-world" problems. The use of interviews concerning participants' own stressful life events is designed to extend our understanding of thinking during interpersonal problem-solving. Thus, this research is
important because, according to Keating, (1990), the use of “real-life” dilemmas contributes to the contextual validity of research on social cognition.

To date, much of the research on postformal thinking has been based on the discussion of scenarios about hypothetical dilemmas. The primary advantage of scenario-based investigations is that all participants address the same problem. Thus, the quality of individual responses can easily be rated in comparison to an ideal answer. However, there are also a number of limitations to research based solely on the discussion of hypothetical scenarios. For example, the knowledge that participants display in the discussion of hypothetical dilemmas may not adequately reflect their ability in thinking about real situations. Also, responses may be limited by a lack of knowledge about the factual realities and complexities of problems which are outside the personal experience of the individual. In addition, the impersonal nature of hypothetical dilemmas may limit emotional engagement when thinking about the problem. On the other hand, thinking about hypothetical situations, unlike thinking during “real-world” decision-making, does not require an urgent response (Keating & Clark, 1980). Hence, there is a greater opportunity for reflection on hypothetical problems. However, the interview used in this study asked about stressful life events that had happened in the past six months to a year. Thus, participants may have had an opportunity to reflect on and discuss the event with others. The personal relevance of one’s own dilemma also increases the importance of the event for the individual. One disadvantage however, of measuring wisdom-related knowledge in interviews about one’s own dilemma, is that some participants, particularly younger ones, may not have experienced a serious stressful life event. Thus the degree of difficulty of the life problem may vary. Although there are advantages and disadvantages
associated with each, the inclusion of both real and hypothetical dilemmas in the multi-
method approach used in this study contributes to construct validity in the measurement 
of wisdom-related knowledge.

This study complements earlier research on wisdom in that participants represent a younger population. Specifically, this study includes a sample of individuals in middle and late adolescence as well as early adulthood, as opposed to previous studies of wisdom-related knowledge which were limited to individuals in the period of adulthood. The age range encompassed by individuals in this sample was appropriate for a study of wisdom as a form of cognitive development because of the important life transitions which occur during the late adolescent and early adult period of the lifespan. During this period of growing independence from one’s family of origin, individuals are likely to be faced with a variety of stressful life problems. Successful coping with these personal life difficulties can be an impetus to change in the way that one thinks about such problems. Thus, this research will provide information about an important period of the lifespan in which little work has been done, to date.

This investigation also includes a demographically diverse population in contrast to much of the early research on cognitive development in adolescence and early adulthood. For example, Perry’s (1970) and Kohlberg’s (1969) theories of intellectual and moral development were based initially on all-male samples. Similarly, Gilligan’s (1977) theory of cognitive development in the moral domain was based on a female sample. However, in subsequent research, Kohlberg and Gilligan tested their theories on samples that included both males and females (i.e., Gilligan & Murphy, 1979; Nisan &
Kohlberg, 1982). Perry's model was also extended to a female sample by Clinchy and Zimmerman (1982).

This present study is important because it integrates gender, race, and SES in a contextual, developmental design. Thus, it addresses the development of wisdom-related knowledge in male and female, African-American and white, and working-class and middle-class participants in the period from middle and late adolescence into early adulthood. The inclusion of race and social class in this study of wisdom-related knowledge is important because it offers an opportunity to observe whether demographic differences in cognitive competence, which have been reported on IQ test performance, are present in the domain of real-world intelligence. The use of a demographically diverse sample also allows results of this study to be generalized to a broader population.

1.1 Theoretical Basis for the Measurement of Wisdom-Related Knowledge

Baltes and his fellow researchers have devised a methodological framework for the assessment of wisdom-related performance that is based on a cognitive model of expertise (Baltes & Smith, 1990; Baltes & Staudinger, 1993; Smith, Dixon, & Baltes, 1989; Staudinger & Baltes, 1994). This expertise model has evolved from research in relatively well-defined domains of knowledge such as chess (Charness, 1981; Chase & Simon, 1973), physics (Chi, Glaser, & Rees, 1982), and typing (Salthouse, 1984). The group of wisdom researchers have attempted to extend the general expertise model to real-life expertise in the ill-defined knowledge domain of the "fundamental pragmatics of life." According to Baltes and Smith (1990), three elements of the expertise framework are particularly relevant to the conceptualization of wisdom.
The first element concerns a general model of expert knowledge. The set of five wisdom-defining criteria is consistent with such a model. For example, the two basic wisdom criteria, rich factual knowledge and rich procedural knowledge, are considered essential components of expert knowledge (Chi et al., 1982; Ericsson & Smith, 1991). The remaining three criteria, life-span contextualism, value-relativism, and the recognition and management of life's uncertainty, are derived from life-span theory and research on adult cognitive development (e.g., Alexander & Langer, 1990). These three criteria specify characteristics of the meta-level organization of expert knowledge in the domain of the "fundamental pragmatics of life" (Baltes & Smith, 1990).

The second relevant element of the expertise model is the assumption made by cognitive psychologists studying expert knowledge systems that analysis of verbal protocols can reveal the content and structure of domain-specific knowledge (Anderson, 1987; Ericsson & Simon, 1993). This assumption acts as the basis for using verbal protocols in the methodology used to measure wisdom-related knowledge. Thus, a protocol involving advice or decision-making about difficult life situations could be analyzed to determine a subject's level of wisdom-related knowledge and judgment (Smith et al., 1989).

The third element of the expertise paradigm underlying Baltes' operational definition of wisdom is the criterion for acquiring a high level of performance (i.e., expertise). In most domains, expert-level performance is the exception rather than the rule since a minimum of ten years of structured, deliberate practice is considered a necessary, but not sufficient, condition to achieve expertise (Ericsson & Charness, 1994; Ericsson & Crutcher, 1990; Ericsson, Krampe, & Tesch-Romer, 1993; Simon & Chase, 1973). These
three elements of a cognitive science model of expertise have contributed to the theoretical basis for an empirical study of wisdom.

1.2 Theories of Intelligence.

Over the past two decades the scope of intelligence has been expanded with the recognition of non-academic forms of intelligence. These domains of "real-world" intelligence include, among others, practical intelligence, social intelligence, emotional intelligence, and wisdom.

Neisser (1979) was one of the first psychologists to distinguish between practical and academic intelligence. He defined practical intelligence as knowledge gained through personal experience with the ill-defined tasks of everyday life. A number of studies have provided support for the distinction between these two forms of intelligence. For example, Sternberg, Conway, Ketron, and Bernstein (1981) found that people's conceptions of academic intelligence differed from their conceptions of everyday intelligence. Participants in their study mentioned abilities such as solving practical problems, functioning adaptively in practical situations, and demonstrating social competence as important components of practical or everyday intelligence. Ceci and Liker (1986) provided further support in a study which showed that experienced handicappers with low IQs displayed high levels of practical intelligence in the real-world situation of predicting winners at the racetrack. Cornelius and Caspi (1987) also demonstrated that performance in everyday problem situations was not related to performance on traditional measures of cognitive ability. Sternberg (1985a), in his triarchic theory of intelligence, distinguished practical intelligence from two forms of academic intelligence.
Keating (1978, 1979, 1984) has proposed that the concept of intelligence should be extended beyond the traditional focus on abilities in the academic world to include abilities in the social world. He has suggested that social intelligence be explored as a measure of crystallized intelligence because of the declining importance of fluid intelligence as a source of variance in cognitive performance from middle adolescence on (Keating, 1979; Keating & Bobbitt, 1978). Ford and Tisak (1983) used factor analysis to provide evidence for the postulated existence of social intelligence as a separate domain of intelligence. Social intelligence has been defined as knowledge used to manage personal life tasks (Cantor & Kihlstrom, 1987) and as knowledge about interpersonal relationships (Dittmann-Kohli & Baltes, 1990). Cantor and Kihlstrom (1987) have related social intelligence to personality factors and to knowledge about the self.

In Gardner's (1983) theory of multiple intelligences, two of the seven forms of intelligence focus on the social domain. The first of these, interpersonal (social) intelligence, is concerned with understanding of others, while the second, intrapersonal (personal) intelligence, is concerned with understanding of the self. Gardner has described adolescence as a period in which these two forms of intelligence come together, in the process of identity development, to form a sense of self.

Emotional intelligence is the most recent addition to the discussion of non-academic forms of intelligence. It has been viewed as a sub-construct of social intelligence which focuses on emotions (Mayer & Salovey, 1993; Salovey & Mayer, 1990). The high profile attached to the concept of emotional intelligence in the past few years stems from a convergence of interest by researchers in the fields of intelligence and social psychology (Mayer & Geher, 1996). Emotional intelligence has been defined as
"the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions so as to promote both better emotion and thought" (Mayer & Salovey, 1997, p. 22).

Gardner's (1983) personal intelligences, with their focus on knowledge about feelings, are closely related to the concept of emotional intelligence. Mayer and Geher (1996) have described the problem-solving abilities associated with emotional intelligence as being helpful when people are dealing with such "real-world" tasks as managing careers and relationships.

Daniel Goleman (1995), in his book, *Emotional Intelligence*, argues that the traditional view of intelligence is far too limited and that measures such as IQ do not take into account abilities in the socioemotional domain that are important for success in dealing with the vicissitudes of real life. He includes abilities such as self-awareness, impulse control, persistence, zeal, self-motivation, empathy, and social deftness in his description of emotional intelligence as an important meta-ability which influences how people use their other mental capacities and skills.

Socioemotional intelligence may be viewed as a form of reasoning which is based on knowledge about emotions in relation to the social world. To date, most research in the socioemotional domain has focused on the period of infancy and childhood. Thompson and Ganzel (1994) describe the field of socioemotional development as addressing issues such as the expression of emotion in social contexts, emotional understanding, and the effects of emotion on social behavior. They have suggested that research on socioemotional functioning should be extended into adolescence and
adulthood, particularly because of the importance of growth in self-understanding during the period of identity development.

Keating (1996) has used the metaphor, “habits of mind,” to describe a conceptual framework for understanding human development which is based on the idea that people develop individual patterns of reacting with the world. These patterns are created by the weaving together of various strands of competence over the life span. Elements of this competence include a knowledge component in the form of wisdom-related knowledge and a personality component in the form of social and personal dispositions. Wisdom-related thinking, which begins to develop in adolescence, contributes a perspective-taking stance on life problems while personal dispositions contribute a way of acting in the social world. Thus adolescence can be viewed as a “critical period for the development of critical thinking and a critical habit of mind” (Keating & Sasse, 1996, p. 247). Integration of these elements of competence across a lifetime creates a developmental pathway to develop this critical “habit of mind.”

The construct, wisdom-related knowledge, can be related to other forms of non-academic intelligence such as social intelligence with its focus on interpersonal relationships and practical intelligence with its focus on tasks of everyday living (Baltes & Smith, 1990; Dittmann-Kohli & Baltes, 1990). For example, Sternberg (1985b), in his study of people’s conceptions of intelligence, found that wisdom was significantly correlated with a measure of social intelligence. In addition, wisdom-related knowledge and socioemotional intelligence share a common concern with knowledge and understanding of the self both in relation to other people and in the context of difficult life problems. However the domain of wisdom involves three constructs which
differentiate it from the domain of socioemotional intelligence. These include postformal reasoning, a wide range of knowledge about fundamental matters of life, and a reflective stance in which knowledge about pragmatic issues is considered in conjunction with knowledge about interpersonal issues.

Baltes and his colleagues have recently completed two studies in which they investigated the role of personality in the prediction of wisdom-related performance. In one study they determined that, in combination, personal characteristics and experiential contexts (in terms of professional specialization) made a strong contribution to the prediction of wisdom-related performance (Staudinger, Maciel, Smith, & Baltes, in press). In a second study, they found support for the idea that certain facets of personal and intellectual functioning need to form a combination in order for wisdom-related knowledge to start to emerge (Staudinger, Lopez, & Baltes, in press). They concluded that wisdom-related performance, as they have construed it, is not just another measure of cognitive ability or a “measure which exclusively focuses on the cognitive side of wisdom.” Thus, they suggest that the predictor variables could be viewed as antecedent conditions of wisdom-related performance.
1.3 Cognitive Development

The majority of research on cognitive development has focused on the period from childhood through to middle adolescence with little attention being paid to the period from middle adolescence into early adulthood. However, a number of researchers have questioned whether the hypothetico-deductive reasoning of formal operations could adequately account for the real-life reasoning of adults. Therefore, some cognitive psychologists have posited a fifth stage of development following Piaget's fourth stage of formal operations. For example, Arlin (1975, 1984, 1986, 1990) has described a period of postformal thought as relativistic, meaning that individuals become aware of the relativity of knowledge. Riegel (1973, 1975), Kramer (1983, 1989, 1990), and Basseches (1986) have called this fifth stage the stage of dialectical operations. Basseches has described dialectical thinking as being important because it allows individuals to accept and to integrate contradictions in their own thinking or between their own thinking and that of another. Blanchard-Fields (1986, 1989) and Labouvie-Vief (1982) have studied postformal reasoning in the interpersonal domain. They have found that the ability to adopt a relativistic point of view with respect to themselves and others (i.e., to recognize that other perspectives can also be legitimate) was an important aspect of cognitive development in the period of late adolescence and early adulthood.

Both Sinnott (1993) and Meacham (1983) have linked postformal thought to wisdom, with Sinnott suggesting that postformal thought underlies the development of wisdom and Meacham pointed out that many wisdom characteristics are similar to those suggested for a fifth stage of cognitive development. Meacham has contended that the ability to recognize and to tolerate the uncertainty of knowledge is a requirement for
wisdom and that "in being wise, it is not merely what one knows that is important, but also what one can admit to not knowing" (1983, p. 128). Thus, he has defined wisdom as "a balance between increases in the amount that one knows and simultaneous increases in the recognition that there is much that one does not know" (p. 132).

A number of developmental theories have implications for the study of wisdom (e.g., Kitchener & King, 1981; Kohlberg, 1973; Perry, 1970). Perry (1970) developed a model of intellectual and ethical development based on interviews with male undergraduates at Harvard. He was able to demonstrate a progression in ways of thinking and in forms of thought during the college years. The first five positions of his nine-position model focused on the development of ways of thinking. He traced development from an all-or-none absolutist construal of knowledge through to contextual relativism, crediting the "recognition of the conceptual relativism of all knowledge" as the stimulus for cognitive change (Perry, 1970, p. 79). Perry’s research on cognitive development during late adolescence and early adulthood demonstrated the possibility of assessing, in developmental terms, abstract aspects of knowing. His pioneering work has been an impetus to much of the research in this field. The limitation of Perry’s scheme, as a model of cognitive development, is the shift in focus from intellectual to identity development in the last four positions of his nine position model.

Clinchy and Zimmerman (1982) applied Perry’s model of cognitive development to the study of a comparable female sample by using a semi-structured interview instead of the unstructured interview format used by Perry. They found evidence of significant development in contextual reasoning, particularly within the interpersonal domain. Belenky, Clinchy, Goldberger, and Tarule (1986) extended this research to the study of
real-life decision-making and moral dilemmas in a population that included diverse ethnic and social groups. Gilligan and Murphy (1979; Murphy & Gilligan, 1980), applying Perry’s model of intellectual and ethical development to the moral domain, found evidence of development, in the post-adolescent period, of a contextually-relative perception of one’s own real-life moral dilemma.

Kitchener and King used Perry’s model as an initial framework for their Reflective Judgment model, a seven-stage model of post-adolescent reasoning styles. They and their colleagues conducted a series of studies involving reasoning about the basis for knowing in ill-structured problem situations in samples including high school, college, and graduate students (King, Kitchener, Davison, Parker, & Wood, 1983; Kitchener & King, 1981; Kitchener, King, Wood, & Davison, 1989; Kitchener, Lynch, Fischer, & Wood, 1993). Kitchener and King’s model was based on the idea that higher stages of Reflective Judgment develop out of lower stages in a sequential manner and that beliefs about knowledge and reality as well as assumptions used to justify these beliefs change with development.

Kitchener and Brenner (1990) have suggested that some aspects of wisdom may be explained by the development of Reflective Judgment, thus implying that reaching late adolescence, at a minimum, is a requirement for the development of wisdom. They identified “an awareness of the unknown and its implications for real-world problem-solving and judgment” as a central characteristic of wisdom (p. 212). The Reflective Judgment model describes the developing relationship between epistemic cognition (i.e., an individual’s knowledge about the limits of knowing, the certainty of knowing, and the criteria for knowing) and good judgment in the face of uncertainty (Kitchener, 1983).
Specifically, this model depicts the movement of individuals through several levels of understanding about the nature of uncertainty. In the early stages of the Reflective Judgment model epistemic assumptions do not acknowledge the existence of real uncertainty, rather, it is assumed that ultimately all uncertainty will be reduced to certainty. Development in understanding of the causes of uncertainty can be seen in the increased maturity of thinking in the higher stages, particularly in the understanding of how judgments can be made in the face of uncertainty. Characteristics of an individual at stage seven of the Reflective Judgment model are similar to those of an individual classified as wise in the Baltes and Smith (1990) model of wisdom. Kitchener and Brenner (1990) do not claim that reflective judgment can account for all aspects of wisdom since their model doesn’t focus on personally-relevant life problems which are pertinent to the development of wisdom. However, their model of cognitive development describes the changing ability to make reasoned judgments in the face of uncertainty, thus illuminating one important aspect of wisdom-related knowledge. Therefore, an understanding of the development of reflective judgment is relevant to an understanding of the development of wisdom. Kitchener and Brenner (1990) have suggested that wisdom may be a rare combination of attributes with cognitive development being only one aspect. However, the Reflective Judgment model may illuminate the specific aspects of wisdom characterized by the ability to make reasoned judgments in the face of uncertainty.

