**The Career Development of Adolescent Mothers: Research to Practice**

Heather Heinfelden Barto

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Pamelia E. Brott, Chair

Simone F. Lambert, Co-Chair

Gabriella M. Belli

Norma L. Day-Vines

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**ABSTRACT**

This research endeavor contributes to a better understanding of the career development of adolescent mothers by (a) highlighting the contextual considerations; (b) examining the existing body of literature; (c) contributing to the research on adolescent mothers' career adaptability, resiliency, and obstacles;  and (c) proposing ways to bridge the research to practice gap.  An ecological examination of the contextual considerations associated with adolescent pregnancy and motherhood provided pertinent information on which to base a culturally sensitive framework to examine the career development of adolescent mothers using the concepts of career adaptability and resiliency and an assessment of obstacles that may impede their career development.

The culturally sensitive framework was used in two studies conducted to better understand the career development of adolescent mothers.  The first was a content analysis designed to provide a better understanding of the published literature and to direct a research study.  Content analysis findings revealed the need to develop and implement comprehensive programs for adolescent mothers that are strength-based, responsive to areas of need, and foster career development skills/knowledge and resiliency.  Using the results of the content analysis, a study was designed to examine the relationships among career adaptability, resiliency, and perceived obstacles to career development with a convenience sample of adolescent mothers.  Results indicated that these adolescent mothers were similar to non-mothering peers in the planning and decision making dimensions of career adaptability but lower in exploration.  Traits of personal resiliency and emotional reactivity were comparable to non-mothering peers, but

relational resiliency was lower.  Obstacles most often cited as impeding career development were pressing immediate needs and educational/career related concerns.

Finally, the need to bridge the research to practice gap is discussed including considerations related to practitioners, organizations, and communication.  In an effort to bridge the research to practice gap, the Interactive Systems Framework (ISF) is proposed as a model for communicating with practitioners through *Synthesis and Translation*, *Support*, and *Delivery* systems.  The model is presented as an example for sharing with practitioners a culturally sensitive framework on the career adaptability of adolescent mothers supported by dissemination and implementation of research findings.

know.  I love you.   To my role model, Mom, you were the first doctor in the family and my

guide for balancing family, school, and work.  Although our styles may be very different, I have

learned so much from your advice and support.  I love you.

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**CHAPTER 1**

**A Culturally Sensitive Approach to the Career Development of Adolescent Mothers**


Much of the professional literature portrays adolescent motherhood as a social problem and a non-normative life event that results in negative long-term consequences for both the mother and child (e.g., Bonell, 2004; Schellenbach, Witman, & Borowski, 1992). This portrayal suggests that adolescent motherhood restricts the potential for future success by reducing an adolescent mother's chances for developing the behaviors, skills, and psychological processes to effectively cope with developmental tasks (Smith-Battle, 2005). Research on adolescent motherhood can be separated into the categories of prevention and intervention. While beyond the scope of this research endeavor, prevention literature is helpful to further understand the pregnant and parenting adolescent differs from peers who do not become pregnant during adolescence and may also provide ideas to strengthen intervention strategies. In addition, the prevalence of diversity and multicultural issues in the adolescent pregnancy prevention literature helps to demonstrate why racial, cultural, ethnic, and other cultural factors like geographic location may be useful in developing a better understanding of adolescent pregnancy and parenting. Intervention research focuses on interpersonal issues and academic achievement of adolescent mothers, which includes career development. Interpersonal issues studied have included stress (Milan, Ickovics, Kershaw, Lewis, Meade, & Either, 2004), parenting skills (Feldman, 2007), and/or abuse or neglect potential (Hunt, Joe-Laidler, & MacKenzie, 2005). Research on the academics of adolescent mothers has focused on academic achievement (i.e., grades and test scores), graduation rates (DeBolt, Pasley, & Kreutzer, 1990), and academic success (Zachry, 2005). However, there is a striking dearth of research that explores the career development of adolescent mothers (Sieger & Rank, 2007).

Career development terminology can be misused and may have different interpretations depending on the theoretical framework utilized (Brown, 2002; Niles & Harris-Bowlsbey, 2009). The current view on *career* is based on the narrative and the events and roles that constitute a life (Brott, 2005; Niles & Harris-Bowlsbey, 2009). *Career development* is the behaviors, skills, and psychological processes over the life span that integrates one's life roles and values, decision-making, and self-concepts to effectively cope with developmental tasks (Niles & Harris-Bowlsbey, 2009). Unfortunately, there is a gap in the literature to conceptualize the career

development of adolescent mothers, and there are concerns about whether the current research provides an accurate portrayal (Bonell, 2004; Hunt et al., 2005; Smith-Battle, 2005).

The concerns that exist about the career related research on adolescent mothers can be separated into three general categories (Bonell, 2004; Smith-Battle, 2005). First, the current research portrays adolescent motherhood as a societal problem and may not take into consideration the contextual factors that perpetuate adolescent pregnancy and motherhood and impair the development of career related behaviors (Bonell, 2004). Second, the amount of information presented in the professional literature on the career development of adolescent mothers is scant. Third, the current research may give an inaccurate picture of adolescent mothers as adults by presenting conflicted information and narrowly focusing on career in terms of educational and financial aspects (Smith-Battle, 2005).

It is known that some adolescent mothers do find career success as adults, but little is known about what makes some adolescent mothers successful and self-supporting in later life while others remain dependent on family or public assistance (Rosengard, Pollock, Weitzen, Meers, & Phipps, 2006). Some strategies have proven to be effective in furthering the career development of adolescent mothers (e.g., Klaw, Rhodes, & Fitzgerald, 2003). Understanding what has been successful in the past may help to explore possibilities for ensuring the future life success for adolescent mothers. Finally, it would be helpful to examine the factors that may potentially influence the ability of adolescent mothers to adapt to their life events. Specifically, how the skills of planning, exploring, and decision making foster one's ability to change in order to fit new and changed circumstances into her life (Savickas, 1997). Career adaptability appears to be a fitting way to view the career development of adolescent mothers because of the unique challenges and opportunities in their developing life stories.

In order to set the stage for career adaptability of adolescent mothers, it is important to begin with the contextual considerations of this population. The use of Bronfenbrenner's ecological framework (1977) illustrates the numerous contextual considerations that influence the parenting status and career development of adolescent girls of color. The combination of factors from the mircosystem, mesosystem, and macrosystem levels provides a wealth of contextual information about adolescent mothers and career development. The intent of giving attention to these influences is not to marginalize adolescent mothers but to more fully

understand the complex and multidimensional nature of their reality in order to further their career development.

**Contextual Considerations for the Career Development of Adolescent Mothers**

The research on the topic of adolescent motherhood in the United States often begins with the assumption that teenage pregnancy and parenthood is a societal problem, which is different from how researchers in other countries approach the topic of adolescent pregnancy and motherhood (Bonell, 2004). This health-based perspective of adolescent pregnancy and motherhood, used in research in many European countries (Bonell, 2004), tends to focus on the physical health in terms of frequency of prenatal care, infant's weight at birth, and developing a healthy diet and lifestyle for mother and child. For example, researchers in Great Britain tend to examine adolescent pregnancy and motherhood from this more health-related perspective (Bonell, 2004). The assumption that teenage pregnancy is a societal problem that prevails in the research conducted in the United States results in a research bias towards studies that focus on racial, cultural, and economic factors (Bonell, 2004). Given this bias that adolescent pregnancy and parenting is often conceptualized as social problem, it is important that researchers in the United States view adolescent parenthood as a multidimensional issue that requires attention to a number of contextual considerations (Hockaday, Crase, Shelly, & Stickdale, 2000). Concerns exist when researchers attempt to place the entire responsibility of the perceived social problem of adolescent motherhood on the individual adolescent mother (i.e., attention to only individual differences/characteristics) because it is both unfair and inaccurate if proper consideration is not given to the contextual factors (e.g., poverty) surrounding adolescent pregnancy and motherhood (Breheny & Stephens, 2007). The purpose in drawing attention to contextual considerations is not to further marginalize adolescent mothers, but to draw attention to the impact these factors may have on adolescent motherhood in the United States (Breheny & Stephens, 2007).

Excluding ecological and contextual variables that have been linked to adolescent pregnancy and parenthood provides only limited understanding of a complex and multidimensional issue. One conceptual framework used to organize the multiple factors that can influence adolescent pregnancy and parenthood is Bronfenbrenner's ecological perspective (Bronfenbrenner, 1977; Corcoran, Franklin, & Bennett, 2000). Bronfenbrenner's ecological model has also been applied to career development in order to describe numerous and potential factors that contribute to the career development of adolescent mothers (Merrick, 1995).