An additional perspective comes from Kohlberg’s (1973; Kohlberg & Gilligan, 1971) theory of cognitive development which describes universal stages in the development of moral judgment. Kohlberg’s theory (1973), in contrast to Piaget’s theory
of cognitive development, indicates that there are moral stages that first appear in young adulthood. In particular, moral relativism is described as a transitional stage between conventional and principled morality. This stage of skeptical relativism is associated with the period of identity crisis in adolescence when values, meaning, and truth may be subjected to question. Kohlberg suggests that the development of principled moral thought in adulthood requires personal experience of decision-making with matters involving moral choices and responsibility. Kohlberg’s model of reasoning in the moral domain has not only contributed to research on adult cognitive development, but has also influenced thinking about the development of wisdom. In fact, Simonton (1990) has suggested that Kohlberg’s theory can be interpreted as “specifying the acquisition of ethical wisdom in a sequence of stages” (p. 324).

Baltes and his colleagues have developed a model of adult cognitive development based on the growth of wisdom-related knowledge. Their study of wisdom has evolved from research on successful aging in which wisdom has been seen as a form of growth in the cognitive domain across the period of adulthood (Baltes et al., 1984). They characterized wisdom as an expert knowledge system in which the term, wisdom, was reserved for high levels of knowledge while the term, wisdom-related knowledge, was used to refer to lower levels of performance (Staudinger, Smith & Baltes, 1994). Baltes and Smith (1990) have described wisdom as encompassing the domain of knowledge about the conduct of life and the human condition. This includes knowledge about things such as: the variations and conditions of life-span development, human nature and conduct, life tasks and goals, social and intergenerational relationships, life’s uncertainties, one’s self, and one’s goals. They have established a set of five wisdom-
defining criteria which describe the prototypical features of wisdom-related knowledge and performance. These include two criteria which are essential to a body of expert knowledge (i.e., rich factual and procedural knowledge) as well as three meta-level criteria: contextualism, awareness of relativism, and recognition of uncertainty.

The construct, wisdom-related knowledge, employed in this study is based upon the conceptual framework developed by Baltes and his colleagues for the measurement of intellectual growth in adulthood. Some elements of wisdom-related knowledge can be identified in the conceptual frameworks of Perry, Kohlberg, and Kitchener and King. For example, Perry’s model describes the growth of understanding with respect to the contextual and relativistic nature of knowledge. Kitchener and King’s model is relevant because it describes the growth of relativistic and reflective thinking in the developing capacity to make reasoned judgments in the face of uncertainty. Kohlberg’s model describes relativistic reasoning as a transitional stage in the development of reasoning in the moral domain. The nature of the knowledge which is being assessed varies across these models of cognitive development. While the research paradigms of Baltes and of Kitchener and King both involve judgments being made about ill-defined problems, only Baltes’ studies focus on reasoning in the interpersonal domain of knowledge. The advantage of using Baltes’ model for this investigation is that it incorporates a set of five criteria from earlier models of cognitive development in the postformal period. In addition, his model describes a theory of intellectual development which continues across the lifespan. Further, the interview protocols yield responses which afford scoring on these multiple criteria of wisdom-related knowledge.
A number of psychologists have emphasized the importance of the link between cognitive development and identity development in adolescence. For example, Graber and Brooks-Gunn (1996) have suggested that the study of cognitive development in late adolescence and early adulthood is important because this is a critical period of life transitions and identity formation. Kroger (1996) has discussed identity formation in adolescence from a variety of perspectives including Kohlberg's (1969) cognitive-developmental view and Erikson's (1968) psychosocial approach. Marcia (1980) has also emphasized the "cognitive underpinnings" of the search for identity in adolescence (p. 181). After examining the literature on gender and self-definition, Côté (1996) has suggested that more females than males appear to explore issues related to real-life concerns in a "world of changing gender roles" (p. 152). Similarly, Waterman (1993) has reviewed a number of studies which looked at gender and identity development. He concluded that: "The task of identity formation is more complex for females than for males in that they endeavor to work out for themselves their goals, values, and beliefs in more domains than do males. Not only do females experience the desire to establish their sense of identity in vocational choice, religious beliefs, political ideology, and sex-role attitudes in the same manner as males, but they engage in more active reflection and decision-making regarding identity in a relational context than do their male counterparts" (p. 62). These conclusions support Gilligan's (1982) suggestion that females define themselves by what they are and by their relationships with others while males define themselves solely in terms of what they do. Patterson, Sochting, and Marcia (1992) also concluded that gender differences in identity development are due to women's greater interpersonal connectedness. This body of research on identity
development is relevant to a study of wisdom because self-knowledge has been identified as a cognitive benchmark of wisdom (Kekes, 1983).

In a recent study, Menna and Keating (1997) found age and gender differences in adolescent and young adult thinking about "real-world" problems in the interpersonal domain. Results of their study indicated that complexity of cognitive representations of one's own "real-world" problems (i.e., stressful life events) increased over this developmental period. However, very few high scores were attained suggesting continued cognitive growth in the interpersonal domain beyond early adulthood. In addition, consistent with other research in the social domain, they detected a gender difference with females achieving higher levels of cognitive reasoning. This advantage was attributed to the different socialization experiences of males and females which result in a greater tendency for females to think about the self in relation to others (Menna & Keating, 1997).

The investigation of wisdom as a function of age is a main objective of this study in light of the importance of cognitive development over the period from middle adolescence into early adulthood.
1.4 Socialization Influences on Wisdom-Related Knowledge

One aim of this study was to investigate demographic patterns of wisdom-related knowledge and understanding in light of controversy regarding socialization factors and cognitive development. According to Keating (1990), allegations of inferiority in cognitive competence have been directed at some of society’s less powerful groups such as females, racial minorities, and working class individuals. However, Cole and Means (1981) have argued that there is no empirical basis to support these inferred gender, race, and social class differences. Their argument is based on the claim that experimental treatments may not be equivalent because task materials used to measure cognitive abilities may not be equally familiar to all groups in society. Keating (1990) has suggested that higher test scores achieved by white, upper-class adolescents and young adults on standard measures of educational achievement may be explained by the effects of socialization on cognitive development. Thus, this study is important because it integrates gender, race, and SES in a contextual developmental design.

1.5 Previous Research on Wisdom-Related Knowledge

Recently, psychologists interested in cognitive development have chosen to test explicit theories of wisdom because, in their view, wisdom is the prototype of an advanced form of intellectual functioning in adulthood. In particular, Dittmann-Kohli and Baltes (1990) have reconceptualized adult intellectual development as “a process of further change not so much in decontextualized cognitive skills but in real-life problem-solving and synthesized pragmatic knowledge systems” (p. 54). Baltes and his colleagues’ conceptualization of wisdom is derived from the literature on adult cognitive development (e.g. Arlin, 1984; Basseches, 1986; Blanchard-Fields, 1986; Commons,
Richards, & Armon, 1984; Kramer, 1983; Kuhn, Pennington, & Leadbeater, 1983; Labouvie-Vief, 1982; Meacham, 1983; Riegel, 1975; Sinnott, 1984).

Baltes’ group of wisdom researchers have conducted a series of studies to test their theoretical model of wisdom. They chose the domain of knowledge about life, specifically the fundamental pragmatics of life, as the domain in which to investigate wisdom (Smith & Baltes, 1990). Their methodological approach involves the evaluation of discourse about hypothetical life dilemmas for knowledge about human development and the human condition. In their research to date, older subjects have not shown overall higher levels of wisdom-related knowledge (Smith & Baltes, 1990; Staudinger, 1989). This finding is inconsistent with the traditional view that wisdom is associated with old age. However, the failure to find a relationship between age and wisdom is also inconsistent with the negative relationship between age and cognitive functioning which is typically found in research on aging and intellectual functioning (Staudinger, 1989). In the series of wisdom studies carried out by Baltes and his fellow researchers the highest levels of wisdom-related knowledge were obtained when age and life circumstances of the participant matched those of the hypothetical individual in the scenario. Thus, younger and older adults tended to perform best when discussing problems specific to their current stage in life. It was suggested that the higher scores obtained in these cases could be explained by knowledge gained through direct or indirect experience with these specific problems (Smith, Staudinger, & Baltes, 1994). However, one age effect that was noted was an increase in acknowledgment of the uncertainty of life with age.

The relationship between age, cohort, professional specialty, and wisdom-related knowledge was investigated in several studies. For example, Staudinger et al. (1992)
compared the responses of human services professionals to responses of other professionals on a life review task. Results confirmed their hypothesis that experience as a human services professional would enhance wisdom-related knowledge. Similarly, Smith et al. (1994) found that clinical psychologists outperformed a control group of other professionals on a task that required them to discuss a life planning dilemma. It was suggested that the effect of long-term, organized practice in the domain of the “fundamental pragmatics of life” could account for expert-level wisdom scores achieved by the clinical psychologists. Another exploration using this experimental paradigm extended previous research by including a group of wisdom nominees (Baltes, Staudinger, Maercker, & Smith, 1995). The participants came from a group of citizens in West Berlin who were active in public life and who were considered by top local journalists to be “life experienced” or “wise.” In this case, both the older psychologists and the wisdom nominees met the expertise criteria of more than ten years of experience in their domain of expertise. This extended period of practice might account for the finding that wisdom scores of both these groups were higher than those of the young and old control groups (Baltes et al., 1995). Overall results of these studies have suggested that cohort group and area of specialization are more important than age in the development of expertise in the domain of the “fundamental pragmatics of life.” These findings have confirmed the importance of the theoretical elements of an expertise model in designing a methodological framework for an empirical analysis of wisdom-related knowledge.

Support for Baltes’ coding scheme as a valid measure of wisdom-related performance in verbal protocols has come from research on global measures of wisdom.
Scores based on the five wisdom-related criteria (i.e., rich factual knowledge, rich procedural knowledge, life-span contextualism, value-relativism, and uncertainty) have been shown to correlate with global ratings of wisdom (Staudinger et al., 1992). Baltes’ method for the measurement of wisdom has been validated by comparing scores resulting from his explicit method with scores resulting from implicit measures based on people’s “naive” theories of wisdom.

1.6 Research Objectives

The purpose of this present study was to extend an understanding of wisdom-related thinking during “real-world” problem-solving to the period of adolescence and early adulthood across a demographically representative sample. In addition, this study was designed to examine reasoning in two areas, that is, in thinking about one’s own “real-world” problems in the personal domain and in thinking about hypothetical life problems of others.

The aims of this research were (1) to examine the wisdom-related knowledge in thinking about one’s own life problems, (2) to examine wisdom-related knowledge in thinking about hypothetical life problems of others, (3) to compare wisdom-related knowledge about one’s own life problems to wisdom-related knowledge about life problems of others, and (4) to examine the content of verbal protocols with higher levels of wisdom-related knowledge in order to understand the meta-level responses more fully with respect to the themes. These investigations were carried out across the demographic variables of age, gender, race, and social class over the period from middle adolescence into early adulthood.
1.7 Data Collection

The interview protocols used in this study were obtained from an earlier investigation of adolescent stress and well-being carried out by Keating, Gouze, and Maton. This archival data set was collected in Baltimore, Maryland from late 1986 until late 1989. Each participant completed a series of paper and pencil tests and a semi-structured interview on life problems of adolescents and young adults. Interviews were conducted at either the high school or the university by graduate students in clinical or developmental psychology who had been trained to conduct the semi-structured interview. Participants were asked if they had any preferences for a male or female interviewer, or an African-American or white interviewer and all such preferences were honored. All interviews were audio-taped. Subjects were informed that, “We are interested in learning about the kinds of difficulties that _____ year olds (fill in with subject’s age) face today, and how they deal with these difficulties. We are asking for your help because as a _____ year old you know a lot about this question and we hope that what we learn in the project will increase our ability to help others your age when they have problems coping with stress.”

1.8 Prior Research on this Data Base

Several researchers have already examined parts of this data base from different theoretical perspectives. For example, Boer (1992) investigated identity issues using content analysis to examine the following two sections of the Life Problems Interview: (1) open-ended questions about identity and (2) questions about participants’ views on specific identity issues. Similarly, Menna (1994) investigated cognitive complexity and emotional awareness using content analysis to examine several sections of the Life
Problems Interview. This second study also included an exploration of the role that these cognitive and emotional factors play in coping with stressful life events.

1.9 Summary of this Study

My contribution to the body of knowledge arising from this large data base involved an investigation of wisdom-related knowledge in thinking about "real-world" problems in the interpersonal domain. I used content analysis to examine two sections of the Life Problems Interview. These interview sections included participants' discussion of (1) their own most stressful life event and (2) hypothetical stressful life events of others. My first contribution to the methodology used in this study was the development of a coding system for the exploration of wisdom-related knowledge in the interview protocols. In contrast to coding systems used in previous research on wisdom, this coding system can be applied not only to verbal protocols with a common theme (e.g., hypothetical scenarios), but also to verbal protocols with a variety of themes (e.g., stressful life events). My second methodological contribution lies in the establishment of the reliability of this new rating system. The third innovative aspect of this study was the incorporation of both quantitative and qualitative components in the analysis of verbal protocols for evidence of wisdom-related knowledge.
CHAPTER 2

METHOD

2.1 Participants

Participants in this study were 128 adolescents and young adults ranging in age from 15 to 27 years. Subjects were randomly selected from an original sample of 383 participants. This original sample was stratified on four variables to produce a 4 (age) x 2 (gender) x 2 (race) x 2 (social class) design. A random numbers table was used to select four participants from the original sample for each of the 32 cells created by this design. This sample of 128 individuals was divided by age into four groups: 15-16, 17-18, 20-22, and 25-27 years. The mean age in years for each of the groups was as follows: (1) 15.3 (SD = .36), (2) 17.9 (SD = .53), (3) 21.1 (SD = 2.14), and (4) 25.9 (SD = 1.27). Each age cohort had equal numbers of male and female participants, African-American and white participants, and middle class and working class participants.

The four age groupings were chosen as being relevant for a study of development in ways of thinking about life problems over the transitional period from middle adolescence into early adulthood. For example, those in the 15-16 year old age group would be representative of a relatively stable period of development in middle adolescence. The thinking of this age group may be characterized as somewhat dualistic in nature. The 17-18 year old age group would represent a more transitional stage of development as these older adolescents are required to make important educational or occupational decisions. Their thinking, both about themselves and their lives, tends to become more relativistic in this important period of identity development. The 20-22 year old age group would be representative of young adults going through another transitional
period which is more sharply defined for those nearing the end of college. This is a
second period in which relativistic thinking is important for identity development, for
both students and non-students, as future choices are being considered with respect to
such things as education, careers, and long-term relationships. The 25-27 year old age
group represents a relatively stable period of early adulthood in which many personal
decisions have already been made. Some members of this age cohort may have begun to
understand and acknowledge the uncertainty of knowing as a result of their own life
experiences. Thus, a study of these four age groupings is important because of the key
transitions taking place in the lives of individuals in the late adolescent and early adult
period of development. With the growing independence which is characteristic of this
phase of life, individuals face an increasing need to change their ways of thinking as they
cope with stressful life problems on their own.

Participants were volunteers recruited from a city high school, a local university,
and community settings (e.g., YMCA, social service agencies) in the Baltimore
metropolitan area. The high school used in this study was chosen because of its balanced
distribution of students based on race, SES, and educational stream. One educational
track was designed for students planning to continue on to higher education while the
other track was aimed at students planning to enter the world of work after high school.
High school students were recruited by research assistants who visited homeroom classes
to explain the project and hand out information packages. University students were
solicited through advertisements posted on campus and in the student newspaper as well
as through announcements in classes. Community participants were recruited through
advertisements in local newspapers aimed at the community at large, as well as
advertisements posted in community centers and on telephone poles aimed at target communities.

The original study was designed to include individuals representing a full range of social class and educational levels. In addition, sample selection ensured that the four age groups were demographically comparable. Volunteers were subjected to a pre-selection assessment to ensure a balanced representation of middle class and working class participants across age. A number of strategies were used to ensure that a range of educational potentials and/or levels were represented for each age grouping. For example, the youngest cohort (15-16 years) came from a high school in which the student population was fairly evenly divided into programs for those planning to continue their education and those planning to enter the work force after high school. The 17-18 year old cohort included a school sample of students from the target high school as well as a non-school sample of volunteers recruited from the community. The two oldest cohorts included participants equally distributed between a university sample and a community sample in order to obtain a range of educational achievements.