Bronfenbrenner (1977) delineated an ecological perspective that consisted of four levels of interacting variables: microsystem, mesosystem, exosystem, and macrosystem. The microsystem consists of characteristics of the individual, his/her immediate setting, life roles, and time. The mesosystem is described as the environment in which an individual interacts. The exosystem includes settings that affect the individual but with which the individual does not directly interact. Consistent with other research on adolescent mothers, the exosystem variables are not covered here, since there are many other variables that have a more direct influence on adolescent mothers (Berry, Shillington, Peak, & Hohman, 2000; Corcoran et al., 2000; Merrick, 1995). The macrosystem is the overarching patterns of culture that impact the individual. Corcoran et al. (2000) defined variables specifically related to each of these systems for the purpose of examining adolescent pregnancy and parenting. In the study conducted by Corcoran et al., variables from three of the system levels of Bronfenbrenner's ecological perspective (1977), excluding the exosystem, were influential in contributing to adolescent pregnancy and parenting status. In terms of the career development of adolescent mothers, Merrick (1995) identified potential positive and negative influences at each system level. Each system (i.e., mircosystem, mesosystem, and macrosystem) will be examined separately to highlight contextual considerations for both adolescent motherhood and the career development of adolescent mothers.

**Microsystem**

The microsystem is defined by Bronfenbrenner (1977) as a set of relations between the individual, her immediate setting, activities, roles (e.g., mother, daughter, or employee) and time. Factors from the microsystem can contribute to both adolescent pregnancy/parenting status and career development (Breheny & Stevens, 2000; Merrick, 1995). As the microsystem focuses primarily on the individual, it highlights the individual characteristics and differences that may predispose one to adolescent pregnancy/parenthood and influence career development skills and choices.

When researchers have used the microsystem to study adolescent mothers it has been conceptualized as the psychological variables of the individual (i.e., depression, self-concept, and stress level) and the social psychological variable of substance use/abuse (Corcoran et al., 2000). In terms of individual and social psychological variables, the results are diverse based on the focus of study and sample demographics (e.g., Breheny & Stephens, 2000). For example, results

of one study indicated that self-esteem did not impact pregnancy rates of White adolescents, but higher levels of self-esteem decreased the likelihood of an adolescent pregnancy for both Black and Latina adolescents (Berry et al., 2000).  In studying the psychological variable of substance use/abuse, Berry at al. (2000) found that: (a) cigarette use was related to an increased chance of an adolescent pregnancy for both Black and White adolescents, (b) marijuana use was related to an increased chance of pregnancy for White adolescents, (c) neither cigarette nor marijuana use was related to an increased chance of pregnancy for Latina adolescents, and (d) the use of alcohol did not appear to be related to the possibility of an adolescent pregnancy in any racial/ethnic group.  Both individual and social psychological variables have been demonstrated to impact the likelihood becoming a mother during adolescence (e.g., Berry, et al., 2000).  Subsequently, adolescent parenting may positively or negatively influence the career development of adolescent mothers (e.g., Klaw et al., 2003).

In terms of career development at the microsystem level, individual differences (e.g., level of academic achievement and commitment), individual strengths, abilities, interests, and personality traits (e.g., introversion vs. extroversion) influence career development (e.g., Hellenga, Aber, & Rhodes, 2002).  As adolescents grow and mature from children to adults they learn and discover many things about themselves as individuals that can influence their career development (i.e., future life planning) based on personal strengths (e.g., academic success, strong social skills) preferences like abilities and interests (e.g., interest and ability in science).  Most often this information about self (e.g., individual differences and personality traits) is acquired from interactions with family, peers, and other sources (Merrick, 1995).  The relationships with family members, peers, and other sources that generate thoughts, feelings, and attitudes about self that may be viewed through interactions present at the both the microsystem and mesosystem levels depending on subjective interpretation (Berry et al., 2000; Bronfenbrenner, 1977; Merrick, 1995).  Given the potential for overlap into both the micro- and meso- systems, all relationship factors even those that help to contribute to a better understanding of the individual will be explored in the following section (i.e., mesosystem) to facilitate organization and comparison.

**Mesosystem**

As described by Bronfenbrenner (1977), the mesosystem is the environment in which the individual interacts.  With respect to adolescent mothers, the mesosystem is often viewed in

terms of the family dynamics/attachments, religion, peers, education, neighborhood, and level of acculturation (Corcoran et al., 2000; Dehlendorf, Marchi, Vittinghoff, & Braverman, 2010). The influences at the mesosystem level often compete and conflict with one another in terms of the messages adolescent girls receive with respect to sexual behaviors/attitudes and career development. For example, family and church serve as important socializing agents in the African American community and may promote abstinence as the only acceptable level of sexual activity. Aaron and Jenkins (2002) contend that exclusive emphasis on sexual activity as a religious and moral anathema, may limit discussions with trusted adults about other aspects of pregnancy prevention, leaving female adolescents vulnerable to peer influences and misinformation (Aaron & Jenkins, 2002). The mesosystem provides adolescents with a number of environmental influences (family dynamics/attachments, religion, peers, education, neighborhood, and level of acculturation), which can impact parenting status and career development. For example, studies have shown that family members (i.e., parents, siblings, and extended family) can influence both sexual behaviors/attitudes and likelihood of adolescent pregnancy (e.g., Aarons & Jenkins, 2002) and career development (e.g., Brosh, Weigel & Evans, 2007).

**Family dynamics.** Family dynamics that can detract from the quality of the family environment and are considered risk factors for adolescent pregnancy and parenthood are: single-mother households, family history of adolescent pregnancy/parenting, low parental education level, and sibling pressure to be sexually active (Corcoran et al., 2000; East, Khoo, & Reyes, 2006). Family attachment patterns, level of parent involvement, and level of parental supervision also influence the likelihood of adolescent pregnancy (Browning & Burrington, 2006; South & Baumer, 2000). Adolescents whose parents are unable to provide adequate supervision and/or to foster positive parent-child relationships/interactions are more vulnerable to potential negative influences (e.g., peer pressure) that may increase the likelihood of an adolescent pregnancy (Browning & Burrington, 2006). Family dynamics that are considered protective factors against adolescent pregnancy/parenting include: connected and vigilant parents, high parental educational expectations, and communication of parental disapproval of adolescent sexual activity/pregnancy/parenting (East et al., 2006).

The career development of adolescent mothers is often influenced by family members in terms of both support and knowledge (Brosh et al., 2007). Adolescent mothers report parents

and other family members as sources of both support and information with respect to career development (Stiles, 2005). Children and adolescents learn both directly and indirectly about career development from their parents and other family members. Directly, family members can initiate and participate in discussions with adolescent mothers to give and receive information about career knowledge, skills, and/or interests (Hellenga et al., 2002). Indirectly, parents and other family members also may serve as role models for work related behaviors, career choices, prioritization of educational/occupational choices, and overall life planning (Brosh et al., 2007). Given the influence that parents have over the sexual attitudes/behaviors and career development of adolescent mothers before and after motherhood it is important to know some of the family values which may influence how and what information is communicated.

  **Religious beliefs.** When religious beliefs are the basis for the family's value system, these beliefs influence how adolescent sexual activity, pregnancy and parenting are perceived and discussed by the family (Aarons & Jenkins, 2002). In some studies, adolescents of color are more likely than White adolescent to attend church regularly and/or indicate strong family religious beliefs (e.g., Hockaday et al., 2000). Studies with focus groups of pregnant and parenting adolescents of color indicate that the adolescents attribute the influences of religious beliefs of the family on the family's attitudes towards sexual activity, contraception, and pregnancy (Aaron & Jenkins, 2002). Specifically due to strong religious beliefs, African American families traditionally have placed a high value on the sanctity of human life. African American families value having children, tend to discourage the termination of pregnancies, and are willing to help and support adolescent mothers despite the frustrations associated with the premature nature of adolescent parenting (McAdoo, 2007). Similarly, Latino families tend to be supportive of adolescent mothers due to both solid collectivist world views and strong religious beliefs (Rivera, Arredondo, & Gallardo-Cooper, 2002). This support often follows a brief period of anger due to the premature nature of the pregnancy, especially if it occurs out of wedlock (Rivera et al., 2002). The support that many families of color provide for adolescent mothers following the birth of a child appears to be in conflict with the opposition to premarital sex expressed by the family and church. However it is important to note that families and churches also believe in the sanctity of human life and appreciation of children so they provide pregnant adolescents with the support they need to become parents. These seemingly conflicting messages of oppositions to premarital sex and support for adolescent mothers may be a

contributing factor to the higher rates of adolescent pregnancy and parenting among adolescents of color. Members of the African American and Hispanic church communities would not see these messages as conflicting because the application of the biblical teachings and spiritual values of the church encourage a supportive reaction to adolescent pregnancy and parenthood (Rivera et al., 2002; Stevenson, 1990). However, it appears that many churches with congregations of color do not tend to embrace more proactive measures like education and prevention programs for families to more effectively address sexuality, sex education, and the consequences of adolescent pregnancy and parenthood (Stevenson, 1990). Stevenson (1990) suggests that church leaders seek to identify and accept the role of the church in the prevention of adolescent pregnancy by advocating for programs to help families talk about pregnancy and parenting issues and to influence adolescent sexual behavior in a manner that is in agreement with the teachings of the church and the values of the family. Even with strong communication of family and religious values about sexual behavior and adolescent pregnancy, these desired values are often in direct opposition to the messages adolescent girls receive from their peers.

**Peer relationships.** Adolescents are highly susceptive to the influence of peers (Aarons & Jenkins, 2002). Adolescence is a time when peer relationships (i.e., friendships and dating relationships) become increasingly important as adolescents attempt to acquire more adult-like independence (e.g., Corcoran et al., 2000). As these peer relationships become more intense and valued, peers often overshadow the role of the family and church (Aarons & Jenkins, 2002; McAdoo, 2007; Rivera et al., 2006). Peers appear to have significant influence on decisions regarding sexual behavior; this is especially true for African American adolescents who tend to have more favorable attitudes towards premarital sexual activity, pregnancy, and childbearing (Browning & Burrington, 2006; Merrick, 1995). Peers may also provide inaccurate information on pregnancy prevention and/or prenatal care (Aarons & Jenkins, 2002). However, peers are rarely mentioned as being influential in career decision development when compared with other socially supportive relationships (i.e., family members and mentors) which are more likely to be viewed as sources of career information (e.g., Bogat, Ling, & Rigol-Dahn, 2008; Brosh et al., 2007). This lack of information from peers on career development coupled with the strong influence of peer relationships may indirectly discourage adolescent girls from addressing career development (Brosh et al., 2007). For example, hanging out with friends may have more appeal than exploring career related interests (e.g., participating in an internship experience or planning

career exploration activities). Without adult intervention either at home or in the school setting, adolescents may neglect their career development.

**Education and schools.** Educational aspirations, academic performance, and school involvement have an effect on both likelihood of adolescent pregnancy (e.g., Corcoran et al., 2000) and career development (Merrick, 1995). School in lower socioeconomic communities, may be of poorer quality and may not provide opportunities for adolescents to further their academic and/or career development (Merrick, 1995). Darling-Hammond (2009) identifies and terms this an "opportunity gap" meaning low-income students, students of color, and English language learners often do not have the same access as others to qualified teachers, high-quality curriculum, and well-resourced classroom. Much of adolescent development occurs in the school setting and schools in disadvantaged communities may not be able to provide the positive effects (e.g., a supportive environment to grow and develop career, academic, and social skills) that are necessary for students to delay pregnancy and become productive and self-supporting adults (Browning & Burrington, 2006). For example, students in schools in disadvantaged communities may have limited access to school counselors, little access to sex education, limited infusion of career development into the curriculum at all school levels, and may have little attention given to the relationship between school performance and the world of work (e.g., South & Baumer, 2000).

In terms of adolescent pregnancy, lower educational aspirations, poor academic achievement, and weak relationships within the school community are associated with an increased risk of adolescent pregnancy (Corcoran et al., 2000). Research studies on adolescent mothers indicate that adolescent mothers have lower educational and vocational aspiration than non-pregnant and non-parenting peers (Hellenga et al., 2002). Corcoran et al. (2000) propose that if female adolescent students do not experience academic success in the school setting, they may seek recognition, maturity, and identity by other means (i.e., becoming a parent). Students who are unable to make meaningful connections with adults in the school like school counselors and teachers are at higher risk for pregnancy during adolescence (Corcoran et al., 2000; South & Baumer, 2000).

Similar to the correlations between academics and pregnancy/parenthood, academic aspirations and performance are correlated with levels of career aspirations and expectations for adolescent mothers (Klaw et al., 2003). Adolescent mothers participating in research studies

indicated that they have either low career expectations for themselves or unrealistically high expectations given their current circumstances (Hellenga et al., 2002).  In addition, adolescent mothers report gaining little to no career development information from the school (South & Baumer, 2000; Klaw et al., 2003).  Schools in disadvantaged communities may not provide adequate career development and the connection between school performance and the world of work may not be reinforced leaving students with limited career development skills and knowledge (South & Baumer, 2000).  Schools are one of many neighborhood characteristics that can influence the rate of adolescent parenthood and career development (Brubaker, 2007; Wickrama, Noh, & Bryant, 2005).

**Neighborhood.** Neighborhood and/or community characteristics that can lead to structural inequalities include racial/ethnic composition, community poverty, and access to formal community resources (Browning & Burrington, 2006; Wickrama et al., 2005).  Many community resources (e.g., school and medical care) in poorer communities may be of inferior quality and are not designed to meet the increased needs of a disadvantaged population (Wickrama et al., 2005).  Also economic resources and establishments (e.g., banking services and grocery stores) may be unavailable and perpetuate the cycle of poverty in such neighborhoods (Browning & Burrington, 2006).  Wickrama et al. (2005) draw attention to the fact that community stress and disadvantage are not equitably distributed among racial/ethnic groups.  For African Americans, Wilson's model of neighborhood decline depicts how urban African American neighborhoods have changed and contributed to higher rates of parenthood and lower level of career development among adolescent girls (Browning & Burrington, 2006; South & Baumer, 2000; Wilson, 1996).  Based on their research using Wilson's model, Browning and Burrington (2006) claim that some neighborhood characteristics are unique to African American urban communities and may not applicable to other racial/ethnic groups due to numerous historical and cultural factors.

The common dimensions of neighborhood characteristics (i.e., neighborhood economic disadvantage and residential instability) are the variables most often studied with respect to adolescent pregnancy/parenthood (Harding, 2003).  Two dimensions common in poor African American urban neighborhoods are neighborhood economic disadvantage (i.e., poverty, unemployment, and reliance on public assistance) and residential instability (i.e., percentage of residents living in the same house over a period of time) have been linked to higher rates of

adolescent pregnancy and motherhood (Browning & Burrington, 2006).  In contrast to the previously mentioned concerns about disadvantaged African American neighborhoods, predominately African American communities can provide socially supportive and empowering environments even in the face of adverse community conditions.  The relationships may or may not protect some adolescent girls from premature pregnancy and parenthood, but have been shown to help further the career development of adolescent mothers through mentoring relationships (Wickrama et al., 2005).

        The career development of adolescent mothers is positively impacted by socially supportive relationships in the community, but may be negatively influenced by other neighborhood characteristics.  Mentoring relationships with adults in the community show promise in furthering the career development of adolescent mothers, but these relationships have proved to be rare and difficult to maintain if not naturally occurring (Klaw et al., 2003).  The number of potential mentors for adolescent mothers may be in part determined by neighborhood characteristics.  Wilson (1996) differentiates between types of African American neighborhoods with a concentration of poverty (i.e., working poor and non-working poor) that impacts community values towards adolescent parenthood and work (Wilson, 1996).  For example, communities in which residents are poor and not working may provide few mentoring opportunities and as a result little information for adolescent mothers about career and the world of work (South & Baumer, 2000; Klaw et al., 2003).  While neighborhood effect may be an important aspect of the career development of African American adolescent mothers, other factors may be more influential for other racial/ethnic groups (Browning & Burrington, 2006; Dehlendorf et al., 2010).

        **Level of acculturation.** Neighborhood effects appear to have less impact on the rate of adolescent parenthood and career development of Latina adolescents than the level of acculturation (Browning & Burrington, 2006; Dehlendorf et al., 2010). The study by  Dehlendorf et al. (2010) of the acculturation of adolescent mothers has been defined as exposure and adaptation to US culture and can be viewed in terms of number of years in the US, age of immigration (if applicable) and preferred language (i.e., English, Spanish, or English and Spanish equally).  Higher levels of acculturation do not appear to be a protective factor in terms of adolescent pregnancy/parenthood among Latina adolescents.  Latina adolescent girls born in the United States, who spoke English at school and Spanish at home, had the highest likelihood

of an adolescent pregnancy (Dehlendorf et al., 2010).  Later immigration has been shown to be a protective factor in preventing adolescent pregnancy among Latina adolescents.  A higher age at immigration to the United States is correlated with a lowered likelihood of adolescent pregnancy (Dehlendorf, et al., 2010).  However, older immigrants may have lowered levels of career development.  Researchers speculate that older immigrants may encounter a barrier due to language and/or lack the required formal education or job skills necessary to further their career development in the US (Dehlendorf, et al., 2010).