Informed consent was obtained for all participants and parental consent was obtained for those under 18 years of age. Participants were paid $10.00 plus $2.00 for transportation.

2.2 Materials

2.2.1 Demographic Variables

Demographic information on the variables of age, gender, race, and socioeconomic status (SES) was gathered upon initial contact with participants. Nock and Rossi's (1979) index was used to calculate SES based on a weighted combination of
parental educational level and occupational status. SES was dichotomized so that equal numbers of participants were assigned to two groups: middle/managerial class and working class. Gender and race (African-American; white) were also coded as dichotomous variables.

2.2.2 Life Problems Interview

Participants completed a semi-structured interview on life problems of adolescents and young adults. The interview was designed to elicit participants’ understanding of stress and coping both in their own lives and in the lives of others. The interview protocol covered a wide range of topics such as worries and hassles, educational and career goals, and identity issues. The two sections of the life problems interview used for this study asked participants questions about: (1) their own stressful life events and (2) life events faced by others of their age and gender. A description of these two parts of the interview follows (see Appendix A for the complete interview).

Stressful life events

Participants were asked questions about major stressful events that they had experienced in their own lives over the past six months to one year. Participants were initially told: “From time to time, major events occur which change or affect people’s lives in important ways. Take a moment to think about the important things which have happened in your life during the past six months to a year and then tell me about those which have had the biggest impact on you.” If necessary, the following probe was used to elicit more information from participants: “Are there any other events which seemed especially important or made a difference in your life during the past year?” Later on in the interview participants were asked to go back to the important events that they had
listed earlier (at least three had been obtained), to rank order these events, and to then
discuss the most stressful event. Spontaneous descriptions were collected and when
additional information was needed, probes were used. For example, if unclear, the
interviewer would ask the question: "How was it difficult for you?" If when the event had
happened hadn't been mentioned, the interviewer would ask: "When did this happen?" If
coping strategies hadn't been mentioned, the interviewer would ask: "Did you do (Are
you doing) anything special to deal with this?" If how they felt about the event had not
been mentioned, the interviewer would ask: "Could you tell me more about how you felt
at the time?" and then: "How did you deal with these feelings?" If the effect of the event
had not been mentioned, participants were asked: "Has this continued to influence you or
make a difference in your life? (If yes, How?)." If feelings had not been mentioned,
interviewers asked: "Could you tell me more about how you’ve been feeling about this
since the time it happened?" Finally, interviewers asked participants: "If you could live
this time over again, would you deal with it differently?" If the response was yes, then
they were asked: "How would you deal with it differently?"

Scenarios

In the second section of the interview, participants were presented with
hypothetical scenarios and asked to discuss them. These scenarios included problems
related to: (1) making friends, (2) alcohol abuse, (3) death, (4) money problems, (5) self
issues, and (6) unemployment. For advice on issues related to a shortage of money,
interviewers typically presented the scenario about general money problems to
participants who were still students and the scenario about unemployment to participants
who were no longer in school. However, some interviewers presented both scenarios to
participants. The person described in the scenario was the same age and gender as the participant. For example, scenarios read to an 18 year old female participant would be as follows:

(1) Lynne is 18 years old. She feels lonely and is having a lot of trouble making friends. She is wondering if something is wrong with her.

(2) Pat is 18 years old. She is drinking two glasses of whiskey every morning before she goes to work. Sometimes she skips work and her performance at work is going downhill.

(3) Renee is 18 years old. Her mother just died of cancer. She has been very depressed and has lost interest in the things she used to enjoy. She doesn't know what to do to get herself going again.

(4) Terry is 18 years old. She has serious money problems and never seems to be able to make ends meet.

(5) Robin is 18 years old. She spends a lot of time wondering who she is and what she is going to do with her life. Sometimes she spends so much time worrying about this that she has trouble getting anything else done.

(6) Jane is 18 years old. She has been unemployed for about a year now. Lately she has been becoming more and more depressed and hardly ever looks for work anymore. She doesn't seem to know what to do with her days.

After the description of each problem, participants were asked four questions about the situation (including several probes, if needed) to elicit their knowledge and understanding of such problems. For example, questions about a female having problems making friends would be as follows:
"Sometimes when people are having problems it may be their responsibility or another person’s responsibility or just the situation. Whose responsibility do you think it is that Lynne has this problem?"

"Do you think that Lynne needs help?"

(If yes) “Who should Lynne go to for help?” and (If no) “If Lynne thought she needed help, who should she go to for help?” If a probe were needed, the interviewer would ask either: “How might you go about doing that?” or “How might she go about doing that?”

"If Lynne were your friend, how would you provide support and help?” If necessary, the interviewer would ask: “How might you go about doing that?” or “How might she go about doing that?”

2.3 Procedure

2.3.1 Rating System Development

I developed a coding system to rate responses from the Life Problems Interview for level of wisdom-related knowledge. This wisdom coding system was adapted from the method used by Baltes and his colleagues to measure wisdom-related knowledge in interview protocols about difficult life problems (Staudinger, 1989; Staudinger, Smith, & Baltes, 1994). As discussed in the introduction, their theoretical approach to the measurement of wisdom has been found to give a reliable approximation of both the quantity and quality of wisdom-related knowledge in verbal protocols (Baltes & Staudinger, 1993; Smith & Baltes, 1990; Staudinger, Smith, & Baltes, 1992).

The method used by Baltes and his colleagues involved asking participants to discuss and give advice to hypothetical individuals facing a life-planning, life-
management, or life-review task. Participants' responses were evaluated for level of wisdom-related knowledge using both trained and untrained raters. Trained raters used a seven-point rating scale to score verbal protocols using anchor points of one, four, and seven. Raters were given detailed guidelines for the characteristics associated with poor (score of 1), average (score of 4), and ideal (score of 7) responses. Two raters were trained for each of the five wisdom criteria categories and each of these five sets of trained raters independently evaluated protocols for one of the five criteria for wisdom. Raters gave each response a score ranging from one to seven depending on the degree to which it matched an ideal response. In some studies (e.g., Staudinger, 1989), two untrained raters were also asked to evaluate the protocols against their own definition of wisdom using a five-point scale. This latter rating task was based on the assumption that consensus concerning wisdom can be reached within a given society (Baltes & Smith, 1990).

The coding system that they used to tap the concept of wisdom included the following five criteria: (1) rich factual knowledge (FK), (2) rich procedural knowledge (PK), (3) life-span contextualism (C), (4) value-relativism (R), and (5) uncertainty of knowing (U). They considered the first two to be basic criteria for wisdom-related knowledge and the last three to be meta-level criteria for wisdom-related knowledge. The first basic criterion, rich factual knowledge, refers to general and specific knowledge about the conditions of life and its variations (Smith & Baltes, 1990). This includes, for example, general knowledge about the nature of typical events and decisions (Baltes & Smith, 1990). This first criterion also includes knowledge about specific life events, the age-related occurrence of such events, and their expected or unexpected course.
The second basic criterion, rich procedural knowledge, refers to general and specific knowledge about strategies of judgment and advice concerning life matters (Smith & Baltes, 1990). For example, procedural knowledge includes knowledge about things such as planning for alternative options when making decisions, evaluating and using knowledge gained from past experience, and prioritizing goals. It also includes knowledge about strategies for giving advice in difficult life situations including, when advice is called for, and who else might be helpful (Staudinger et al., 1994).

The first meta-level criterion, contextualistic thinking, includes knowledge about the contexts of life and their temporal (developmental) relationships (Smith & Baltes, 1990). In other words, persons or events are not considered in isolation. In addition, important past, present, and future background contexts to a problem are considered. Three life-span contexts are specified: age-related contexts, cultural contexts, and biographical contexts (Staudinger et al., 1994). Age-related contexts imply that certain stages or specific ages are associated with particular tasks and expectations. Thus, for example, the event might be viewed as a universal situation at that stage of life. Cultural contexts refer to the fact that historical and cultural events can change conditions and influence the experience of different cohorts. Biographical contexts include such things as nonnormative events or idiosyncratic life decisions which can produce variation in the life course of individuals.

The second meta-level criterion, relativistic thinking, refers to knowledge about differences in values, goals, and priorities (Smith & Baltes, 1990). Various aspects of relativistic thinking include: (1) the ability to respect and consider the values of others,
(2) the ability to offer advice in an unbiased manner, (3) the insight to recognize that there are many possible solutions to a life problem depending upon one's values and objectives, (4) the recognition that there may be a set of universal values which are basic to all, thus making total relativism unacceptable (Staudinger et al., 1994). This implies that, in spite of the multitude of values that may be held depending on individual and socio-cultural conditions, there may still be a restricted number of basic human principles such that total relativism is impossible.

The third meta-level criterion, uncertainty of knowing, refers to knowledge about the relative indeterminacy and unpredictability of life and ways to manage (Smith & Baltes, 1990). This includes the realization that one's knowledge concerning life is limited and that not all aspects of the past or present can be known. One must be able to make plans and decisions in spite of this uncertainty and also be able to manage the unexpected (Staudinger et al., 1994). This category includes consideration of the limits of knowing, which includes not only uncertainty about one's own personal knowledge but also uncertainty about all knowledge.

2.3.2 Coding System Development

Two phases were involved in the development of the wisdom coding system used to analyze the interview protocols in this study. In an initial pilot phase I asked members of a cognitive development research group consisting of graduate students, recent doctoral graduates, and a senior university professor, to try scoring a set of five hypothetical scenario protocols from this data base. The aim of this first phase was to see if wisdom-related knowledge could be quantified in these verbal protocols. Members of the research group were given a description of Baltes' theoretical criteria for wisdom and
also, for each scenario category, the characteristics of protocols with scores of one, three, and five, to be used as anchor points to guide their scoring. Feedback from group members suggested that the wisdom criteria would be useful for identifying wisdom-related knowledge in the hypothetical scenario protocols. The method of rating, in which verbal protocols were compared to a standard set of protocols, was found to be suitable for the hypothetical scenarios because the common set of problems allowed responses to be compared across participants. However, this global method of rating, using anchor points, would not be suitable for the evaluation of verbal data from the stressful life event section of the Life Events Interview. The individual nature of participants’ own stressful life problems would make it difficult to describe the characteristics of poor, average, and ideal protocols (i.e., anchor points in scoring). Therefore, I undertook a second phase in the development of the wisdom coding system for this study.

In this second phase I used content analysis in a microanalytic approach to the measurement of wisdom-related knowledge in the verbal data. Content analysis is widely used as a method of measuring the content of verbal protocols (Ericsson & Simon, 1993). Using this approach, individual elements of the protocol text were coded according to the criteria for wisdom. This method differs from the macroanalytic approach used by Baltes and his colleagues to rate the quality of whole protocols at a global level by comparing them to a set of standard protocols. A set of 28 protocols was used in the process of adapting Baltes’ wisdom criteria for use in scoring the verbal data in this study.

2.3.3 Scoring

I used a five-point rating scale to evaluate the interview protocols because of theoretical considerations with respect to the measurement of wisdom-related knowledge.
One point was given for each of the five wisdom criteria that was evident in the protocol. According to Lissitz and Green (1975), a five-point scale is optimal for balancing reliability and differentiation. I defined minimum (i.e., necessary) levels of evidence for wisdom-related knowledge that were required for scores of one through five to be assigned to protocols. For example, a score of one would be assigned to a protocol in which there was little evidence of factual knowledge about the specific life problem. A score of two would be assigned when there was some evidence of factual and/or procedural knowledge about such problems. Similarly, scores of three, four, or five would be assigned to protocols with evidence of, respectively, one, two, or three of the metacriteria categories (i.e., contextualism, relativism, or uncertainty) in addition to the basic criteria of factual and procedural knowledge. It is important to note that a metacriterion was acknowledged as being present in a protocol as long as there was evidence for any one category within that metacriterion. See Appendix B for examples of hypothetical scenario protocols and stressful life event protocols with scores of one through five.

2.3.4 Application of Coding System to Protocols

The relevant sections of the interviews were transcribed from the audio tapes. Each of the hypothetical scenario problems was scored as a separate unit so that participants had a total of five wisdom scores for scenarios. Participants who had been asked by the interviewer to discuss both the scenario about money problems and the scenario about unemployment had their scores for these two scenarios averaged to produce one score for money issues. Participants also had one wisdom score for their own stressful life event.
I used a random sample of 28 transcribed interviews as a source of data in the construction of the coding system. Preliminary analyses of the wisdom scores from this set of data indicated that there were significant age and gender differences for several scenario categories. Therefore, I concluded that this coding system was able to detect differences in the level of wisdom-related knowledge. Next, examples of wisdom-related knowledge detected in the 28 protocols were used to further elaborate the wisdom coding system. See Appendix C for examples of the criteria developed for each of the hypothetical scenario categories.

The coding system developed to rate the hypothetical scenario protocols was also used to rate the stressful life event protocols. First, the coding system was applied to the 28 stressful life event protocols. Examples of wisdom-related knowledge in these protocols were used to further elaborate the coding system. This elaborated coding system was then applied to the stressful life event protocols.

An additional analysis was carried out on stressful life event responses with scores of three or more in order to examine more fully the themes present in participants’ discussions of their own “real-world” problems. Thus, a fine-grained coding system with a greater number of metacriteria categories (i.e., themes) was developed and applied to stressful life event interviews with scores of three, four, or five. These metacriteria themes were derived from Staudinger, Smith, and Baltes’ (1994) wisdom coding system and from an inspection of the 28 stressful life event protocols. Eleven themes were identified for the metacriterion of contextualism, six for relativism, and three for uncertainty.
Themes for the metacriterion of contextualism are described as follows: (C1) Universal situations (e.g., everyone goes through it), (C2) Universal reactions (e.g., it’s perfectly normal to feel that way), (C3) Limits to the normal range of behavior (e.g., depends on how long it’s been going on), (C4) People/Aspects of individuals (e.g., self-confidence), (C5) Reflections on aspects of self/Self-knowledge (e.g., needs to look at oneself), (C6) Others/Involvement of others and understanding of human nature (e.g., someone she can relate to), (C7) Situation and self/Expand on the situation and its implications for self (e.g., hard getting used to being alone), (C8) Situation and others/Consider event in relation to others (e.g., the initial reaction was not to grieve for myself, but for my grandmother who would be alone), (C9) Consider event in the context of life as a whole/Put into perspective (e.g., it’s going to affect my life, I’m losing a very significant person), (C10) Expand on biographical context (e.g., way one was brought up), (C11) Temporal considerations/Past, present, future (e.g., able to leave and go on to better situations).

Themes for the metacriterion of relativism are described as follows: (R1) Perspective-taking/Viewing from another perspective (e.g., recognize that there are other possible ways of looking at it), (R2) Individual differences in personality, priorities, values, goals (e.g., got to find answers to one’s own questions), (R3) Put things into perspective (e.g., ...is not the worst problem in the world), (R4) Cost-benefits analysis (e.g., do I really want to put up with this for the next couple of years), (R5) Future concerns (e.g., I don’t want to work minimum wage jobs all my life), (R6) Self-knowledge about values and goals (e.g., I think it will have a lasting effect on me as a person - it’s changed the way I thought about myself).
Themes for the metacriterion of uncertainty are described as follows: (U1) Limits of personal knowledge (e.g., I don't know what it's like to have that problem), (U2) Uncertainty of knowing about life and the future (e.g., I don't think anyone can really say "I know who I am"), (U3) Limits of knowing (e.g., I don't know if I could be a support system for her). See Appendix D for examples of metacriteria themes in the stressful life event protocols.

2.3.5 Reliability

Two measures were used to establish the reliability of the coding system used to measure the construct of wisdom in this study: (1) inter-rater reliability and (2) measurement reliability. Inter-rater reliability is a measure of the extent to which two or more raters provide similar ratings on identical dimensions of an individual's behavior (Saal, Downey, & Lahey, 1980). Inter-rater reliability is accepted as a measure of convergent validity when other more objective indices of behavior are not available. In order to determine the reliability of the coding system which I had developed for this study, I trained a second rater on the application of the wisdom coding system to the transcribed protocols. This rater was a member of the research group who was familiar with the data base. Each rater scored 20% of the sets of hypothetical scenario protocols and 20% of the stressful life event protocols independently. Inter-rater reliability was measured in terms of percent agreement between raters. Exact agreement of wisdom scores for the hypothetical scenario protocols was 71% and after eliminating rater disagreements of one scale point, agreement rose to 97%. Similarly, for the stressful life event protocols, exact agreement was 75% and after eliminating disagreements of one scale point, agreement rose to 100%. Raters were generally blind to the demographic
status of participants except for information which was evident in the interviews themselves and the age group numbering of the tapes.

Measurement reliability, which is also referred to as scale reliability, is a measure of the internal consistency of a scale. Cronbach’s coefficient alpha, one measure of a scale’s internal consistency, determines the extent to which a set of items measure the same underlying construct (Crano & Brewer, 1986). Scale reliability was assessed for wisdom scores on the set of scenarios since these were used to derive an overall Scenario Average score for wisdom. In this study, Cronbach’s alpha for the set of five scenarios was .71. When scores on the stressful life event interviews were included as another item measuring the underlying construct of wisdom, Cronbach’s alpha dropped to .63. Given the small number of “items” (i.e., the scenarios) and the exploratory nature of the investigation, these are minimally acceptable levels of measurement and reliability.