Career development of Latina adolescents is also influenced by the level of acculturation. Language is one measure of how acculturation impacts career development (Dehlendorf et al., 2010).  Language can serve as either an obstacle or an advantage in terms of career development. Language can also be a barrier to educational and career opportunities.  Exclusive use of the Spanish language is also associated with lowered levels of educational attainment and career development (Dehlendorf et al., 2010).  On the other hand, bilingual adolescents may be more adaptable in terms of career development.  Effective use of both English and Spanish can create a number of educational and career-related opportunities (e.g., ability to earn more than monolingual employees).  Level of acculturation can also be influential in terms of the macrosystem in the expression of cultural values.

**Macrosystem**

The macrosystem is comprised of the overarching patterns of culture (e.g., economic, social, and political systems) that affect the individual (Bronfenbrenner, 1977).  In the research involving the career development of adolescent mothers, the variables most often studied at this level are socioeconomic status and race/ethnicity (i.e., social class positionality) (Corcoran et al., 2000; Merrick, 1995; Wickrama et al., 2005).  Low socioeconomic status (i.e., living in poverty) and minority group membership are both significant contributing factors to adolescent motherhood (Merrick, 1995).

**Socioeconomic status.**  Research indicates that young women from lowered socioeconomic status face a higher risk of adolescent pregnancy and parenthood than adolescents who are more financially secure (e.g., South & Baumer, 2000).  Being poor has been shown to increase the odds of an adolescent pregnancy by 50% (Berry et al., 2000).  Socioeconomic status has been measured in several ways in the research on adolescent mothers including mother's educational level, father's economic level, parental occupation, and combinations of these factors

and/or overall family income (Corcoran, 1999).  In a meta-analysis of studies conducted on adolescent mothers, Corcoran (1999) noted many of the negative consequences attributed to adolescent pregnancy and parenthood (i.e., truncated education, reduced employment opportunities, and lowered income potential) are also correlated with low socioeconomic status. In addition, adolescents from lowered socioeconomic status homes and communities may not accurately perceive the implications of an adolescent pregnancy (e.g., economic consequences and impact on education) and may view adolescent parenthood as a means to attaining adult status if other means are not explored (e.g., high school graduation or obtaining employment).  In communities with high rates of adolescent pregnancy and parenthood, this may be perceived as normative behavior with few negative consequences making the cycles of poverty and adolescent parenthood difficult to break.  Much of the research on adolescent mothers and socioeconomic status has involved poor, urban, African American participants and so it is unclear if some of the conclusions about the relationships between socioeconomic status and adolescent parenthood would be applicable to adolescent mothers of other racial/ethnic groups living in other settings like rural communities (Corcoran et al., 2000).

Similar to adolescent parenting status, socioeconomic variables have been shown to impact the career development of adolescent mothers (Berry et al., 2000).  In lower socioeconomic communities, exposure to the world of work is limited, unemployment rates tend to be high, and adolescents receive little career guidance/education (Corcoran et al., 2000). Attention to developing career related goals may be viewed as unrealistic by adolescent girls in lower socioeconomic communities if the pervasive attitude of the community towards career development and/or work is negative (Merrick, 1995).  It appears that in such a depressed socioeconomic environment, there is little perceived advantage to planning for the future making adolescent motherhood a viable means to obtain adult status and can be viewed a career choice (Corcoran et al., 2000; Merrick, 1995).  Relationships between socioeconomic status and adolescent parenthood and the career development of adolescent mothers are well documented; however they cannot be fully explored without examining the relationships between race/ethnicity and adolescent parenthood and career development.

**Race and ethnicity.** Like socioeconomic status, research also indicates that adolescent pregnancy and parenthood is disproportionately balanced racially and ethnically with African American and Latina adolescents having higher pregnancy and birth rates than non-Latina white

adolescents (e.g., Dehlendorf et al., 2010; Hockaday et al., 2000).  The most recent information from the Guttmacher Institute (2010) reports the adolescent (ages 15-19) pregnancy rates at 126.3 pregnancies per 1,000 for African Americans, 126.6 for Latinas, and 44.0 for Caucasians (non-Hispanic); the national rate for all adolescent mothers is reported at 71.5 pregnancies per 1,000 (Guttmacher Institute, 2010).  Similarly, reported adolescent (ages 15-19) birth rates at 64.6 births per 1,000 for African American, 83.0 for Latinas, and 26.2 for Caucasian (non-Hispanic) adolescents; the national rate for all adolescent mothers is reported at 41.9 births per 1,000 (Guttmacher Institute, 2010).  Given higher pregnancy and birth rates among African American and Latina adolescents, much of the research on adolescent pregnancy and parenthood has been conducted with adolescents of color.  Studies have shown that even when socioeconomic status is controlled for there are racial/ethnic differences in the rates of adolescent pregnancy and parenting and when looking at the career development of adolescent mothers (Merrick, 1995; South & Baumer, 2000).

In terms of pregnancy and parenthood, race and/or ethnicity can be expressed as an array of differing cultural norms (Berry et al. 2000).  Overall, the American culture and societal permissiveness have changed the perception and indirectly encouraged adolescent sexual activity resulting in adolescent pregnancy and parenthood prior to marriage.  Ironically, in the 1950's there were more births to teenage parents than are currently reported.  However, in the 1950's the majority of the pregnant and parenting teens were married (85%) compared with only 21% of pregnant or parenting teens married in the year 2000 (Zachry, 2005).  With the birth rates among African American and Latina adolescents being higher than the national rates, it is important to examine specific cultural considerations for these two groups.  For African Americans, cultural patterns related to pregnancy, childbearing, and motherhood can be influenced by historical events (McAdoo, 2007).  Due to the negative effects that the atrocity of slavery had on families, African Americans for generations placed value on early childbearing, which may have a residual effect on current birth rates (Merrick, 1995).  In Hispanic families, the prematurity of adolescent pregnancy and parenthood may be less of a concern than having a child out of wedlock and the shame associated with premarital pregnancy and parenthood (Berry et al., 2000).  Both African American and Hispanic families place a high value on the sanctity of human life and may be more likely than other racial/ethnic groups to discourage termination of pregnancy and/or adoption (McAdoo, 2007; Merrick, 1995; Rivera et al., 2006).  In addition,

cultural norms and values in families of color may influence career development by encouraging attention to being a parent over career-related attitudes and behaviors (Merrick, 1995)

With families being such an influential force in the career development of adolescent mothers, it is important to know what racial and/or cultural factors may also be influential. Family values and norms which tend to be bound by race and/or ethnicity communicate expectations related to career and values related to work (McAdoo, 2007; Rivera et al., 2002). In addition to family influences, adolescent of color may encounter discrimination or oppression when looking for employment which can be stressful and/ or impact future efforts to obtain employment (Wickrama et al., 2005). Experiencing discrimination, oppression, or other types of psychological distress (e.g., lower self-esteem, anxiety, or depression) may make African American and Latina adolescent mothers less likely to attend to career related matters (Berry et al., 2000). For example, adolescent of color may experience a type of stress termed "minority stress", which is characterized by feelings of depression, powerlessness, and/or alienation, lowering the priority of attention to career-related issues (Wickrama et al., 2005). Similar to the pattern seen with the medical care of adolescent mothers, African American adolescents may be less likely to seek and/or have less access than other racial group members to counseling services that address psychological and/or career related issues (Brubaker, 2007; Wickrama et al., 2005). Latina adolescent mothers may encounter language barriers, family resistance, lack of proper documentation, and/ or educational barriers, which may limit access to services to address psychological and/or career-related matters (Dehlendorf et al., 2010). Career related issues may be more challenging for adolescent mothers of color to address due to the pressure from family and potential for psychological distress due to issues such as discrimination.

**Interplay of socioeconomic status and race/ethnicity.** Both socioeconomic status and racial/ethnic group membership are influential in conceptualizing parenting status and the career development of adolescent mothers. Controversy exists if the considerations attributed to racial/ethnic group membership are in fact primarily due to socioeconomic status. With many studies involving samples of economically disadvantaged adolescents of color (e.g., Hellenga et al., 2002), it may be difficult to accurately determine which influences on adolescent parenting status and the career development of adolescent mothers can be attributed to race/ethnicity and which are attributed to socioeconomic status. It may not be possible to accurately determine the

primary source of influence on adolescent motherhood and career development due to the overlapping and interacting variables.

## Career Adaptability of Adolescent Mothers

Career adaptability is a contextual and culturally responsive approach to career development rooted in the postmodern constructivist perspective (Brown, 2002).  Becoming an adolescent mother presents both challenges and opportunities for career development.  Career adaptability may be promising in assessing career development skills/knowledge and addressing challenges that could impede the career development of adolescent mothers.  Theoretical constructs on career development for adolescent mothers must be carefully selected in order to: address the contextual challenges, capitalize on opportunities/strengths, and develop guidelines for positive intervention strategies/programs to better the long-term outcomes of adolescent mothers.

From the constructivist point of view, a central construct in adolescent career development is career adaptability (Hirschi, 2009).  Career adaptability is defined as the ability to change oneself to fit new and/or changed circumstances (Brown, 2002; Savickas, 1997).  Career adaptability is a developmental concept that is especially applicable to the adolescent population given the tremendous number of cognitive and affective changes that occur during this transition from childhood to adulthood (Patton & Creed, 2001).  Adolescent mothers have the added challenge of parenthood, which can either encourage or stifle career adaptability (Zachry, 2005).  The concept of career adaptability is a modification and expansion of the works of Donald Super on career maturity (Nevill & Super, 1988).  Savickas attempted to connect the four concepts (individual differences, developmental considerations, self-concept, and contextual factors) representative of the Super's life-span, life-space perspective (Super, 1990; Super, 1980).  Savickas (1997) proposed that the concept of career maturity be replaced with the term career adaptability to unite the concepts derived by Super.

Career adaptability focuses attention on developing coping skills that encompass planning, exploring, and decision making (Savickas, 1997).  Planfulness in the context of career adaptability is defined as a learned skill that allows individuals to develop a future orientation in order to increase the ability to adapt to new situations and/or circumstances (Savickas, 1997).  Using the theory of career adaptability, exploration is viewed from a more constructivist and dynamic perspective used to learn about and better understand the relationships between self and

environment (Blustein, 1997).  With respect to career adaptability, decision making is viewed as an adaptive process that is both complex and subjective in order to reduce barriers and enhance adaptability.

Career adaptability provides a more process orientated and dynamic perspective to understand the relationships between individual differences and contextual factors in order to reduce barriers to enhance career development (Blustein, 1997; Phillips, 1997).  Career adaptability is currently the theoretical basis for (a) the assessment of career related skills and knowledge, (b) the development and implementation of intervention strategies for adolescents, and (c) the evaluation of intervention strategies (Creed, Fallon, & Hood, 2008; Hirschi, 2009; Kenny & Bledsoe, 2004).   The concept of career adaptability is applicable to adolescent mothers because it focuses on developing skills to address both the individual and the contextual factors associated with career development.

**Career Related Outcomes for Adolescent Mothers as Adults**

Information on the career outcomes for adolescent mothers has been collected qualitatively both during adolescence (i.e., shortly after becoming a mother) and in longitudinal follow-up studies with adults who were adolescent mothers (Hunt et al., 2005; Spear, 2004). The difference in timing of the data collection provides differing accounts of the impact of adolescent motherhood on career.  In the short term, the majority of new adolescent mothers reflected on the experience of motherhood as a positive and life changing event with new responsibilities and requiring new behaviors in order to provide for self and child (Hunt et al., 2005).   These young mothers expect to achieve success as both a mother and provider (e.g., Hunt et al., 2005).   This finding is confirmed by other studies, indicating that adolescents who become mothers often feel a heightened sense of maturity, responsibility, commitment to improving self, and to provide for her child, which strengthen a desire for and openness to career development (Brubaker & Wright, 2006).  It appears that shortly after becoming a parent, adolescent mothers report a positive attitude towards developing career related skills and knowledge in order to able to provide financially for self and child (Brubaker & Wright, 2006; Hunt et al., 2005).

Studies qualitatively evaluating the long-term career outcomes of adolescent mothers by interviewing adults who were adolescent mothers have provided mixed results (Smith-Battle, 2005; Spear, 2004).  Smith-Battle (2005) completed in-depth narrative interviews with three

adults who were adolescent mothers to learn more about the interplay of motherhood and career. She found motherhood provided a source of identity and a purpose for self and future in the beginning for all of the mothers as adolescents, but differing levels of meaningfulness later as adults. She also found differing levels of meaning related to career among the adolescent mothers after reaching their early 30s. One mother described both her role as a mother and her career choices as bringing additional meaning and satisfaction to her life. Another mother found great meaning and satisfaction from her role as a mother and satisfaction but not meaning from her career. Finally, a third mother found little meaning or satisfaction in either motherhood or her chosen career. Spear (2004) also found differences in the amount of fulfillment adults who had been adolescent mothers expressed with both motherhood and career development. Although initially it appears that the majority of adolescent mothers expect to find meaning in their career choices, it appears that as adult some experience this anticipated meaning and fulfillment and others do not and the current research does not detail what accounts for such differences.

An additional concern with the research on the career related outcomes of adolescent mothers is that poor comparison groups have been selected upon which to base conclusions and the conditions of the adolescent before becoming a mother have been largely ignored (Smith-Battle 2005). Comparison groups for studies on adolescent motherhood have been selected with the mindset that if parenting was delayed to a more acceptable age (i.e., after age 20) this would have allowed adolescent mothers the chance to graduate from high school, attend college, and establish a career before becoming a parent (Geronimus, 1997). This application of typical middle-class life trajectory to adolescent mothers diminishes the accomplishments and exaggerates the negative long-term outcomes of adolescent mothers (Geronimus, 1997; Smith-Battle, 2005). A study comparing adolescent mothers to peers who delayed motherhood until after adolescence showed that certain career related outcomes for adolescent mothers were worse than their non-parenting peers (e.g., less prestigious occupations and less job satisfaction) but did not examine other factors that could have accounted for the difference in outcomes aside from timing of motherhood (Taylor, 2009). These findings lead to questions about the circumstances of adolescent mothers before they become parents. Some studies have suggested that adolescent mothers may be more disadvantaged prior to becoming mothers (e.g., higher levels of poverty and/or poorer academic achievement) than mothers who wait until later to become parents and it

is these disadvantages that least to the adverse long-term career outcomes and not simply becoming a mother during adolescence (Smith-Battle, 2005).  The environment in which adolescent girls live both prior to and after having a child are important considerations when studying adolescent mothers and their career adaptability.

**Effective Strategies to Further the Career Development of Adolescent Mothers**

While it is not clear exactly what makes some adolescent mothers more successful that others with respect to career, several possibilities have emerged: (a) participating in parenting programs (Horowitz, Klerman, Kuo, & Jekel, 1991), (b) developing career skills and knowledge (e.g., Brosh et al., 2007), (c) fostering resiliency skills (Carey, Ratcliff, Lyle, 1998), (d) identifying and reducing obstacles to career development (Klaw, 2008) and (e) developing socially supportive networks/relationships (Klaw et al., 2003).  Participation in parenting programs designed for adolescent mothers have shown promise in helping adolescent mothers to develop career related skills and knowledge and become self-supporting adults (Horowitz et al., 1991).  Most researchers concerned with the career development of adolescent mothers support developing and implementing programs to assist adolescent mothers (Klaw et al., 2003).  Similar to the support found for developing and implementing programs for adolescent mothers, most researchers cite the need to promote the further development of career skills and knowledge in order for adolescent mothers to be successful and self-supporting adults (Stiles, 2005).  It is important to give all adolescent mothers the career adaptability skills to be successful and self-supporting in later life.

**Parenting programs.** There are many specific groups, programs, and services designed to meet the unique needs of the pregnant and parenting adolescent population (Sangalang, Barth, & Painter, 2006).  These services have been implemented in a variety of settings in order to meet an identified set of needs of the specific needs of the population which they are in contact (Sangalang et al., 2006).  Often times these programs are targeted towards a specific subgroup of the pregnant and parenting adolescent population for example; students in an alternative education setting (Sarri & Phillips, 2004), residents in a defined geographic area (Sarri & Phillips, 2004), and/or with families with lower income/socio economic status (Emihovich & Fromme, 1998).  While some programs experienced less than the desired and/or expected results, most community and/or school-based programs have demonstrated some level of positive results for adolescent parents and/or their children (e.g., Sangalang et al., 2006; Thomas & Looney,

2004).  Although, it is unclear specifically which components of programs designed for parenting adolescents produce positive results, these programs have the potential to positively influence the lives of adolescent mothers are would be a viable means to assist in developing career adaptability skills.