### 2.3.6 General Rating Design

Raters judged the hypothetical scenario protocols one dilemma at a time beginning with the first hypothetical scenario (i.e., having trouble making friends). Thus, all of the hypothetical scenarios about having trouble making friends were rated before going on to the second set of scenarios about alcohol abuse. This strategy was used to control for errors due to rater biases (e.g., halo effect) (Bernardin & Walter, 1977; Saal, Downey, & Lahey, 1980).
### Table 1

**Dependent Variables used in the Study**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>DESCRIPTION</th>
<th>RANGE OF VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends</td>
<td>score - problem with making friends</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Alcohol</td>
<td>score - problem with alcohol abuse</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Death</td>
<td>score - coping with death of mother</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Money</td>
<td>score - money problems or unemployed</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Self</td>
<td>score - problem understanding self</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Scenario Average</td>
<td>average score for 5 scenarios</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Stressful Life Event</td>
<td>score - one’s own life problem</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Contextualism</td>
<td>contextualistic thinking</td>
<td>present/absent</td>
</tr>
<tr>
<td>Relativism</td>
<td>relativistic thinking</td>
<td>present/absent</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>acknowledge uncertainty of knowing</td>
<td>present/absent</td>
</tr>
<tr>
<td>C1-C11</td>
<td>contextualism themes</td>
<td>present/absent</td>
</tr>
<tr>
<td>R1-R6</td>
<td>relativism themes</td>
<td>present/absent</td>
</tr>
<tr>
<td>U1-U3</td>
<td>uncertainty themes</td>
<td>present/absent</td>
</tr>
</tbody>
</table>
CHAPTER 3
RESULTS

Results of this study of wisdom-related knowledge are divided into four main sections to address objectives posed by this study. Analyses in each of these sections were carried out across age (4), gender (2), race (2), and SES (2). In the first section I examined the pattern of wisdom scores based on participants’ discussions of hypothetical life problems of others. In the second section I examined the pattern of wisdom scores based on participants’ discussions of their own stressful life problems. In the third section I compared participants’ wisdom scores for hypothetical life problems of others to their wisdom scores for their own stressful life problems. In the final section I explored the pattern of metacriteria themes in participants’ discussions of their own stressful life problems.

3.1 Hypothetical Scenarios

Analysis of variance tests were conducted on wisdom scores for the hypothetical scenarios. Participants’ scores were averaged across the five scenario categories to derive a Scenario Average score for wisdom. A 4-factor ANOVA was computed to examine the pattern of Scenario Average scores across age, gender, race, and SES. Significance levels were set at $p<.01$ for interaction effects due to the large number of possible interactions among the four demographic variables. In looking at Figure 1 you will see that mean wisdom scores for Scenario Average increase with age and that female scores are higher than male scores for each age group. Results of statistical analyses indicated that there were significant main effects for both age, $F(3, 96) = 11.31$, $p<.001$, and gender, $F(1, 96)$
The main effect for age can be seen in the increasing mean scores for wisdom-related knowledge across age groups (see Table 2). These mean scores are somewhat compressed with a range of 2.6 to 3.3 and relatively few scores of 4 and 5. Post-hoc analyses (Scheffé F-test) revealed that the mean wisdom score for the 15-16 year old group was significantly lower than mean scores for the 20-22 and 25-27 year old groups. These results suggest a developmental progression in wisdom-related knowledge over the period extending from middle adolescence into early adulthood. For the main effect of gender, female scores were higher than male scores overall as well as at each age level (see Table 2). No significant race or SES differences were found.
Figure 1. Mean wisdom scores for Scenario Average by age and gender (interaction not significant).
Table 2

**Means and Standard Deviations for Wisdom Scores for Hypothetical Scenarios and Stressful Life Event across age, gender, race, and SES**

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Friends</th>
<th>Drinking</th>
<th>Death</th>
<th>Money</th>
<th>Self</th>
<th>Scenario Average</th>
<th>Stressful Life Event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Overall</td>
<td>3.07</td>
<td>.86</td>
<td>3.01</td>
<td>.93</td>
<td>3.09</td>
<td>.86</td>
<td>2.72</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-16</td>
<td>2.69</td>
<td>.90</td>
<td>2.56</td>
<td>1.10</td>
<td>2.81</td>
<td>.90</td>
<td>2.44</td>
</tr>
<tr>
<td>17-18</td>
<td>3.09</td>
<td>.73</td>
<td>3.15</td>
<td>1.02</td>
<td>2.94</td>
<td>.84</td>
<td>2.45</td>
</tr>
<tr>
<td>20-22</td>
<td>3.19</td>
<td>.93</td>
<td>3.03</td>
<td>.86</td>
<td>3.22</td>
<td>.75</td>
<td>2.84</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2.86</td>
<td>.77</td>
<td>2.89</td>
<td>1.01</td>
<td>2.98</td>
<td>.81</td>
<td>2.62</td>
</tr>
<tr>
<td>Female</td>
<td>3.28</td>
<td>.90</td>
<td>3.13</td>
<td>.85</td>
<td>3.19</td>
<td>.91</td>
<td>2.83</td>
</tr>
<tr>
<td>RACE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>2.98</td>
<td>.86</td>
<td>2.94</td>
<td>.83</td>
<td>3.02</td>
<td>.81</td>
<td>2.59</td>
</tr>
<tr>
<td>White</td>
<td>3.16</td>
<td>.86</td>
<td>3.08</td>
<td>1.01</td>
<td>3.16</td>
<td>.91</td>
<td>2.86</td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle-class</td>
<td>3.00</td>
<td>.85</td>
<td>3.05</td>
<td>.97</td>
<td>2.95</td>
<td>.84</td>
<td>2.75</td>
</tr>
<tr>
<td>Working-class</td>
<td>3.14</td>
<td>.87</td>
<td>2.97</td>
<td>.91</td>
<td>3.22</td>
<td>.86</td>
<td>2.70</td>
</tr>
</tbody>
</table>
Analyses were also conducted to examine demographic patterns of wisdom scores for each of the hypothetical scenario categories. In looking at Table 2 you will see that mean wisdom scores for the five hypothetical scenario categories generally increase with age. Results of analyses revealed that there was a significant main effect for age across all scenario categories: (1) friends, $F(3, 96) = 3.76, p<.05$; (2) drinking, $F(3, 96) = 3.77, p<.05$; (3) death, $F(3, 96) = 3.00, p<.05$; (4) money, $F(3, 95) = 6.90, p<.001$; and (5) self, $F(3, 95) = 7.70, p<.001$. A series of post-hoc analyses (Scheffé F-test) were performed to examine age patterns of wisdom scores for the five scenario categories. First, for the scenario about having difficulty making friends, scores for 25-27 year olds were found to be significantly higher than scores for 15-16 year olds. Second, for the scenario about alcohol abuse, a similar pattern was detected with a significant difference between scores for 25-27 year olds and scores for 15-16 year olds. Third, for the scenario about coping with death, although there was an overall age difference, no significant difference was found between any two group means. Fourth, for scenarios about money issues, wisdom scores for 25-27 year olds were significantly higher than those for 15-16 year olds and for 17-18 year olds. Fifth, for the scenario about self issues, wisdom scores for the three oldest groups (17-18; 20-22; and 25-27 year olds) were significantly higher than wisdom scores for the youngest group (15-16 years). A main effect for gender was found on the problem about making friends, $F(1, 96) = 8.57, p<.01$ with female scores exceeding male scores (see Table 2). No significant race or social class differences were found. There were no interaction effects for the hypothetical scenarios.
3.2 Stressful Life Events

A 4-factor ANOVA with between-subject factors of age, gender, race, and SES was performed on the Stressful Life Event wisdom scores. In looking at Figure 2 you will see that mean wisdom scores for Stressful Life Event increase with age and that female scores are higher than male scores for each age group. Results of statistical analyses indicated that there were significant main effects for age, \( F(3, 96) = 13.71, p<.001 \), and for gender, \( F(1, 96) = 17.93, p<.001 \). A pattern of growth in wisdom-related knowledge can be seen in the increasing mean scores for wisdom across age (see Table 2). Post-hoc analyses (Scheffé F-test) revealed that scores for 20-22 year olds and 25-27 year olds were significantly higher than scores for 15-16 year olds, and that scores for 25-27 year olds were also significantly different from scores for 17-18 year olds. For the main effect of gender, female scores were higher than male scores (see Table 2). No significant race or SES differences were found on Stressful Life Event scores.
Figure 2. Mean wisdom scores for Stressful Life Event by age and gender (interaction not significant).
Multivariate analyses were carried out to examine patterns of evidence for the three wisdom metacriteria in the stressful life event protocols. These analyses were conducted across the demographic variables of age, gender, race, and SES. The three wisdom metacriteria, contextualism, relativism, and uncertainty, had been coded as either present (1) or absent (0) in the interview protocols. In looking at Table 3 you will see that the percentage of participants exhibiting evidence for each of the three metacriteria for wisdom generally increases across age. You will also see that the percentage of females exhibiting evidence for each metacriterion category is higher than the percentage of males. Results of a 4-factor MANOVA revealed an overall effect of age (Wilks lambda = .66, p<.001), and gender (Wilks lambda = .83, p<.001) for all three metacriteria.

First, for age, univariate tests indicated significant effects for all three metacriteria: (1) contextualism, F(3, 96) = 5.47, p<.01; (2) relativism, F(3, 96) = 8.68, p<.001; and (3) uncertainty, F(3, 96) = 3.83, p<.05. The first metacriterion, "knowledge about the contextualism of life," showed evidence of incremental growth with age. Post-hoc analyses indicated that only the youngest (15-16 years) and the oldest (25-27 years) groups differed significantly on the category of contextualism. The second metacriterion, "relativistic thinking," was increasingly evident across age with significantly more examples of relativism in protocols of the 25-27 year old group than in protocols of the 15-16 year old and the 17-18 year old groups. The third metacriterion, "acknowledgment of uncertainty," showed a pattern of increasing presence in the stressful life event interviews across age with the exception of a decrease in the 20-22 year old group. Only the youngest (15-16 years) and oldest (25-27 years) groups of participants differed significantly in rate of references to the "uncertainty of knowing."
Second, for gender, univariate tests revealed significant effects for the metacriteria for wisdom: (1) contextualism, \( F(1, 96) = 7.89, p<.01 \); (2) relativism, \( F(1, 96) = 8.05, p<.01 \); and (3) uncertainty, \( F(1, 96) = 6.85, p<.05 \). The number of female protocols displaying evidence for each of the metacriteria categories was higher than the number of male protocols.
Table 3

Percentage of 128 Participants Exhibiting the Metacriteria for Wisdom in Stressful Life Event Interviews

<table>
<thead>
<tr>
<th>GROUP</th>
<th>CONTEXTUALISM</th>
<th>RELATIVISM</th>
<th>UNCERTAINTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>84.4</td>
<td>28.9</td>
<td>19.5</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-16</td>
<td>68.8</td>
<td>9.4</td>
<td>3.1</td>
</tr>
<tr>
<td>17-18</td>
<td>81.3</td>
<td>15.6</td>
<td>28.1</td>
</tr>
<tr>
<td>20-22</td>
<td>87.5</td>
<td>34.4</td>
<td>15.6</td>
</tr>
<tr>
<td>25-27</td>
<td>100.0</td>
<td>56.3</td>
<td>31.3</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>76.6</td>
<td>18.8</td>
<td>10.9</td>
</tr>
<tr>
<td>Female</td>
<td>92.2</td>
<td>39.1</td>
<td>28.1</td>
</tr>
<tr>
<td>RACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>79.7</td>
<td>28.1</td>
<td>18.8</td>
</tr>
<tr>
<td>White</td>
<td>89.1</td>
<td>29.7</td>
<td>20.3</td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle-class</td>
<td>85.9</td>
<td>26.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Working-class</td>
<td>82.8</td>
<td>31.3</td>
<td>21.9</td>
</tr>
</tbody>
</table>
3.3 Comparison of Hypothetical Scenarios and Stressful Life Events

An age (4) x gender (2) x race (2) x SES (2) x problem type (2) (Scenario Average versus Stressful Life Event) analysis of variance was performed with repeated measures on the last factor. This analysis compared wisdom scores on thinking about the life problems of others and wisdom scores on thinking about one’s own stressful life problems. In looking at Table 2 you will see that mean wisdom scores were higher for Stressful Life Event than for Scenario Average. Results of the analysis revealed a significant effect of problem type on wisdom score, $F(1, 96) = 19.50$, $p<.001$. In looking at Figure 3 and Figure 4, you will see that mean wisdom scores are higher for Stressful Life Event than for Scenario Average across both age and gender. Results of analyses indicated that there were significant main effects of problem type for age, $F(3, 96) = 9.64$, $p<.001$, and gender, $F(1, 96) = 11.32$, $p<.001$. No significant interactions were detected.
Figure 3. Mean wisdom scores for Scenario Average and Stressful Life Event by age (interaction not significant).
Figure 4. Mean wisdom scores for Scenario Average and Stressful Life Event by gender (interaction not significant).
3.4 Metacriteria Themes

Components within each of the three metacriteria for wisdom were examined in order to identify demographic trends in themes present in the stressful life event protocols. Table 4 presents the percentage of participants exhibiting each of the eleven criteria for contextualism. Similarly, Table 5 presents percentages for the six criteria for relativism and Table 6 presents percentages for the three criteria for uncertainty. Statistical analyses (chi-square) were limited to metacriteria themes which were present in at least 20 of the 128 protocols. Only three categories met this criterion, including the contextualism themes, “self-issues” (C5) and “self and the situation” (C7) and the uncertainty theme, “uncertainty of knowing” (U2). Bonferroni would require an alpha of .05/12 or .004 to test for significance in analyzing these three categories across four demographic variables. A slightly less stringent criteria with an alpha of .01 was used in this analysis. By relaxing the criteria to this level, significant age effects were detected in two categories and significant gender effects were detected in two categories.

Chi-square analyses revealed a significant main effect for age on “self-issues” (C5), \( \chi^2(3, N = 22) = 15.15, p < .01 \) and on “self and situation” (C7), \( \chi^2(3, N = 79) = 14.38, p < .01 \). Wisdom-related knowledge concerning the “self” (C5) was more evident in protocols of 17-18 year olds and 20-22 year olds than in protocols of 15-16 year olds and 25-27 year olds. The percentage of responses showing evidence of wisdom-related knowledge about “self and the situation” (C7) increased steadily with age. Chi-square analyses revealed significant main effects for gender with females more likely than males to make references to “self” issues (C5), \( \chi^2(1, N = 22) = 14.05, p < .001 \) and to acknowledge the “uncertainty of knowing” (U2), \( \chi^2(1, N = 20) = 8.53, p < .01 \).
Some interesting trends were noted in several categories which had less than the minimum number of responses for statistical analysis. For example, in looking at Table 4, it is evident that more protocols of the 20-22 year old group contained evidence of thinking about "implications of the event for one's life" (C9) than did protocols of any other age group. In Table 5, a developmental trend can be observed for the category "future concerns" (R5) with references to this theme being present only in protocols of the two oldest groups (i.e., 20-22 year olds and 25-27 year olds). In looking at Table 6, it is interesting to note that all but one of the five participants who demonstrated an awareness of the "limits of knowing" (U3) belong to the oldest group (25-27 years).
Table 4

Percentage of Participants Exhibiting the Criteria for Contextualism in Stressful Life Event Interviews

<table>
<thead>
<tr>
<th>GROUP</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>C11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (n=128)</td>
<td>5.5</td>
<td>0.8</td>
<td>3.1</td>
<td>0.8</td>
<td>17.2</td>
<td>3.1</td>
<td>61.7</td>
<td>14.8</td>
<td>10.9</td>
<td>7.8</td>
<td>8.6</td>
</tr>
<tr>
<td>AGE (n=32)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15-16</td>
<td>3.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6.3</td>
<td>6.3</td>
<td>43.8</td>
<td>15.6</td>
<td>0</td>
<td>3.1</td>
<td>12.5</td>
</tr>
<tr>
<td>17-18</td>
<td>0</td>
<td>0</td>
<td>9.4</td>
<td>3.1</td>
<td>34.4</td>
<td>3.1</td>
<td>53.1</td>
<td>15.6</td>
<td>9.4</td>
<td>6.3</td>
<td>3.1</td>
</tr>
<tr>
<td>20-22</td>
<td>6.3</td>
<td>0</td>
<td>3.1</td>
<td>0</td>
<td>25.0</td>
<td>3.1</td>
<td>62.5</td>
<td>15.6</td>
<td>21.9</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>25-27</td>
<td>12.5</td>
<td>3.1</td>
<td>0</td>
<td>0</td>
<td>3.1</td>
<td>0</td>
<td>87.5</td>
<td>12.5</td>
<td>12.5</td>
<td>15.6</td>
<td>12.5</td>
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<tr>
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Table 5

Percentage of Participants Exhibiting the Criteria for Relativism in Stressful Life Event Interviews

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<th>R3</th>
<th>R4</th>
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<tr>
<td>Working-class</td>
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<td>10.9</td>
<td>3.1</td>
<td>6.3</td>
<td>9.4</td>
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</tbody>
</table>

Note. Description of categories: (R1) Perspective-taking, (R2) Individual differences, (R3) Put things in perspective, (R4) Cost-benefits analysis, (R5) Future concerns, (R6) Self-knowledge about values and goals.
Table 6

Percentage of Participants Exhibiting the Criteria for Uncertainty in Stressful Life Event Interviews

<table>
<thead>
<tr>
<th>GROUP</th>
<th>U1</th>
<th>U2</th>
<th>U3</th>
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<tr>
<td>Overall (n=128)</td>
<td>2.3</td>
<td>15.6</td>
<td>3.9</td>
</tr>
<tr>
<td>AGE (n=32)</td>
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<td></td>
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<td>6.3</td>
<td>1.6</td>
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<td>White</td>
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<td>15.6</td>
<td>1.6</td>
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<tr>
<td>Working-class</td>
<td>1.6</td>
<td>17.2</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Note. Description of categories: (U1) Limits of personal knowledge, (U2) Uncertainty of knowing, (U3) Limits of knowing.
CHAPTER 4
DISCUSSION

This study examined wisdom-related knowledge in the period from middle adolescence through to early adulthood in a sample balanced across the demographic variables of age, gender, race, and social class. Wisdom as a form of "real-world" thinking was measured in two domains: (1) participants’ verbal protocols about their own major life problems and (2) participants’ verbal protocols about hypothetical life dilemmas of others. Four aims of this research were (1) to examine wisdom-related knowledge about one’s own life problems across age, gender, race, and social class in the period from middle adolescence into early adulthood, (2) to examine wisdom-related knowledge about life problems of others across age, gender, race, and social class over the period from middle adolescence into early adulthood, (3) to compare wisdom-related knowledge about one’s own life problems to wisdom-related knowledge about life problems of others, and (4) to examine the themes in metacriteria responses. The outcome of this developmental and contextual study of wisdom is discussed in the following sections.

4.1 Influence of Age on Wisdom-Related Knowledge

To date, most empirical research on the topic of wisdom has been limited to the study of an adult population. Thus, one aim of this study was to extend research on wisdom to a younger population, specifically, to the period from middle adolescence to early adulthood.

Results of this study indicated that levels of wisdom-related knowledge increased significantly with age across the period from mid-adolescence into early adulthood.
regardless of whether participants were discussing hypothetical life problems of others or their own real-life problems. This finding, of a positive correlation between wisdom-related performance and age, is inconsistent with earlier research which failed to show an increase in wisdom-related knowledge across age (e.g., Baltes et al., 1995; Smith & Baltes, 1990; Smith et al., 1989; Staudinger, 1989). This inconsistency may be explained by the fact that, to date, empirical research on wisdom has focused mainly on the period of adulthood. On the other hand, results of this study are consistent with previous research on cognitive development over this period of the life-span (e.g., Gilligan, 1982; Kitchener & King, 1981; Kohlberg, 1969; Perry, 1970). These results also support Erikson's (1968) contention that wisdom develops across the age-span, not just in old age.

4.1.1 Hypothetical Scenarios and Age

Overall, the pattern of results for the hypothetical scenario protocols indicated that wisdom-related performance increased with age. A more detailed look at this pattern revealed that 15-16 year old responses contained less evidence of wisdom-related knowledge than 20-22 year old and 25-27 year old responses. Responses from the youngest participants tended to focus on factual and procedural knowledge with a general absence of evidence for the metacriteria of wisdom. Further analyses indicated that the pattern of age differences varied with the nature of the problem. For example, 25-27 year olds displaying a significantly higher level of wisdom-related knowledge than 15-16 year olds in discussing the problem about having trouble making friends and the problem about alcohol abuse. The difference between these two age groups in terms of complexity of their thinking about problem situations can be seen in the interview protocols. For the
problem in making friends, the advice offered by one young participant was to "talk to him" whereas an older participant suggested that "An important thing for solving problems is to find the problem - find out why she is not making friends - I might have to ask her questions about family and past experiences." The second response indicates an awareness of the importance of first determining the source of the difficulty in order to solve a problem. Arlin (1975, 1984) has suggested that this "problem-finding" ability, which is an important element in solving problems in ill-defined situations, should be evident as part of postformal thinking by age 21.

Participants in the 25-27 year old group also displayed a better understanding of money problems than 15-16 year old and 17-18 year old participants. This difference is exemplified in their responses to interview questions about money issues. One young participant replied that "I would loan money but can't make ends meet myself" while an older participant suggested that "she probably needs someone to sit down and teach her how to handle her money." Psychologists who support a contextual view of intelligence (e.g., Ceci, 1990; Sternberg, 1985a) would likely consider the higher scores achieved by older participants to be a reflection of their greater experience with a variety of money problems. This finding is also consistent with research on expertise which has shown that familiarity with the content of a domain improves reasoning in the domain (Chi et al., 1982; Glaser, 1984). In addition, the oldest participants may have had ten years of experience coping with these types of money problems which, as expertise researchers (e.g., Simon & Chase, 1973) have suggested, is a necessary requirement for expertise to develop in a domain.
For the scenario about understanding of the self, wisdom scores for the three older groups were found to be considerably higher than scores for the youngest group. This pattern of results may be understood in light of the importance of self-understanding for those in late adolescence and early adulthood as they make decisions about their future life roles (Graber & Brooks-Gunn, 1996). A major change in complexity of thinking about the self across this age-span can be seen in the following examples. A limited understanding of "self" is suggested by one young participant's response: "you are who you are - you ain't going to change it yourself - just stop worrying about it - just get it out of your mind - take a vacation." A more insightful picture of self-understanding is displayed in the response of an older participant: "I think everybody goes through a period when they are unsure of who they are - it all works out in the long run - just giving her time to find herself - I can somewhat relate to that."

Wisdom scores for the scenario about death displayed a unique developmental pattern. In contrast to the other scenarios, there was a steady pattern of growth in wisdom-related knowledge about death across the whole age period but with no significant difference between any two age groups. This developmental pattern may be a reflection of two factors: (1) the universal importance of the topic of death, regardless of age, and (2) the increasing likelihood, with age, of having experienced the loss of a close family member or friend.

4.1.2 Stressful Life Events and Age

The overall pattern of increasing wisdom scores across age for the personal stressful life event was similar to the pattern of scores for the scenarios (i.e., life problems of others). However, in addition to the difference in scores between the youngest (15-16
year olds) group and the two oldest (20-22 and 25-27 year olds) groups on the scenarios, there was also a difference between 17-18 year olds and 25-27 year olds on the stressful life event. The increase in wisdom scores with age reflects the increasing presence of relativistic thinking and thinking about uncertainty in the protocols of older participants. This developmental pattern for wisdom-related knowledge about one's own stressful life event is similar to the pattern found by Menna and Keating (1997) in their investigation of cognitive complexity in the interpersonal domain.

Stressful life event protocols were also subjected to analysis for the specific metacriteria for wisdom (i.e., contextualism, relativism, and uncertainty). These analyses were conducted in an effort to uncover the type of metacriteria that people use when thinking about difficult life problems. An examination of the stressful life event protocols revealed significant differences across age for all three metacriteria with individual patterns of growth for each metacriterion. First, for contextualism, evidence increased uniformly across age with a significant difference in the percentage of responses in this category given by 15-16 year olds (69%) and 25-27 year olds (100%). This pattern of steady growth in understanding about the contextualism of life likely results from a normal increase, with age, in experience with a variety of life problems. Second, relativistic thinking was more evident in protocols of 25-27 year old participants (56%) than in protocols of 15-16 year old (9%) and 17-18 year old participants (16%). This pattern of development would seem to indicate that relativistic thinking develops later than contextualistic thinking. This finding is consistent with earlier studies of cognitive development across this age span (e.g., Belenky et al., 1986; Kitchener & King, 1981; Perry, 1970). For example, Perry found evidence of major growth in relativistic thinking
when individuals were in their twenties. Third, thinking about uncertainty increased substantially across this age period with evidence for this way of thinking about difficult life problems being present in only three percent of 15-16 year old protocols as compared to 31 percent of 25-27 year old protocols. On further inspection an uneven pattern of development was uncovered with a higher percentage of 17-18 year olds (28%) than 20-22 year olds (16%) referring to the uncertainty of life. This unexpected finding may possibly be explained by the uncertainty experienced in the lives of many 17-18 year olds as they leave high school and move on to college or to the world of work (Graber & Brooks-Gunn, 1996).

Exploration of the relative presence of the three metacriteria for wisdom revealed an interesting pattern across age groups. For the youngest group, the percentage of stressful life event protocols displaying evidence for the three metacriteria was as follows: (1) 69% (contextualism), (2) 9% (relativism), and (3) 3% (uncertainty). However, for the oldest group these percentages changed proportionally with the greatest increases in relativism and uncertainty: (1) 100% (contextualism), (2) 56% (relativism), and (3) 31% (uncertainty). The increasing evidence for relativism and uncertainty across age is consistent with previous research on cognitive development which shows distinctive changes in ways of thinking over the period from middle adolescence into early adulthood (Kitchener & King, 1981; Menna & Keating, 1997; Perry, 1970). Keating and Sasse (1996) have described the “increasing recognition of uncertainty and relativity of knowledge” in adolescence as being “essential to the formation of a critical habit of mind” (p. 246).
4.2 Influence of Social Context on Wisdom-Related Knowledge

To date, wisdom research on an adult population has failed to detect a significant gender difference in performance on wisdom-related tasks (e.g., Baltes et al., 1995; Staudinger & Baltes, 1994; Smith & Baltes, 1990). However, Achenbaum and Orwoll (1991) have postulated the existence of gender differences in wisdom as a result of the different challenges and opportunities that males and females experience throughout their lives. The use of a balanced distribution of males and females in this current study permitted gender patterns on wisdom-related thinking to be examined. Results of analyses revealed a significant difference between males and females in thinking about both their own stressful life events and difficult life events of others. Gender differences for both types of events can be seen in the pattern of higher female scores overall and for each age group. These gender differences may result from the different socialization experiences of males and females in the interpersonal domain (Gilligan, 1982). Menna and Keating (1997) found a similar pattern of gender differences in complexity of cognitive representation in a sample of older adolescents and young adults. They suggested that females may think in more complex ways than males when dealing with stressful life events as a result of the differing socialization experiences of males and females. The gender difference found on scores for the scenario about having problems making friends is consistent with previous research which has shown that females display more sophisticated knowledge than males in several domains including friendship (Archer, 1994). This difference may also be, as Gilligan (1982) and Miller (1976) have suggested, an indication of the contextual nature of development as males and females experience and understand relationships in different ways. In a related study, in which
participants ranged from pre-adolescents to older adults, Strough, Berg, and Sansone (1996) found that females were more concerned than males with the interpersonal aspects of everyday problem situations.

Gender differences were found in this study on the metacriteria for wisdom in the stressful life event protocols. Female protocols contained higher levels of evidence for all three metacriteria categories. The comparable percentages were 92% (C), 39% (R), and 28% (U) for females and 77% (C), 19% (R), and 11% (U) for males.

Analyses on the basis of race and social class failed to detect any significant difference between African-American and white and working class and middle class participants on any of the measures of wisdom used in this study. This finding, that there were no demographic differences in this form of real-world intelligence, is important in light of recent controversial claims, which are based on conventional tests of intelligence, that a genetic basis exists for race and social class differences in intelligence. These results suggest that forms of intelligence used in real-world activities are not influenced by social and cultural factors that may result in demographic differences in forms of intelligence used in academic activities.

4.3 Comparison of Hypothetical Scenarios and Stressful Life Events

The next issue addressed by this study was a comparison of wisdom-related knowledge about one’s own life problems and wisdom-related knowledge about hypothetical problems in the lives of others. Wisdom scores for participants’ own stressful life events were compared to wisdom scores for the set of hypothetical scenarios. Results of this analysis indicated that adolescents and young adults, regardless of gender,
race, or social class, demonstrate higher levels of wisdom-related knowledge when they are discussing their own "real-world" problems than when they are discussing hypothetical life problems of others. Keating (1990) has suggested that discussing a context which is both personally-relevant and familiar may influence cognitive performance in the interpersonal domain. These results are also consistent with previous research which showed that adolescents and young adults displayed higher levels of cognitive complexity when discussing their own life problems than when discussing life problems of others (Menna & Keating, 1997). Thus, it may be that thinking about one's own personal problems is more highly processed than thinking about advice to give to others about their personal problems (Menna & Keating, 1997).

4.4 Metacriteria Themes

4.4.1 Metacriteria Themes and Age

A fine-grained examination was carried out on the categories within the metacriteria for wisdom in an attempt to gain a greater understanding of the development of ways of thinking about difficult life problems. Two categories within contextualism with distinctive patterns of development were "self-knowledge" and "self and the situation." Examples of "self-knowledge" were most evident in protocols of 17-18 year olds (34%) and 20-22 year olds (25%). The peak in responses on this theme for these two age groups may reflect the importance of the task of self-definition during this critical period of identity development (Kroger, 1996). According to Graber and Brooks-Gunn (1996), an increased focus on the self during the transition into adulthood may be explained by the stress associated with changes in social roles. These authors suggest that
the focus on the self at this period of life may result from feelings of incompetence which often accompany role changes. In addition, the fact that only one of the 25-27 year old participants expressed this type of concern may be a reflection of the improvement in self-evaluation which occurs once young adults have adapted to their new role demands (Graber & Brooks-Gunn, 1996). The decline in references to the self by those in the oldest age group is also consistent with Waterman’s (1982) suggestion that, following completion of college, there is a “consolidation of the sense of self rather than the continued exploration of identity alternatives” (p. 355). An example of “self-knowledge” can be seen in the following excerpt from the protocol of a 20 year old female participant: “I’m learning that I can be independent and that it’s okay to be me - and I don’t need a guy to do it - to be me - I like me now.” Evidence of thinking about “self and the situation” increased across age from 44% in the protocols of the youngest group to 88% in the protocols of the oldest group of participants. The following comment exemplifies this criteria category: “It’s going to affect my life, I’m losing a very significant person.” Although the number of responses categorized as “consideration of the event in the context of life as a whole” was too small for analysis, half of the 14 comments classified in this category were made by 20-22 year olds. This finding may reflect the fact that important long-term decisions about relationships and careers are often being made at this stage of life (Graber & Brooks-Gunn, 1996). For one individual whose stressful life event involved “being incarcerated,” the concern was that “It may not hurt you immediately, but it will have its effect in the long run.” It is interesting to note the absence of evidence for long-term thinking in the protocols of 15 and 16 year olds. This would seem to suggest that the cognitive ability to take a long term view of current life problems has not
yet developed in the youngest group of participants. This developmental pattern lends support to Keating’s (1990) proposal that the ability to put events into perspective with respect to the past, present, and future appears to develop when people are in their early twenties.

An examination was carried out of the categories within the metacriterion of relativism. Although the number of responses in each category was too small for analysis an interesting trend was seen in the category, “concern about the future.” A developmental pattern is suggested by the lack of responses in this category by those in the two youngest groups followed by an increase from two responses in the 20-22 year old group to five responses in the 25-27 year old group. This type of thinking can be seen in a comment by a participant in her early twenties: “Now I’m determined to get back to school - I don’t want to work minimum wage jobs all my life.” This developmental pattern may be due to the increasing ability to reflect on one’s present life which is gained through a greater variety of life experiences.

An examination was carried out of the categories within the metacriterion of uncertainty. It was interesting to note that all but one of the five responses which “acknowledging the limits of knowing” were made by 25-27 year old participants. Although the number of responses was too small for analysis, this trend would suggest that “acknowledgment of the limits of knowing” may be one of the last elements to arise in the development of wise thinking in the interpersonal domain of life. This is consistent with the suggestion made by Kitchener and her colleagues (Kitchener et al., 1989) that an awareness of the uncertainty of knowing is not associated with the adolescent or early adult period. Baltes’ wisdom studies with adults have also indicated that knowledge about
the uncertainty of life develops later than other wisdom criteria (Baltes et al., 1995; Smith et al., 1994). A comment made by one participant demonstrates an understanding of the limits of knowing: “I think I dealt with it the best way I could - now - ask me five years from now - that’s a different thing.”