**A Culturally Sensitive Framework for the Career Development of Adolescent Mothers**

Based on the information presented, research on the topic of adolescent motherhood needs to move towards viewing adolescent parenthood as a multidimensional issue that requires an integrated theoretical framework, which allows for contextual considerations (Hockaday et al., 2000).  Concerns exist when researchers focus exclusively on the individual adolescent mother (i.e., attention to only individual differences/characteristics) because it is both unfair and inaccurate if proper consideration is not given to the contextual factors (e.g., poverty and/or discrimination) surrounding adolescent pregnancy and motherhood (Breheny & Stephens, 2007). Incorporating contextual considerations into an integrated theoretical framework is not designed to further marginalize adolescent mothers, but to draw attention to the impact these factors may have on adolescent motherhood (Breheny & Stephens, 2007).  Excluding the previously mentioned ecological and contextual variables that have been linked to adolescent pregnancy and parenthood and the career development of adolescent mothers provides only limited understanding to a complex and multidimensional issue.

Becoming a mother during adolescence presents both challenges and opportunities for career development.  Theoretical constructs on career development for adolescent mothers must be carefully selected: (a) to address the challenges (e.g., contextual factors), (b) to capitalize on opportunities/strengths (e.g., increased sense of maturity/responsibility), and (c) to develop positive intervention strategies/programs to better the long-term outcomes of adolescent mothers. One possible integrated theoretical framework that meets these selection criteria is combining aspects of career adaptability theory and resiliency theory with an assessment of obstacles to furthering career development.  Career adaptability is a contextual and culturally responsive approach to career development rooted in the postmodern constructivist perspective (Brown, 2002).  Career adaptability may be promising in assessing career development skills/knowledge and addressing challenges that could impede the career development of adolescent mothers. Resiliency is a concept derived from positive psychology that may assist in better understanding the positive attributes (e.g., increase sense of responsibility) that adolescent mothers have

acquired as a result of becoming a parent (Carey et al., 1998). These positive attributes of resiliency and the concept of career adaptability are utilized in the conjunction with the perceived obstacles adolescent mothers to further examine in the career development of adolescent mothers.

**Career Adaptability**

While not currently widely used with adolescent mothers, the concept of career adaptability appears to have promise as an approach to career development of adolescent mothers because it involves learning skills (planning, exploring, and decision making) that are not only applicable to employment, but also other aspects of future/life planning (Savickas, 1997). The concept of career adaptability can be used to assess skills, develop intervention strategies, and evaluate interventions (Kenny & Bledsoe, 2004). Planning, exploration, and decision making skills can be assessed using a variety of instruments and measures (e.g., *Career Development Inventory:* Super, Thompson, Lindeman, Jordaan, & Myers, 1979). These assessments can be used to identify strengths and weaknesses in career adaptability skills of adolescent mothers in order to design and implement intervention strategies (Creed et al., 2008). Interventions can also be evaluated by measuring growth in career adaptability skills (Hirschi, 2009). Other factors that could potentially influence career adaptability (e.g., resiliency) also need to be examined.

**Resiliency**

It is still unknown why some adolescent mothers go on to lead successful and fulfilling lives in terms of both family and career choices. Resiliency is thought to be one of the protective factors that when fostered can make adolescent mothers stronger and more successful in later life because they are able to overcome the challenges (e.g., increased responsibility) associated with adolescent motherhood (Carey et al., 1998; Schilling, 2008). Resiliency can be measured on three dimensions; personal traits, relationships, and vulnerability (Prince Embury, 2007). Understanding the resiliency profile of an adolescent mother may be helpful in assessing strengths and deficits in terms of developing career adaptability. Resiliency is built by overcoming adversity, but sometimes smaller daily challenges which do not cultivate higher levels of resiliency and can challenge already acquired levels of resiliency (Schilling, 2008).

**Obstacles to Career Development**

The day-to-day demands of motherhood can be overwhelming even for resilient adolescent mothers. Without attention being given to meeting the daily challenges of motherhood (e.g., childcare), adolescent mothers will be unable to attend to career adaptability skill development (Klaw, 2008). Recognizing and making provisions to meet these pressing immediate needs, helps adolescent mothers gain the ability to focus attention and effort on developing their personal career adaptability (Klaw, 2008). Finally, adolescent mothers cannot successfully attend to the combined challenges of motherhood and career development without cultivating supportive relationships that foster and encourage resiliency (Zippay, 1995). Socially supportive relationships with family members and/or mentors proved to help further the career adaptability of adolescent mothers by providing them with career-related information and encouraging developing career related skills (Klaw & Rhodes, 1995; Klaw et al., 2003). Both career adaptability skills and higher levels of personal and relational resiliency may be helpful in overcoming the obstacles experienced by adolescent mothers.

## Overview of the Approach for the Dissertation

There are challenges and opportunities associated with the career development of adolescent mothers. This dissertation endeavor is designed to: (a) examine the existing body of professional literature about the career development of adolescent mothers, (b) highlight contextual considerations adolescent pregnancy and parenthood and the career adaptability of adolescent mothers, (c) contribute new information to the professional literature about the career development of adolescent mothers, and (d) propose a framework for future researchers to close the research to practice gap in the area of the career development of adolescent mothers.

This document is an alternative dissertation format. Chapter 1 provides the conceptual framework for a culturally sensitive approach to career adaptability of adolescent mothers. Chapter 2 is a content analysis of research articles from the professional literature of the last 25 years on the career development of adolescent mothers. Chapter 3 is a research study designed to: (a) examine the pressing immediate needs or obstacles impeding the career development of adolescent mothers, (b) gain information about the current state of the career development of adolescent mothers in terms of career adaptability, and (c) assess the resiliency of adolescent mothers. Chapter 4 contains a proposal of a framework, based on the two studies completed as a

content analysis and a survey research study, designed to close the gap between researchers and practitioners regarding the career development of adolescent mothers.

### Summary

It is the hoped that both the individual elements as well as the cohesive structure of this endeavor will help to further the understanding for the career development of adolescent mothers.  Individually, each chapter of the dissertation provides an important piece to the puzzle on the career development of adolescent mothers.  As a cohesive document, the conceptual framework, content analysis, research results, and a proposal to provide a culturally sensitive approach to the career development of adolescent mothers.  It is anticipated that this research will be the beginning of a larger movement to develop and implement intervention strategies to help adolescent mothers become successful and self-supporting adults by enhancing career adaptability, fostering resiliency, and effectively addressing the obstacles that may impede the career development of this population.

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## CHAPTER 2

### The Career Development of Adolescent Mothers:
### A Content Analysis of 25 Years of Professional Literature

**Abstract.** Twenty-one articles containing both qualitative and quantitative research methods were selected for inclusion in a review of the professional literature on the career development of adolescent mothers from the past 25 years. A content analysis method was selected to provide a better understanding of what has been published and to direct future research for exploring the career development of adolescent mothers. Pervasive throughout the content analysis findings were research endeavors reflective of areas of need, variety in research methods and theoretical approaches, and pressing immediate needs impeding career development. The most frequent recommendations were the need to conduct further research and the need to develop and implement comprehensive programs for adolescent mothers that are strength-based, responsive to the needs of the adolescent mothers, and foster career development skills/knowledge and resiliency.

*Keywords:* adolescent mothers, career development

Adolescence is a time of transition and growth that can be further complicated with the addition of a parenting role (Zachry, 2005). Almost 750,000 young women between the ages of 15 and 19 become pregnant with 59% of these pregnancies resulting in a live birth accounting for 10% of the all births in the United States each year (Guttmacher Institute, 2010). The numerous concerns and negative outcomes associated with adolescent pregnancy are well documented in the counseling, educational, psychological, health services, and sociological literature. Concerns related to adolescent parenthood include high risk for child abuse/neglect (Stevens-Simon, Nelligan, & Kelly, 2001), high levels of stress and limited coping skills (Elster, McAnarney, & Lamb, 1983), lowered academic achievement and higher potential to drop out of high school (Harris & Franklin, 2003), and limited parenting knowledge and immature parenting skills (Ferguson & Schneider, 1999). However, only a handful of studies explore the future life planning and career development or implications for these young women.

The latest statistics approximate the national adolescent (ages 15-19) birthrate at 41.9 births per 1,000 women (Guttmacher Institute, 2010). The birthrate is the number of live births of a given population and does not account for pregnancies that were terminated due to abortion or miscarriage. The birthrate per 1,000 for African American female adolescents is 64.6 births, for Hispanic teens is 83.0, and for non-Hispanic white adolescents is 44.0 (Guttmacher Institute,

2010).  Given higher birthrates among African American and Hispanic adolescents, the majority of the research on adolescent pregnancy has been conducted with adolescents of color and includes related socio-contextual factors such as social support systems and socioeconomic status.