4.4.2 Metacriteria Themes and Gender

Results of further exploration of the metacriteria for wisdom suggested that gender differences exist for specific themes within contextualism and uncertainty but not for relativism. Within contextualism, “self-knowledge” issues were mentioned more frequently by females with 30% of females but only 5% of males reflecting on aspects of the self. This gender difference in thinking about self-issues is consistent with previous theory and research on gender and self (e.g., Boer, 1992; Gilligan, 1982; Miller, 1976; Surrey, 1991). This female advantage in the interpersonal domain is also consistent with previous research on social reasoning in adolescence (Ford, 1982; Keating & Clark, 1980). The gender imbalance may also be explained by the greater importance of interpersonal aspects of identity for females, especially in light of their more complex task of identity development in a world of changing gender roles (Côté, 1996). As Waterman (1993) has noted, females spend more time than males in this late adolescent and early adult period reflecting upon and making decisions about their identity in a relational context. In addition, the greater number of female responses on this category may reflect gender differences in socialization practices which encourage females to think about relationships and the self. The female advantage in “self-knowledge” found in this study also supports Orwoll and Achenbaum’s (1993) hypothesis of gender variation in self-knowledge. A gender difference on the metacriterion of uncertainty was found with
25% of females but only 6% of males acknowledging the “limits of knowing.” This finding may reflect the greater uncertainty that females experience in their lives as they attempt to establish identities in a greater number of domains than males (Harter, 1990). In addition, decision-making concerning the relative priority of occupational and relationship roles may contribute to feelings of uncertainty for females in this developmental period.

4.5 Summary

To summarize, a significant increase in wisdom-related knowledge and understanding was detected across the period from middle adolescence into early adulthood. This developmental pattern was evident in wisdom scores for both hypothetical scenario and stressful life event protocols. For the scenario protocols, levels of wisdom-related knowledge varied with the nature of the life problem. For the stressful life event protocols, increases in wisdom-related knowledge resulted mainly from the increasing presence of “relativistic thinking” and “thinking about uncertainty” with age. Female scores were higher than male scores in wisdom-related thinking about one’s own life problems. For the set of hypothetical life problems of others, higher female scores resulted mainly from the female advantage on the problem about making friends. The finding, that wisdom scores were higher when people were discussing their own life problems rather than hypothetical life problems of others, would suggest that wisdom-related thinking is influenced by the personal relevance of difficult life problems. A fine-grained examination of the stressful life event protocols pointed to thinking about “self issues” as a source of gender differences in wisdom. The fact that considerably more
females than males acknowledged the uncertainty of knowing also contributed to higher female scores. In contrast to results of research on "academic" intelligence, no major differences were found in "real-world" intelligence on the basis of race or social class.

4.6 Importance of this Study

This research is important, first, because it extends the study of wisdom to thinking about personally-relevant, "real-world" problems, and second, because wisdom-related knowledge is explored in an earlier period of life. The use of verbal protocols based upon discussion of one's own stressful life event is important because previous research on wisdom was limited to the discussion of hypothetical situations. The extension of research on wisdom to the critical transitional period from middle adolescence into early adulthood has implications for the understanding of cognitive development in the social domain. Results of this research contribute not only to the growing body of knowledge on wisdom, but also to the general body of knowledge about intellectual functioning in the social domain. Specifically, this study helps to clarify the developmental processes that underlie the development of human competence and coping, both in specific expertise and in general "habits of mind."

Although wisdom is generally viewed as a form of high level functioning in the cognitive domain which emerges during the second half of life, results of this study indicate that forms of thinking essential to the development of wisdom can be detected in an earlier part of the lifespan. However, it is important to note that the level of wisdom-related knowledge was found to be generally low over this age period with most wisdom scores in a limited range from 2.6 to 3.3 and that there were relatively few scores of four
and five. These results suggest that an increase in wisdom-related knowledge can be detected in the period of life ranging from middle adolescence to early adulthood.

This study is important because it integrates gender, race, and SES in a contextual developmental design. The demographically diverse population used in this study made it possible to examine the socialization influences of gender, race, and social class on "real-world" thinking in the interpersonal domain. The absence of significant differences across the variables of race and social class would suggest that wisdom-related knowledge, which is based on learning about human nature from one's own experience and the experiences of others, may be a more equitable measure of intelligence. Results of this study may also be generalized to a broader population than previous research on wisdom because of the demographically diverse sample. The importance of this study also lies in its examination of the elements of "wise thinking," that is, the themes within the metacriteria for wisdom. An understanding of the factors underlying developmental and gender differences in "real-world" thinking in this period from middle adolescence to early adulthood is important for the design of educational and social policies.

This research is also important because, according to Keating and Sasse (1996), little attention has been paid to the development of critical thinking in practical or social settings. Thus, this study of wisdom-related knowledge contributes to an understanding of the important role of knowledge and thinking in coping with stressful life events. Knowledge about difficult life events and good coping strategies for dealing with these events are potentially important factors in helping to reduce the associated stress. In addition, a reflective stance, which comes with the development of the type of thinking
which is characterized by the metacriteria for wisdom, enables individuals to put difficult problems into context with respect to the larger picture of life. A reflective stance, entrenched as part of a "habit of mind" or way of thinking about life problems, is likely to predict coping in positive ways which in turn predicts good mental health outcomes. Hence, an understanding of the elements of wisdom-related knowledge can be helpful for counsellors working with people facing difficult life issues. The results of this research are also important for educators concerned with the development of "a critical habit of mind" during adolescence (Keating, 1990, p. 55).

Thus, this study has revealed: (1) the important ways in which thinking about the social domain changes across this transitional period of life, and (2) the source of gender differences in thinking about interpersonal issues in the social domain.

4.7 Limitations and Future Directions

The methodological approach to the measurement of wisdom-related knowledge may be seen as a limitation of this study. However, just as with research on any form of intelligence, the lack of general agreement on a definition may make any attempt to measure wisdom subject to controversy. The cross-sectional design may also be viewed as a second limitation of this study because, with this design, it is not possible to disentangle developmental change from cohort effects. Thus one cannot state with certainty that age effects were due to developmental changes. Hence, the difference in mean wisdom scores across age groups may be due to a true ontogenetic trend or may simply be due to the effect of belonging to different cohorts of individuals who have been exposed to different socio-cultural conditions. Further research using a sequential design
would be needed to clarify the relative influence of age and cohort (Baltes, Cornelius, & Nesselroade, 1979). The subjective nature of self-report data, in the form of semi-structured interviews, may also be seen as a limiting factor. Therefore, future research using a more objective measure of wisdom would help to validate the results of this study. A more general limitation of this study of wisdom is the strict focus on the cognitive aspects of wisdom. Hence, a study which integrated both affective and cognitive domains would result in a more complete picture of wisdom.
REFERENCES


Interview: Stressful Life Event

Q 5: From time to time, major events occur which change or affect people's lives in important ways. Take a moment to think about the important things which have happened in your life during the past year and then tell me those which have had the biggest impact on you.

(List each event on RESPONSE SHEET A)

- (if less than three are given, say:) Are there any other events which seemed especially important or made a difference in your life during the past year?

- (If less than three are given, say:) Are there any other things which seemed especially important or made a difference in your life during the past year?

INTERVIEWERS: SHOW PERSON STRESSFUL LIFE EVENTS SCALE AND SAY:

There are major and minor events that sometimes happen in people's lives. Please indicate by circling "yes" or "no" if these things happened in your life during the past year. Circle all that happened to you, even if you've already told me about them.

13. Now let's go back to the important events that happened in your life this past year which you mentioned earlier or checked off on the sheet. Which of these do you think was the most difficult for you? Please tell me about it. (Get SPONTANEOUS DESCRIPTION).

- (If unclear, ask "How was it difficult for you?)

- (If when the event happened hasn't been mentioned): When did this happen?" At a minimum, find out time of year).
- (If how they felt about the event has not been mentioned): Could you tell me more about how you felt at the time.

- (If coping strategies have not been mentioned): Did you do anything special to deal with this?

- Has this continued to influence you or make a difference in your life? (If yes, "How?")

- (If feelings have not been mentioned): Could you tell me more about how you've been feeling about this since the time it happened?

- (If coping strategies have not been mentioned): Did you do (are you doing) anything special to deal with this?

14. If you could live this time over again, would you deal with it differently? (How?)
Interview: Hypothetical Scenarios (e.g., female non-student)

6. Lynne is __ years old. She feels lonely and is having a lot of trouble making friends. She is wondering if something is wrong with her.
   a. Sometimes when people are having problems it may be their responsibility or another person's responsibility or just the situation. Whose responsibility do you think it is that Lynne is having trouble making friends?
   b. Do you think Lynne needs help?
   c. (If yes), Who should Lynne go to for help?
   (If no), If Lynne thought she needed help, who should she go to for help?
      - ask for more (minimum 3)
      PROBE: How might you go about doing that? or
      PROBE: How might she go about doing that?
   d. If Lynne were your friend, how would you provide support and help?
      - ask for more (minimum 2)
      PROBE: How might you go about doing that? or
      PROBE: How might she go about doing that?

7. Pat is __ years old. She is drinking two glasses of whiskey every morning before she goes to work. Sometimes she skips work and her performance at work is going downhill.
   a. Whose responsibility do you think it is that Pat drinks and skips work?
   b. Do you think Pat needs help?
   c. (If yes), Who should Pat go to for help?
(If no), If Pat thought she needed help, who should she go to for help?
- ask for more (minimum 3)

d. If Pat were your friend, how would you provide support and help?
- ask for more (minimum 2)

PROBE: How might you go about doing that? or
PROBE: How might she go about doing that?

8. Renee is __ years old. Her mother just died of cancer. She has been very
   depressed and has lost interest in the things she used to enjoy. She doesn't know
   what to do to get herself going again.

   a. Sometimes when people are having problems it may be their responsibility or
      another person's responsibility or just the situation. Whose responsibility do you
      think it is that Renee cannot get herself going again?

   b. Do you think Renee needs help?

   c. (If yes), Who should Renee go to for help?

   (If no), If Renee thought she needed help, who should she go to for help?

   - ask for more (minimum 3)

   PROBE: How might you go about doing that? or
   PROBE: How might she go about doing that?

   d. If Renee were your friend, how would you provide support and help?

   - ask for more (minimum 2)

   PROBE: How might you go about doing that? or
   PROBE: How might she go about doing that?
9. Terry is __ years old. She has serious money problems and never seems to be able to make ends meet.
   a. Whose responsibility do you think it is that Terry has serious money problems?
   b. Do you think Terry needs help?
   c. (If yes), Who should Terry go to for help?
      (If no), If Terry thought she needed help, who should she go to for help?
      - ask for more (minimum 3)
      PROBE: Who might that be?
   d. If Terry were your friend, how would you provide support and help?
      - ask for more (minimum 2)
      PROBE: How might you go about doing that? or
      PROBE: How might she go about doing that?

10. Robin is __ years old. She spends a lot of time wondering who she is and what she is going to do with her life. Sometimes she spends so much time worrying about this that she has trouble getting anything else done.
    a. Whose responsibility do you think it is that Robin spends so much time wondering who she is and what she is going to do with her life?
    b. Do you think Robin needs help?
    c. (If yes), Who should Robin go to for help?
      (If no), If Robin thought she needed help, who should she go to for help?
      - ask for more (minimum 3)
      PROBE: Who might that be?
d. If Robin were your friend, how would you provide support and help?
   - ask for more (minimum 2)

   PROBE: How might you go about doing that? or
   PROBE: How might she go about doing that?

11. Jane is __ years old. She has been unemployed for about a year now. Lately she
     has been becoming more and more depressed and hardly ever looks for work
     anymore. She doesn't seem to know what to do with her days.

a. Whose responsibility do you think it is that Jane is unemployed, depressed, and
   hardly ever looks for work anymore?

b. Do you think Jane needs help?

c. (If yes), Who should Jane go to for help?
   (If no), If Jane thought she needed help, who should she go to for help?
   - ask for more (minimum 3)

   PROBE: Who might that be?

d. If Jane were your friend, how would you provide support and help?
   - ask for more (minimum 2)

   PROBE: How might you go about doing that? or
   PROBE: How might she go about doing that?
Appendix B
WISDOM SCORING FOR SCENARIOS: RESPONSE EXAMPLES

Self - Score of 1

Subject 112042

Responsibility? I think it’s his fault - people ought to let him know - not tell him off - but say - you know what’s wrong - you’re not doing this - help him a little bit - it’s his fault

Help? Yes - if he sits around saying - who am I - he’s a head case and he needs a doctor

Help? Who? doctor, psychiatrist [FK], hypnotist

Your support? Say - look - you are who you are - you ain’t going to change it yourself - don’t spend money on a face-lift - just stop worrying - stop, stop, stop - let it go - just stop worrying about it - I mean - it’s important to think about yourself - but all this mumbo-jumbo - just get it out of your mind - just take a vacation

Death - Score of 1

Subject 222041

Responsibility? Hers, nobody else is really involved - the situation

Help? I guess so.

Help? Who? I don’t know - but, not to a psychologist or psychiatrist which most people would say -- I think psychologists and psychiatrists are idiots and don’t know what they are doing.

Your support? I don’t think I could help her - there’s nothing anybody could do about it really - I don’t know what to do about things like that

Friends - Score of 2

Subject 412161

Responsibility? His.

Help? Maybe.

Help? Who? Go to someone he could talk to - a friend, a psychologist, professional help [FK] - Go out more, meet people at work, at bars [PK]
Your support? Tell him he has to get out more, talk to people more, talk to someone at work about what they're working on [PK]

**Drinking - Score of 2**

**Subject 211022**

Responsibility? His

Help? Yes

Help? Who? AA, older role model, somebody he can talk to, church member [FK]

Your support? Tell him he shouldn't drink - it's bad for you - too much is too much - tell him - calm down, drink once a week - one glass. I would try to stop him from drinking if it gets too bad - try to get him to go to a program - sit and talk to other people that's had the problem - drinking problem - persuade him [PK] - give you 10 bucks if you go

**Death - Score of 3**

**Subject 321031**

Best guess? Cause she's just gone through a great loss in her life - to lose a parent - something very difficult to go through [C]

Help? Yes, probably needs to go to counselling or something like that - to have someone to talk to so she can let out her problems [PK]

Help? Who? Friends - other members of her family [FK]

Your support? Just sitting down and listening to her if she needs someone to talk to [PK] - that's a major problem too - someone who's just gone through losing a parent - it's hard to know what to say - just telling them - that maybe - that friends

Advice? I think I'd tell her that she needs to talk to someone - like a professional, sort out her problems [PK] and - get on with the rest of her life [C]

**Money - Score of 3**

**Subject 421092**

Responsibility? Probably hers
Help? Somebody to tell her - you need to sit down and make up a budget and find a job [PK] - this is everyone's basic survival responsibility [C]

Help? Who? Whoever is closest to her or anyone she feels comfortable with [FK] - cause everybody has the same kind of problem as that [C] - as long as it's not real serious - if it's just, what I mean by serious - is that she has a house and 3 kids and her car just went to the shop - that's real serious [C]

Your support? By giving that unwanted advice - stop doing what you're doing, get yourself together, stop buying so much you can't deal with it, etc. [PK]

Drinking - Score of 4

Subject 412111

Responsibility? His

Help? Needs to do something about it himself [C]

Help? Who? AA; I would say a close friend [FK] but by the time an alcoholic realizes he needs help he has lost his close friends and there aren't any available - or if a close friend had tried to help before - it's hard to go back to them and say you were right

Your support? Encourage him to take a look and see if he is happy with life and if he isn't happy with the way life is going - how could he improve the way he feels about that - if he feels that life is fine - there is no amount of arguing that you could do with him that could change that picture - all you can do - is let him know that you are still there for him and wait for him to realize that there is a problem and once they do that - you can help them, but until somebody realizes there is a problem with them, there's not much that any external person can do [C] - once he did I'd be there to listen, drive him to AA, encourage him, take away his booze [PK]

Advice? Tell him to tone down the drinking, especially in the morning and before work - if you let drinking interfere with your livelihood, you obviously value it more than your livelihood [R] I tend to be blunt - can the whisky for breakfast, have him voluntarily surrender all the whiskey in the house - can have a drink after work; I am there if he wants to talk [PK]

Unemployment Score of 4

Subject 412101

Responsibility? Might be the situation, it might be his expectations - I know that it is a vicious circle - you get unemployed and get down - due to the individual most [C]
Help? Yes, probably can’t afford a psychiatrist because he’s out of work - **may be he can get help from social agencies** if he’s like any of my friends they probably wouldn’t use anything like social workers or state funded operation - **probably just seek help from friends and family**

**Your support?** Probably just keep my ears open to hear if there is anywhere they might apply or offer some suggestions about where they might apply - might tell them some story about when I was unemployed - what it was like for me - just to let them know they aren’t different - so they know that things can get better and it’s not just them - so they don’t take it personally and become more down on themselves

**Advice?** Tell him to keep up - keep working at it - I don’t know - I’m not very good at that

**Friends - Score of 5**

**Subject 222201**

**Responsibility?** Inconclusive, can’t tell - I can’t say to her because it depends on what’s happened in the past - if something’s happened in her family situation that’s made her become introverted - she’s not going to be able to go and make friends - you can’t really say it’s her fault from information given - I would say it’s her fault - but you can’t really tell

**Help?** Yes.

**Help? Who?** Someone that’s close to her and good for her - could give her good direction - might be her parents, but may not be - may be a minister, but she may not go to church - may be a teacher at school that she’s close to - someone that lives on the street - an older person that’s grown up with that could help her out

**Your Support?** May not be able to - an important thing for solving problems is to find the problem - find out why she is not making friends - I might be able to see it easily as an outsider but I might have to ask questions about family and past experiences or to observe and find out what the problem is and then let her recognize it and then, make some changes - because, if that problem’s gone, then maybe she’ll be able to make friends - it depends on how serious the problem is, if it’s a mental problem you can’t just sit there and tell someone that they have a problem, especially if it’s very complex, she’d probably need a professional person to help them - I can just sit there and tell you what the problem is, but, it’s something you have to realize for yourself - it may take — seeking professional help - try to be a friend, to be there when she has a problem - also depends on how difficult the problem is, if it affects me, if it turns me off as a friend - but I could always try.
Self - Score of 5

Subject 221032

Responsibility? Hers

Help? I don’t really think that Robin needs help - I just think that she’s going through what most teenagers go through at some point - that time in their life - teenage years - that is - when you start thinking about - who am I - what am I going to do with my life - if I don’t know who I am, I can’t make any decisions - so you eventually spend a lot of time thinking about it - after a while you become comfortable with yourself and you start to find out who you are - basically, I think - all teenagers go through it [C]

Help? Who? Maybe her mother, maybe another teenager - so she could notice that she wasn’t alone in the situation - other people are going through it too - her best friend - even her sister - if she had a sister and her sister were a teenager - older - [FK] - find out how she felt when she was 17 [PK]

Your support? Let her know that I went through the same thing [R] - I couldn’t tell her that this is the way you are going to come out of it and this is how you should think and this is what you should do [U] - I would just let her know that I went through it once [R] and eventually you find out who you are and you become comfortable with yourself - but it takes a little time [C] - get a few other people to tell her so she realizes that there is more than one teenager going through that [C]
Score of 1

Subject 111042

I: Of the important events - what was most difficult?