Guttmacher Institute (2010) also reported the birth rates by geographic location.  Birth rates are highest in the southern states of Texas, New Mexico, Mississippi, Arkansas, and Arizona.  Adolescent birth rates are lowest in the northern and mostly east coast states of New Hampshire, Vermont, Massachusetts, Connecticut, and New Jersey.  Given the recent rise in adolescent pregnancy and birth rates, 3% and 4% respectively, after a steady decade decline (Guttmacher Institute, 2010), a renewed interest within the professional literature can be hopefully anticipated.

The existing professional literature on adolescent pregnancy and parenting can be separated into two distinct categories, namely intervention and prevention. A large body of professional writing has been on the prevention of adolescent pregnancy and tends to highlight issues related to diversity and multiculturalism (Martyn, Darling-Fisher, Smrtka, Fernandez, & Martyn, 2006). The intervention literature involves topics and issues of an interpersonal and/or intrapersonal nature or is related to academic achievement.  Research on personal issues has included stress (Milan, Ickovics, Kershaw, Lewis, Meade, & Ethier, 2004), social support (Logsdon, Gagne, Hughes, Patterson, & Rakestraw, 2004), abuse and neglect potential (Hunt, Joe-Laidler, & MacKenzie, 2005), parenting skills (Feldman, 2007), and experiences of adolescent mothers (Sieger & Renk, 2007).

Researchers have looked at the academic progress of parenting adolescents with a wide variety of results due to the specific research goals of each study including  high school graduation rates (DeBolt, Pasley, & Kreutzer, 1990),  effect of pregnancy/parenting on academic aspirations and/or success (Zachry, 2005), student needs and perceptions (Brosh, Weigel, & Evans, 2007), school interventions (White & Cummings, 1995), and racial/ethnic differences (Amin, Browne, Ahmed, & Sato, 2006).  Research on academic achievement of parenting adolescents reveals unique challenges in the educational setting and a dropout rate that is higher than that of non-parenting peers (Pirog & Magee, 1997).  National results have shown that adolescent pregnancy and parenting status was the individual difference/characteristic most influential in determining on-time high school graduation (Pirog & Magee, 1997).

Although the bulk of the literature on adolescent mothers addresses immediate concerns with personal and academic issues, there is little information available about what happens to adolescent mothers after graduation, specifically their career development and future life planning. Given the documented negative outcomes, such as financial hardship and/or reliance on publicly funded resources to survive that are associated with adolescent motherhood (Bogat, Liang, & Rigol-Dahn, 2008), purposeful and effective career development may be a positive framework from which we can rewrite these potential negative scenarios into lives of possibilities. Therefore, this study was undertaken to explore the existing professional literature on the topic of the career development of adolescent mothers. In this instance, the content analysis process was employed to make the information more accessible by identifying salient characteristics and then synthesizing the data gathered to provide a fresh perspective on the career development of adolescent mothers.

## Methods of the Review

Content analysis is a term derived from the efforts of qualitative researchers to make results more accessible and valid by coding the results and findings in structured interviews, action research, or among related studies (Schilling, 2006). The content analysis process as described by Schilling is a five step process: (1) transferring the written text to raw data (i.e., themes described by words or short phrases), (2) developing guidelines to analyze and condense the themes found in the raw data, (3) grouping the themes from the raw data into a preliminary categorically structured system (4) developing of a coded protocol from the preliminary structured system, and (5) providing concluding analysis and interpretation. While the content analysis process is typically used with qualitative data, it can be used with quantitative studies if the intent is to examine themes in written text (Leech & Onwuebuzie, 2007). This content analysis incorporates information from several studies that are both qualitative and quantitative; however, the methods of the review remain the same as in the traditional qualitative content analysis because the focus is on themes regardless of research design.

For this content analysis, inclusion criteria were peer-reviewed articles in professional journals from the past 25 years using the generic search terms *career* and *adolescent/teenage mother*. Exclusion criteria included the following: (a) research associated with dissertations, (b) studies not conducted in the United States, (c) studies primarily concerned with the prevention of adolescent pregnancy or repeat births, (d) studies in which adolescent parenting status was a

contributing factor but not the principal focus of the research, and (e) articles that were not relevant to the career development of adolescent mothers (e.g., exploring the attitudes and beliefs of the younger sisters of adolescent mothers).

A literature search was conducted using electronic databases including Educational Research Complete such as ERIC, Psychological and Sociological Databases such as PsycINFO, and Health Science such as MEDLINE. Initially, the general term *career* was used as well as thesaurus terms identified for PsycINFO that included the following: *adolescent pregnancy, adolescent mother,* or *adolescent pregnancy* and *career education, occupational aspirations, occupational attitudes, occupational choice, occupational exposure, occupational guidance, occupational interests, occupational preference, occupational success prediction, occupations, vocational education, vocational maturity,* or *vocational school students.* For Educational Research Complete, the thesaurus terms used were *teenage mothers, teenage parents,* or *teenage pregnancy* and the general term *career.* For Psychological and Sociological Databases the general search terms used were *adolescent mother* and *career.* Finally, for the Health Science Databases the general search terms of *adolescent mother* and *career* were used.

Each article to be included in the content analysis was retrieved and read repeatedly. A number of strategies such as note taking, highlighting, and making lists was used in the initial readings to identify salient characteristics, themes, and features to be included in the analysis. An Excel spreadsheet was designed to organize and categorize the raw data from each article to develop the preliminary category system, which was later refined into the coded protocol, namely participants (number, age, ethnicity, race, location, and socioeconomic status), type of research, data collection methods, use of formal instruments, focus of study and/or research questions, theoretical framework, findings, and implications/recommendations. Data in each category were reviewed repeatedly and codes were continuously evaluated and combined when applicable. Data from the coded protocol was used to generate results and findings based on the themes identified in the individual articles when viewed as a whole.

## Results

The electronic database searches generated a total of 77 different peer-reviewed articles to be considered for inclusion in the content analysis. Based on the respective search criteria, PsycINFO search retrieved a total of 47 citations; Educational Research Complete retrieved 20 citations; Psychological and Sociological Databases 33 citations; and Health Science Databases

two citations.  Applying the exclusion criteria and eliminating duplicate citations, a total of 23 articles were identified.  Two articles (Brindis & Philliber, 2003; Scholl, 2000) that were reviews of adolescent parenting programs could not be obtained after an exhaustive search of numerous resources thus reducing the final number to 21 articles to be included in the study (see Table 2.1).

The selected articles were published in counseling and health related (e.g., nursing and social work) journals providing a diverse chronological and geographical representation of knowledge about the career development of adolescent mothers.  Although the years of inclusion in the content analysis ranged from 1985 to 2010, only two articles were dated prior to 1990. Over half (57%) of the 21 articles were published between 1990 and 1999, and 33% were published between 2000 and 2010. Of the 21 citations, 19 represented research studies and two were theoretical articles. The research studies covered a variety of geographic regions and settings within the continental United States:  Midwest (n=7), Southwest (n=3), Northeast (n=2), Southeast (n=3), West Coast (n=2); in two studies, only the United States was indicated as the location.  Settings included rural, suburban, and urban with half of the studies based on participants from urban areas; one study contained a mix of rural, suburban, and urban settings; and the remainder of the studies did not specify the type of setting in which the participants resided.

**Participants**

The number of participants in the respective research studies ranged from a single participant case study to 204 participants for the largest study.  Understanding that some journal articles contained more than one study and included differing numbers of subjects for each study, 38% of the studies were considered small (<30 participants), 29% were medium sized studies (31-100 participants), and 33% of the studies were considered large (>100 participants).  Studies containing less than 30 participants were exclusively qualitative in design.  The medium sized studies contained a mix of methodologies, and the range for the number of participants was 47 to 77 with four of the studies having close to 50 participants in each study.  The large scale studies, with over 100 participants, exclusively utilized quantitative research designs.

The chronological definition of adolescence for these 19 studies was fluid, and the age of participants ranged from 11 to 20 years old.  For most studies, the typical age range was 13 to 18 years old, and the mean ages, when given, were between 16 and 17 years old.  The majority of

the subjects were recruited from alternative education programs designed specifically for pregnant and/or parenting students.  Exceptions were two older studies containing a total of 139 subjects who were selected from a residential facility for pregnant and parenting adolescents and a study that recruited subjects from social service organizations and community health clinics totaling 53 participants.

The racial and ethnic backgrounds of the participants were primarily African American, Caucasian, and Latina.  While most of the studies included a mix of participants, all but one study had a predominant racial/ethnic group of interest meaning that more than 50% of the participants belonged to the same racial/ethnic group.  Three studies contained more than 50% Caucasian participants, and three studies were made up of more than 50% Latina participants.  Of the studies which included adolescent mothers as participants, 13 studies focused on African Americans. One study included more than 60% African American participants, and 12 studies had more that 90% of the participants identified as African American.  Over two-thirds of studies focused exclusively on participants with low socioecomic status (SES).  Researchers in two of the studies indicated that the subjects came from a variety of socio and economic backgrounds, while researchers of four studies did not disclose the socioeconomic status of the participants.