S: None hard for me - I always find a way out of a place - or situation - I’m not really hurt by anything - I just take it as it is and go [PK]

I: so you’re saying that none of these problems were really hard for you last year?

S: No

Subject 212012

I: So, you would say the most difficult for you was --

S: Being ill - had to stay in hospital a few weeks, isolation - I couldn’t be with anyone to talk to - had everything on paper products - to be disposed of - it was just boring - just sat there and stare at a wall

I: When?

S: Last summer - July

I: Could you tell me more about how you felt at the time?

S: It was depressing [FK] and I felt really bored - there was not activities - I don’t run around a lot anyway, but there was really nothing to do

I: Did you do anything to deal with this?

S: There was nothing I could do

I: Has this continued to influence your life?

S: No

I: How have you been feeling since this happened?

S: The same - it hasn’t changed my point of view on anything
I: If you could live it over - would you deal with it differently?
S: No

Score of 2

Subject 111051

I: - most difficult important event?
S: When my mother lost her job.

I: How was it difficult for you?

S: Cause then we wouldn't get a lot of things [FK] - and she’s always home - always there

I: When did it happen?

S: Happened - late November

I: Could you tell me more about how you felt at the time?

S: I was mad - it was kind of like a mistake - cause she was always late to work and I guess that’s why they laid her off.

I: Did you do anything special to deal with that - being mad?

S: I - just started looking for me - a part-time job [PK]

I: Has it continued to influence or make a difference in your life?

S: No, cause she got a new job now

I: Can you tell me more about how you’ve been feeling since it happened?

S: I just been hoping that nothing like that will happen again.

I: Did you do anything special to deal with it?

S: No.

I: If you could live that time over again, do you think you would deal with it differently?

S: No.
Subject 211041

I: Of the important events, which was the most difficult for you?

S: I think the family pressures on me—cause they expect me to do this and do that and work and things like that—they expect me to be like—not an A student but, you know, perfect—good grades—real good grades—uh, well not so much work but they didn’t really care—my grandmother didn’t really care if I worked too much—during the year but she didn’t like when I slept a lot—she wanted me to—she wanted to see me doing the work and I would tell her that I’m going to do it—but you know she wanted to see me doing it then and there and—when you come home from school and you don’t feel like going right to your homework—take a little nap and wake up later and do my homework—and things—that’s about all the pressures I really have.

I: How is that difficult?

S: Because I don’t like any kind of arguments—I don’t like people to argue with me and I don’t like arguing with people and my grandmother likes to argue—it’s difficult because I don’t like to argue and plus she talks about her money and stuff—for college and things—she wanted me to get all these good grades so that she can send me to college and it won’t be as hard for me—cause she’s really concerned about me [FK]

I: When was all this happening?

S: Last school year.

I: How did you feel when all this was going on?

S: I thought my grandmother was blowing everything out of proportion—then my little brother—he has school problems too—not really—but they expect the same thing out of him, for him to get as good grades as I did when in school

I: Has this continued to influence you—to make a difference in your life?

S: They keep telling me to strive—better strive—you know—be the best I can do.

I: If you could live this time over—would you deal with it differently?

S: I guess I would try to be more understanding with my grandmother [PK]

Score of 3

Subject 221062

I: Most difficult important event?
S: Selecting a college.

I: How was that difficult for you?

S: Cause so many colleges say they have so much to offer and you don’t really know which one’s the best one for you - or where you can get the best education [FK] - but I did come here and talk to a few people that I knew who went to the school [PK] - they told me that - that this is a pretty good school - it’s kind of hard but that’s to be expected if you want a good education - I think that was the most difficult for me.

I: How did you feel at the time - choosing the college?

S: A lot of people here made it a lot easier for me - cause when I came here I talked to -- and -- in the Admissions Office and they were pretty nice to me - in the Financial Aid Office - they gave me a lot of inside - about the school itself and the students that were here - the head of the engineering department - he came to -- during the school year and when I came here I talked to him about some of the classes and things - so it really wasn’t hard but it was a little difficult because I wasn’t sure if I really wanted to come here - it’s not that far away from home and this is away from home but it isn’t and when you go away to school I think you should be away-away - but I’m not ready [C]

I: Was there any special feelings going through your mind at that time?

S: Not really, just whether this was right for me - whether I should come here or not [FK].

I: Has it continued to influence you or make a difference in your life - the decision?

S: I never had a doubt that I wanted to go to school regardless of where I was as long as I get to school -- the hard part’s over.

I: So, since that time you’ve been feeling glad that you made that decision. If you could live that time over again do you think that you’d deal with it differently - the decision?

S: No - I might not have taken so long to make my decision - I came in on a PDP day when they accept you on that one day - I took so long to send in my applications because I had so many - I didn’t know where I wanted to go - so I never really sent any of them until the last minute and I still didn’t mail this one but then I came here and I said - let’s see if I can get accepted and I did - so I was late - yeah - I’m coming here - so that’s what I did

**Subject 321041**

I: Most difficult important event?
S: Death of aunt.

*How was this difficult for you?*

S: Because she was the first family member I had ever seen die and she was the closest person in my family and I just wasn’t used to going to funerals and having to mourn over somebody - I didn’t really know how to - I didn’t really cry until after everything was over with and then I just cried because I felt guilty and I had a hard time dealing with that [C] - I had to talk to my parents and our minister to try to handle the situation [PK] - I guess that’s about it

*I: How did you really feel at the time or did you do anything special to deal with it?*

S: I felt bad because she had cancer and she was sick for a while I guess and I was away at school and I didn’t make much of an attempt to get home to see her and she was always calling and asking for me to come see her and so when she did die, I felt guilty about not seeing her before she died and the last time I did see her she wasn’t really coping so I don’t know if she realized I was there or not [C].

*I: Has this continued to affect your life?*

S: Yes, cause after she died - both my cousins kind of - well, they’re both into drugs now and my uncle - he is more or less - he let his own mother move into the house and they’re redecorating and did everything up - he also has cancer now - so, he’s getting ready to die and so - and their grandmother won’t let them move back into the house or have anything to do with it and she doesn’t accept her great-grandchildren - it’s a big family crisis right now

*I: Has this changed your life in some ways?*

S: Yeah, it’s made me appreciate life - cause she was - like only 45 when she died and since he’s just as sick as she was - it’s making - I’m losing a lot of family members quickly - maybe I was just lucky because I didn’t lose any family members before now - but I just feel - I don’t know - that’s just being selfish - I wish that they didn’t have to leave [C]

*I: If you could live this time over again would you have done anything differently? - I’m going to rephrase - if your uncle died would you think you might go about it differently - handle it differently - your feelings might be stronger.*

S: Oh yeah, I would probably handle it differently because I - well, we know he’s going to die soon - cause he’s gotten real sick lately and I’ve just almost accepted the fact that he’s going to be leaving and there’s nothing I can do about it.
Score of 4

Subject 211042

I: Most difficult important event?

S: Academic performance.

I: How was it difficult for you?

S: So far, I've done well in school - but during my senior year - I began to lose that essence - that grip that I had on my subjects and it seemed like I couldn't master skills like I had always had even though I did well in school - I was putting forth a great deal more effort than I usually do - so that cause insecurity within myself - made me saying - maybe I'm reaching the end - maybe I'm reaching the point where all of a sudden I'm going to be mediocre - or - all of a sudden I'm just going to be another face in the crowd academically [FK]

I: When did you start noticing that, when did that start happening?

S: My senior year.

I: Could you tell me more about how you felt at the time - that you started noticing that?

S: I felt defeated - my self-confidence was debilitated much more than usual [FK] - sometimes I felt less --- around me and my school - and - strongest feelings

I: Did you do anything special to deal with it?

S: Unusual - but - for me, say - I don't care - if I don't get an A, so what, if I don't get an A, I'm not going to die - maybe my reputation will suffer but, other than that, life goes on [R][PK]

I: Has that continued to influence you or make a difference in your life?

S: Yes, it influenced me to change my major [PK] - originally I had planned to major in chemical engineering - however, I realize maybe if I had majored in chemical engineering I would have passed but I wouldn't have been as shining as I usually was academically - so I did change my major in effort to establish that security - in my mind I say - this major's a little bit easier - I'll do a little bit better and it's just as good [C]

I: Could you tell me a little bit more how you've been feeling since that time since you noticed that your grades were slipping?
S: It wasn’t how much my grades were slipping, my confidence was slipping - since then I’ve bounced back tremendously - I think I’m more obnoxious now because of it - I’ve had a tremendous re-thinking - re-evaluation - tremendous surge of “yes, I can do it” positiveness, optimism [C]

I: If you could live that time over again, would you deal with it differently?

S: No.

Subject 411072

I: Most difficult important event?

S: My wife went to the hospital and that was the most difficult - well - there were two things and both of them were equally difficult - I was working and I got my job terminated and I didn’t feel it was fair and that ranks right up there with my wife being in the hospital - those two problems were head on problems and they had the most impact on me.

I: How were they difficult?

S: Because - one was emotionally difficult and one was emotionally and financially difficult [FK] - because one made me realize that anything can happen to anybody - well, both of them made me realize that [U] - they really weren’t that different - they both dealt with money - but one was giving me money and the other was taking money away - because one was giving me bills and one was paying bills - so as far as money is concerned - they were the exact opposite - but as far as emotions were concerned they were both disheartening [C]

I: When did this happen?

S: Two months apart - May to July

I: How did you feel?

S: About wife’s illness - felt depressed because there was nothing I could do about it [C] - generally I’m not the type of person to get into a situation where there’s nothing I can do about anything - I’m handcuffed - it’s an emotional problem — my feelings were hurt because there was nothing I could do about the situation - the financial situation - when I lost my job I didn’t think it was fair because I didn’t feel I was being judged properly [C]

I: Did you do anything special to deal with this?
S: As far as dealing with the emotions - well - I cried - when I'm in the hospital I'm allowed to cry - so - I do it every now and then - I don't do it often - but it feels better after you do it - as far as dealing with my employment there was nothing emotionally I could do about it - but grit my teeth and bear it - that's all I could do.

PK

1: Has this continued to influence your life? How?

S: Because I'm unemployed right now and that's a monetary difference as far as having my job terminated - emotionally - when my wife was - that let me know that sometimes there's nothing you can do about anything [C] - so, one was financial and one was emotional - I think those are the two biggest problems that people have - that run into money - people that get married and have jobs.

FK

1: If you could live this time over, would you do anything differently?

S: Sure - pertaining to wife's illness - probably - I would have made her seek medical treatment sooner [PK] - but that's it for that - because there's nothing I could do about the emotions - they're still the same if it would have happened all over [FK] - as far as my job was concerned - I probably would have been more wary of things that happened [PK]

Score of 5

Subject 321072

1: Most difficult important event?

S: Dealing with the breakup with my boyfriend.

C

1: Please tell me a little bit about that?

S: Well, it was emotional and it was disheartening [FK] - I lost a lot of personal self-esteem and it - I mean - I wasn't sure of myself and to put it mildly - from what I've been told - I was told I was a serious bitch and that's to put it nicely and I can see it - you know - it wasn't something I was expecting - we'd been together for two years and - I thought things were going fine and part of it had to do with me coming to school here and part of it had to do with him being - he decided he wasn't sure how he wanted to work things and we broke up and I thought - that was it and then we kept seeing each other, going out and everything else [C] - it was hard to deal with - there was no commitment [FK] - you know - as far as - I would see him with other girls - or whatever and that kind of thing - so - for the longest - I wasn't sure if we were broken up or if we weren't because - he would still call - I'd still see him - we'd still go out, but then - on the other hand I'd see him with other girls and things like that and it was just - it was hard to deal with [C] - you know - and like - friends had
gone through similar situations - at least with the breakup and everything and they
were trying to give me advice [R] and I was, like - you don't understand and you know -
I turned really into myself and threw myself - I threw myself back into the church -
I really started getting involved there and that helped and I mean - I just really
started realizing that - I can't just let that affect me as much as I'm letting it [PK] - I
mean - there are other people - there are other things to do - and other situations
and there are too many people counting on me to get through college and do my best
there and I think that was the biggest thing - because - my grades weren't what I
wanted and I really couldn't talk to my parents about it because my mom still
thinks he is the epitome of sainthood - my dad never liked him, so - there was no
way I was ever going to get an unbiased answer there - my best friend - was - she
hadn't ever really met him - all she knew is what I told her about him - which - from
what I was telling her and then the way I was feeling and the way I was acting -
were - two different things and she didn't really know how to help me and the
people in the church that I would have talked to - the minister and everything - were
close friends with both of us, so that - left that - you really couldn't touch it because
I could see them now - really trying to interfere - you know, on my behalf, or
whatever - there just wasn't really anybody to talk to [C] - one day, something said -
child - wake up - if you can't deal with it, don't go home for awhile - give yourself
time here [PK] and even - though - besides that - you're not the only one hurting
here - you know, you're not just hurting yourself - there are too many people - you
know - home - I am the oldest girl of six kids - my mom's got six kids and my dad's
got seven - I have a half brother and I'm third in line - first one to go to college - I
have two younger sisters - two younger brothers - the middle two - boy and girl -
they're using - I'm breaking the ice for them as far as coming to school and what
they're going to be allowed to do and not allowed to do - I'm breaking new ground -
my older brothers never did it - so, I mean - if I get here and mess up, my parents
are just going to be that much more strict on them and - it was - just that kind of
situation and it wasn't just one day - it was over a period of time - I was just looking
at everything - I just said forget it - this is it - I've got to do - I mean - there are too
many things that I want to do to let something that happened 3 or 4 months ago -
bother me - there's just too much to do [C] and I was like - yup - slowly but surely -
my job sent me away for the summer - he got sent away for the summer - that was
three whole months and that helped and I came back here and I didn't go home for
a couple of months and you know, occasionally I see him in church or whatever -
but by then I'd got my license so when church was over - I'd be waving to
everybody as I was walking out the door - I kept right on going and that helped and
now - we see each other - we talk - I talk to him like it's going out of style - you know -
I met this guy - I'm having problems - I don't understand why he's doing this and
I'll explain it to him and he goes, I think - personally - he's doing it because of -
and he'll let you in on why he thinks guys react the way they are - but that took me
almost a year from the time we broke up to be really good friends and now I can
actually be honest with him because I used to avoid saying things because I knew it
would start an argument and now it'll be like - you're being a jerk - you know [PK]
I: Has this continued to influence you or make a difference in your life?

S: Yeah - cause I’m learning to like myself a lot more - I’m finding I can be self-sufficient [R] - when - you know - people always say when you get older - who are you going to marry - or do you just want to be a housewife or do you want to be - and I’d always just agree with them - oh, yeah - that’s all I’m going to do - all through school - I’ve always had a goal - since elementary school I’ve wanted to go into law [R] and you know - but also - I’m a daddy’s girl - where - my dad’s been very protective and he’s spoilt me rotten and everything and I’ve always gotten what I’ve wanted and Jimmy - when he broke up with me - it was like - oh my God, because - I always thought that this is who I wanted to be with and I thought - this is something I want that I can’t have - that kind of hit home and just everything else - it’s like - now - I’m like - that’s okay - I’m striving for what I want - I’m going to do it and I’m going to be the best at it and I’m going to succeed and right now - I’m working - I’ve got my own car - independent as far as needing money from my parents - self-supportive - would be a better phrase - I’m more confident, my grades are going up - I’m finding out - it’s always been that you don’t need a man to survive - but - the way that I grew up - there was daddy on one end - protecting me and I had my older brothers and my younger brothers taking care of me - I don’t know how to cook - I just learned how to use a washing machine because I lived on campus [C] - and I’m learning that I can be independent and that it’s okay to be me and I don’t need a guy to do it - to be me [R] - I mean - there’s guys and I’ll be like the rest of them - I’ll sit there and I’ll smile and wave and I’ll go out with them - but they’re not the beginning or the end of the world - least that’s the way I’m seeing things now and I’m happy with it - I like it - I like me now - more determined to be independent - an individual - I’ve been told I’ll end up single because of that - I say - that’s all right - I’ll be a very self-satisfied 50 year old woman enjoying myself [C]

I: If you could live this time over again - dealing with the break-up and all - would you deal with it differently?

S: Yeah - I think - at the beginning - I would have cut all ties a lot earlier than I did - I would have cut those because I needed that time to get together [PK], but then - maybe I wouldn’t have because by everything happening the way it did - it’s made me feel just that much more - better about myself [C] - I’m not sure - that’s kind of an iffy question because if you - you go back and change - you don’t know whether - you’re saying that - time is already preset - no matter what you do - things are going to go a certain way and they’re going to happen that way and I don’t quite believe it’s like that - so if you go back - if you change one thing - things are going to be different - there’s no set future [U] - I don’t know if I would change anything - yes, I would, but then again, I wouldn’t - a year later - I’m very pleased with the outcome - if you’d asked me this 6 months ago I probably would have said, no - I’m not pleased with it - I don’t care -
I still love him - but - I’m getting along just fine without him - if things were meant for us to be together - if it was ordained by God - if it’s not - it was a really fun experience [R].

Subject 421101

I: What was the most difficult important event?

S: Losing the baby.

I: Could you tell me about it?

S: About this time last year I had a miscarriage and I think that’s affected me in terms of how fragile life can be - I was about a good 5 months along and I developed an infection which caused a spontaneous or a premature labour and it caused me to lose the baby and the doctors kept saying - if I had just been a couple more weeks along the baby would have had a stronger chance of survival - if I’d only been a couple more weeks along, he’d of had a stronger chance of survival - he was born and he was perfectly normal in terms of development because he was fully developed but he was - just too early - his internal organs - were just too weak [FK] - so - it just made me think more closely about how fragile we are in terms of life and living [R] - so I value living a lot - I value life and the smallest things - that are in life - like animals or just hanging out - or just a casual - I’m not so inclined to have to have the biggest celebration or going to the best this or whatever - it’s just the smallest things that I can appreciate now about life [R].

I: When was that?

S: August 27, last year.

I: How did you feel when it happened?

S: I felt emptied out - I felt like - somebody had knocked the wind out of me because we both wanted it - wanted to have a child and I was so excited - you know - those feelings you get - happy and planning and all that and I was going along happy up until the last and had no idea that it was going to happen or that it was happening until the last moment when it was too late and I felt so helpless - so out of control [FK] because - here we are we can do all these things - send people to the moon - medical breakthroughs - all these inventions and things and you just cannot control life [U] - I just felt so helpless - because it was in me and it was happening within me but I couldn’t control it - so I felt - oh - it was just terrible [FK]

I: Did you do anything special to deal with the feelings you were having?
S: My husband and I - we took a trip to my mother’s resort which is out on the water - a trailer park out on the water - it was around September by the time I was able to go and travel - so - the resort area wasn’t as crowded and it was nice and peaceful, quiet and the weather was still nice so we just went there, spent a lot of time together, talking, walking, and trying to recuperate [PK].

I: So you think it’s continued to influence or make a difference in your life?

S: Oh, yeah, definitely - just the appreciation for life and the smallest events that life presents and its frailty [R] - funny, I was watching the show last night about foster care children and how they were abused and children abused by their natural parents and I thought - how ironic - here were women who don’t need children - cause even though you’re biologically capable of having a child doesn’t mean you need to have children and doesn’t make you a father or mother either - here they are - abusing small babies and killing them - treating them so cruelly and here I am, a person who wants a child and the doctor says I can have them but I haven’t gotten pregnant so far - every time I keep hoping - it’s just so ironic [C] - there are people out there who can’t even have children who would give a child the world and treat it like it were gold and then there are these people who can’t even control themselves and they’re going to take a human being and just destroy it like that - I think that is disgusting, but - that is life [R]

I: If you could live the time over again do you think you’d deal with it differently?

S: Maybe not - I think what helped - I know for me to get through it - is like I said earlier - the belief - the spiritual belief that I have - things happen for a reason - things - I believe - happen for a reason and even though it was hard for me to deal with the fact that I had this baby early and he didn’t survive - on the other hand - by me working with children who’ve come from premature births, damaged births and that type of thing and I see the results - I say to myself - I think my child was fortunate that, if he came early, he didn’t survive because no telling what damages might have occurred and that, to me, is even more devastating - to see a child struggling to learn and struggling to be in this world without all their capabilities - it’s really hard so I think that - even though it did happen that way - maybe it was the better for it [C] - I try to process it in the positive rather than dwell on it in the negative because if I dwell on the negative, emotionally I’d be wrecked [PK].
Appendix C
**SCENARIO SCORING - FRIENDS**

**Life-span Contextualism**

**Self:** (1) could be her personality, maybe she’s shy; (2) sounds like she has low self-esteem - doesn’t feel good about herself; (3) maybe doesn’t have self-confidence, isn’t outgoing; (4) she needs to look at herself and see how she acts and what attitude - that she carries, cause that might be her problem; (5) may not fit in, i.e., different in some way; (6) ask what he thought the problem is; (7) I’d offer him a different set of advice .. depending on what I saw

**Situation:** (1) it could be the situation - I’ve known those feelings too - being lonely and then you start feeling sorry for yourself; (2) she could be homesick

**Universal Situation:** (1) everyone goes through it; (3) I think everybody is like you sometime - you go someplace new - you feel scared and alone cause you don’t know anybody

**Relativism**

**Self-knowledge:** (1) just be yourself; (2) needs to grow a little bit more and feel a little bit more comfortable with himself - find out who he is, what his beliefs are, what his goals are

**Individual differences:** (1) you can’t change a person - you can’t tell them to go out and meet people; (2) some people are not really social people- don’t know how to mix in there good; (3) depends on who she is close to or who she can open up to; (4) I would tell her how I would go about doing something or how I would feel but I wouldn’t go about telling her what to do or how to go about doing it
Perspective-taking: (1) explain to her how I saw her, what could be changed

Uncertainty of Knowing

Limits of knowing: (1) since I don’t know what her job situation’s like, nor what her friends are like, it might be her

SCENARIO SCORING - DRINKING

Life-span Contextualism

Self: (1) probably some type of identity crisis; (2) try to show what he was doing to his life; (3) that’s affecting his life; (4) see exactly where her head is - if she’s denying that she has a problem

Situation: (1) depends on how much she is drinking; (2) find out why she is drinking; (3) find out what the problem was; (4) there might be a family problem; (5) having problems adjusting with school, peers - maybe it’s the first time she’s lived away from home; (6) I’d say she is just not handling her stress of life and is coping by escaping; (7) it could affect a lot of other things too

Limits to the normal range of behavior: (1) AA - but probably need a friend to get her to go - there’s not many people who would go on their own; (2) I’d be supportive but I wouldn’t allow that behavior with me - I think that you cover for people to a point and then there are times when you make them do things and then give them support for those things

Relativism

Self-knowledge: (1) I think you need to go inside; (2) he has to first see that he needs help; (3) needs help, but the only person who can do it is her
Individual Differences: (1) everybody’s different - everybody’s motivated by different things and what works for one person doesn’t always work for another; (2) I wouldn’t tell her, I’d just suggest to her cause you can’t tell them - she’d have to decide

Future Concerns: (1) tell her what it can do --if she wants to have children - lead to difficulties for her or her child; (2) tell her that she’s messing up her life, ask her - what do you intend on doing next year - what do you plan on being? (3) tell her that she’s wasting her life - what she’s doing is not right and is not good for her body

Uncertainty of Knowing

Limits of knowing: (1) I could ask her to go but there’s no telling that she would definitely go and I can’t pull her there; (2) I don’t think I would be competent enough - I don’t know what it’s like to have a drinking problem, I have not been associated with anyone who does

SCENARIO SCORING - DEATH

Life-span Contextualism

Situation: (1) you have to continue with your life; (2) she has to learn to deal with it and go on; (3) tell her - it’s not her fault that her mother died; (4) the death of someone close is very hard to get over; (5) she just might need time; (6) it’s hard - sooner or later you’ll feel better

Universal situation: (1) these things are just part of life; (2) help make her realize that she’s not the only one who has been through it; (3) sooner or later somebody close to me is going to die; (4) talk to older relatives who have been through that or something like that; (5) perfectly normal for her to feel that way; (6) human nature to feel down
**Limits to normal range of behaviour:** (1) if depression lasts for 3 months, then might really need help; (2) needs help? - yes, if it’s been a long time since her mother died; (3) depends on how long he has been depressed (4) I think he needs time but then he’s going to have to come to the fact - you gotta move on

**Relativism**

**Individual differences:** (1) some people take it harder; depends on what kind of person he is; (2) people have different ways of handling it; (3) I just woke up one day and said - I’ve got to do something about it - she might not be able to; (4) try to give her personal counselling but sometimes people don’t talk to their closest friends

**Future Concerns:** (1) tell her how she can look at it - what’s gonna happen in her future - she has to keep moving on; (2) get her into some program for thinking and feeling about what happens after death

**Put things in perspective:** (1) you have good and bad days

**Perspective-taking:** (1) probably great stress to watch his mother die

**Uncertainty of Knowing**

**Limits of personal knowledge:** (1) I would not be competent enough to deal with the situation of cancer or death because I have not been exposed to that; (2) I don’t know that I can say it’s her responsibility for not getting herself together - the death of someone close is very hard to get over

**SCENARIO SCORING - MONEY**

**Life-span Contextualism**
Situation: (1) she’s old enough to work but her parents should give her some allowance; (2) look at the situation - her parents might not want her to work - but, then again, they might want her to and she don’t; (3) depends on why he has money problems; (4) I’d wonder why he is in such difficulties; (5) could have a family of 3 kids to support

Limits to normal range of behaviour: (1) depends on - how long this problem has been going on

Relativism

Perspective-taking: (1) ask friends - that have jobs and see how they would handle it

Uncertainty

Limits of knowing (1) to the best of my knowledge

SCENARIO SCORING - SELF

Life-span Contextualism

Self: (1) if he doesn’t know who he is - he has to find himself - before you can find anything else; (2) needs to evaluate who she is

Situation: (1) perhaps - unhappy with her situation right now and she doesn’t want to see herself 5 years from now in the same situation; (2) I’d talk to her and want to know why - like where she feels like she’s failing at things; (3) maybe worries too much because they’re putting too many expectations on her

Universal situation: (1) I think everybody goes through such a period when they are unsure of who they are; (2) maybe his friends would be going through the same thing; (3) tell her - everybody goes through it; it’s a phase
Biographical context: (1) family should have given her some type of direction early in life; (2) why is she like this at 21 - what kind of childhood or adolescence did she have? (3) problem stems back to an earlier time -- people should have set him on a path to choose

Limits to normal range of behaviour: (1) if it’s keeping her from doing other things; (2) if he takes too long to make up his mind; (3) if he hasn’t figured it out by now he’s going to need somebody to point him in the right direction at least; (4) if it starts affecting what he’s doing; (5) I think it’s fine to wonder but you have to start acting too - there’s a limit on everything

Relativism

Put things in perspective: (1) let her know that if she should fail, it’s not the end of the world - we’re all human

Perspective-taking: (1) talk to - person - think you’d get the best advice from; (2) tell her that she makes a difference - point out the good things that she does - people always need others and she may not see that; (3) try to get her thinking in a more constructive way

Individual Differences: (1) depends on who he is - what I suggest; (2) nobody can tell her who she is and what she should be - that’s something you have to do yourself; (3) you have to master it yourself - in the end - it’s up to you - it’s something you really have to solve yourself; (4) no one can help you find out who you are - she’s got to do it herself

Uncertainty of Knowing

Limits of knowing: (1) I don’t think anybody can ever really say: “I know who I am” - she can have an idea of who she is I couldn’t tell her that this is the way you are going to come out of it and this is the way you should think and this is what you should do
Limited personal knowledge: (1) I’ve never had a problem like that so I don’t think I’d know what to say to her; (2) I’d give him advice to the best of my ability

**SCENARIO SCORING - UNEMPLOYMENT**

**Life-span Contextualism**

**Situation:** (1) for emotional help - pray - for financial help - go to unemployment office;

(2) depending on how depressed she is

**Self:** (1) I guess he can go to family and friends but at the end it’s going to have to be him; (2) mostly I think it has to come from her - she has to push herself

**Relativism**

**Individual differences:** (1) there may be many choices but it would be up to you because I can’t live your life for you and your parents can’t, only you can do that

**Put things in perspective:** (1) tell her that not having a job is not the worst problem in the world

**Uncertainty of Knowing**
Appendix D
STRESSFUL LIFE EVENT SCORING

Life-span Contextualism

1. Universal Situation: (1) these things are just part of life; (2) everyone goes through it; sooner or later; (3) it’s something that can happen to anybody; (4) politics at work - it’s everybody’s problem

2. Universal Reaction: (1) I think everyone is like this sometime; (2) it’s human nature to...; (3) it’s perfectly normal to feel that way

3. Limits to the normal range of behavior: (1) if it goes on too long; (2) depends on how long it’s been going on; (3) if it’s affecting what one is doing; (4) if it’s keeping one from doing other things; (5) so that was all I could do

4. Person (aspects of individuals): (1) identity crisis; (2) self-esteem; (3) self-confidence; (4) personality

5. Reflections on aspects of self (Self-knowledge): (1) needs to look at oneself; (2) has to come from oneself; (3) needs to know who he/she is; (4) I’m a private person - not used to self-disclosing; (5) changed the way I thought about life and others; (6) I felt sort of angry at myself because I know I could have done better; (7) I had self-determination; (8) I thought I was really stupid; (9) felt depressed, hurt, handcuffed

6. Others: Involvement of Others and Understanding of Human nature: (1) someone she can relate to; (2) someone to identify with; (3) the teacher I had influenced me; (4) you don’t understand why they’ve suddenly changed

7. Situation, i.e., Expand on the Situation and its Implications for Self: (1) family problem; (2) life transition; (3) problem with health; (4) need job, but lack skills; (5)
losing a very significant person; (6) marriage - lifestyle adjustments; (7) really hard for me to quit job because I needed money to go to school; (8) realizing that he is not going to be here forever - the effect on my life; (9) hard getting used to being alone

8. Consider event in relation to others: (1) the initial reaction was not to grieve for myself, but for my grandmother who would be alone

9. Consider event in the context of life as a whole (put it into perspective): (1) feeling that things were changing and you couldn’t go back to what was before; (2) It’s going to affect my life

10. Expand on Biographical context: (1) way one was brought up; (2) religion

11. Past/Present/Future considerations: (1) reevaluate goals; (2) able to leave and go on to better situations

Relativism

1. Perspective taking (Knowledge about another perspective): (1) see from another view; (2) recognize that there are other possible ways of looking at it; (3) ask friends for advice (4) it will change the way I look at some people; (5) changed the way I look at myself;

2. Individual differences (i.e., personality, priorities, values, goals): (1) some people take it harder; (2) choice is up to you - can’t live your life for you - only you can do it; (3) depends on who one is; (4) got to find answers to one’s own questions; (5) nobody can tell you - have to do it yourself; (6) people have different values and that is part of society; (7) if your goal in life is to be a big shot; (8) some people are that way and some people are not; (9) not sure how she will feel about removal of a breast
3. Put things in perspective: (1) you have good and bad days; (2) not the worst problem in the world; (3) if fail - not the end of the world; (4) life's just going to be like this, it's all part of being a grown up; (5) a lot of people get C's, it had to happen to me sooner or later

4. Cost-benefits analysis (plans and goals): (1) do I really want to put up with this for the next couple of years

5. Future concerns (relative to one's present situation): (1) effects on one's life in the future; (2) to make sure that we could make it on our own; (3) I'm more determined to get back to school; (4) I don't want to work minimum wage jobs all my life

6. Values and goals - Self-knowledge: (1) find out who one is; (2) I think it will have a lasting effect on me as a person-it's changed the way I thought about myself and motivated me to work harder

Uncertainty of Knowing

1. Limited personal knowledge: (1) I don't know what it's like to have that problem; (2) I don't think I would be competent enough; (3) I haven't been associated with anyone who does;(4) to the best of my knowledge; (5) I'm not an expert; (6) I couldn't tell her that this is how you should think

2. Uncertainty of knowing about life and the future: (1) I don't think anyone can really say "I know who I am" (2) if it's going to happen, it's going to happen, if it isn't, thank God; (3) realization that he is not going to be here forever; (4) worry about the future is it education that I need or do I just work harder?
3. Limits of knowing: (1) made me realize that anything can happen to anyone; (2) I don’t know if I could be a support system for her; ask me five years from now