**Types of Research**

The 19 research studies included in the content analysis were categorized by the types of research methodologies (see Table 2.2).  Approximately half of the studies (n=10) were quantitative studies, and all of the quantitative studies were non-experimental.  The research objective (Johnson, 2001) of these non-experimental studies included comparative (i.e., comparing groups of participants; n=7), relational (i.e., determining relationships among variables; n=2), and descriptive (i.e., describing the current status; n=1).  The nine (47%) qualitative studies used the following methodology: four classified as phenomenology, two ethnographies, two case studies, and one grounded theory.  The time frames for the studies were primarily cross-sectional (i.e., occurring once or over a short period of time; n=8).  However, two studies were longitudinal with one spanning 20 years and one across a two-year timeframe; both studies used the same participants called a panel design (Johnson, 2001).

The data collection methods in the studies were varied, and some studies utilized more than one method to collect data (see Table 2.2).   Fifteen studies used face-to-face and/or telephone interviews as at least one method to gather information; 89% of the qualitative studies

and 70% of the quantitative studies used interviews.  Five qualitative studies used focus groups.  Researcher created questionnaires were used in six studies to gather relevant information from participants.  Researchers in the two studies with a focus on mentoring relationships collected information from mentors including mentor notes and logs. One study looked at the participants' academic records, and another study used art projects to gather information.  Formal instruments were used in seven of the studies with only one of the studies being qualitative in nature.  There were 12 different standardized instruments used across the studies; the most frequently used measure was the *Social Support Network Questionnaire* found in two studies.

**Research Questions/Focus of Study**

The research questions and foci of the research covered a multitude of topics.  Eleven distinct foci of research were determined after carefully and repeated review of each study.  The 11 foci included the following: mentoring; vocational future/identity; sociocultural; self-efficacy/resilience; positive focus; social support; delayed vocational development; obstacles/lack of knowledge; compromise between reality and goals; pressing immediate needs; and decision making, problem solving, and goal setting skills.

As the research agendas were examined as a whole, three distinct types of research foci emerged: (a) identifying obstacles to overcome, (b) delineating areas of need, and (c) suggesting positive intervention strategies.  The four obstacles identified that impeded the career development of adolescent mothers were pressing immediate needs, a lack of knowledge about careers and career development, a delay in career development, and the sociocultural context of the adolescent mother.  The delineated areas of need in the career development of adolescent mothers were identified as a lack of vocational/future identity, an absence of self-efficacy and/or resilience, a compromise between goals and reality, and underdeveloped career development/ skills (i.e., planning skills, exploration skills, and decision making skills).  Seven studies cited that any interventions developed and/or implemented to further the career development of adolescent mothers should be positive in focus and strength-based in nature.  One of the most widely used and supported means of intervention was developing both natural and volunteer mentoring relationships with adult women in the community.  In addition to specifically encouraging mentoring relationships, six studies advocated the development and strengthening of other socially supportive relationships (i.e., parents or peers).

**Theoretical Framework**

In terms of theoretical basis, a wide variety of theorists and theories were referenced. Theorists that were specifically mentioned included Linda Gottfredson, Carol Gillian, and Urie Bronfenbrenner. The theories referenced included Status Attainment Theory, Social Networking Theory, Social Support Theory, Possible Selves Theory, Future Time Perspective Theory, and Cognitive Development Theory. In addition to the existing theories mentioned, one study sought to generate a new theory about mentoring and the career development of adolescent mothers.

In coding the wide variety of theoretical frameworks, three primary categories of theories were revealed, namely Feminist, Social/Contextual, and Cognitive. The feminist theory category contained three articles and included of the works of Carol Gilligan (Merrick, 1995), reflexivity in gender role orientation (Kissman, 1990), and more generalized feminist theory references (Ortiz & Bassoff, 1987). Social/Contextual theories were mentioned in 15 studies and included more specified topics such as mentoring, the ecological model of Urie Bronfenbrenner, social networking theory, social learning theory, and social support theory. Cognitive theories were found in 11 studies and included such specified theories as status attainment theory, "foreshortened future," possible selves, resilience, and locus of control.

**Findings**

The findings generated from the studies were varied. Three concepts were found to have the most widespread support among the studies with seven or more studies citing the same findings related to the career development of adolescent mothers, namely (a) lack of career knowledge/development, (b) pressing immediate needs (e.g., childcare) limiting career development, and (c) mentoring as an effective strategy to further the career development of adolescent mothers. Several other findings received moderate support being mentioned in three to five studies, namely (a) stronger sense of meaning in life after the addition of the parenting role, (b) adolescent mothers found help and/or support for their career development from family members, and (c) other findings from the study were clearly linked to sociocultural context and, therefore, reported the impact of contextual factors as a finding of the study. Three findings were each presented in only one study, namely (a) obstacles to overcome before addressing career development needs, (b) resilience as a necessary ingredient in the career development of adolescent mothers, and (c) the long term outcomes for adults who had been adolescent mothers.

**Recommendations**

Initially**,** a total of nine implications and/or recommendations were identified and coded for the studies.  These were re-examined and collapsed into seven cohesive groupings of what is needed for the career development of adolescent mothers, namely comprehensive interventions, further research on the career development of adolescent mothers, life/career planning skills and assessment (specific), career development skills (non-specific), strategies that are positive in focus, improving mentoring programs, and civil/political action directing attention to the career development of adolescent mothers.

The most wide spread recommendation cited in 89% of the studies was the need for comprehensive interventions for adolescent mothers that should include career and life planning components. The next most widely named recommendation cited in 84% of the studies was a need for further research into the career development of adolescent mothers.  Twelve research teams also cited the lack of career development skills/knowledge among adolescent mothers and suggested necessary interventions for adolescent mothers in three generalized areas as follows: (a) development of career planning skills (e.g., planning, career exploration, and decision making), (b) assessment of individual strengths/weaknesses and areas of interest, and (c) attainment of specific knowledge associated with careers and life planning. Ten studies advocated that career development strategies designed for adolescent mothers should be positive in focus in order to be effective.  Six studies recognized the potential of mentoring relationships in working with adolescent mothers and recommended improving mentoring programs in order to foster the career development of adolescent mothers.  Finally, two studies expanded the focus of the recommendations past working directly with the adolescent mothers and urged for political and civil action to demonstrate the need for attention directed on the career development of adolescent mothers.

**Discussion**

When the information gathered from these 21 separate articles was viewed as the professional literature on the career development of adolescent mothers from the last 25 years, the themes that emerged were both encouraging and discouraging.  Encouraging for two reasons; (a) the research endeavors presented address the needs of adolescent mothers who may need the most career development interventions as demonstrated by the national statistics and (b) the variety in the research conducted in the area of the career development of adolescent mothers is

considerable.   Discouraging for two reasons; (a) because immediate and pressing needs combined with limited career related skills appear to seriously impede the career development of adolescent mothers and (b) some of the specific interventions used to further the career development of adolescent mothers (e.g., mentoring) have been shown to be effective in helping a few adolescent mothers to plan for the future, but effective mentoring relationships were difficult to maintain for most adolescent mothers (e.g., Bogat et al., 2008).  The combination of these positive and negative aspects associated with the career development of adolescent mothers contributes to a trend of moving towards developing and implementing more comprehensive, optimistic, and strength-based interventions to improve the current career development status of adolescent mothers.

**Research Mirrors Current Needs**

As shown by the statistics provided by the Guttmacher Institute (2010), by far the highest adolescent births occur among adolescents of color. Fortunately, the majority of the research uncovered for this study has been conducted with adolescents of color.  Over two-thirds of the professional studies located were predominately conducted with the African American population (e.g., Hellenga, Aber, & Rhodes, 2002).  When other minority populations, like Latina mothers, are included, the reported research on the career development of adolescent mothers conducted with participants of color jumps to over 84% (Brosh et al., 2009). A skew similar to that of racial group membership is noted when the socioeconomic status (SES) of the participants was examined in the presented studies.   Seventy-four percent of the studies focused exclusively on adolescent mothers from lower socioeconomic backgrounds (e.g., Klaw & Rhodes, 1995).  Although the statistics of adolescent births are not tracked by socioeconomic status, it is reasonable to assume that adolescent mother of lowered socioeconomic status may be in greater need of career development interventions that adolescent mother who have a more stable socioeconomic status (Ortiz & Bassoff, 1987).

When using the statistics provided by the Guttmacher Institute (2010) on birth rates by geographic areas of the United States, this study reflected a similar location profile in that approximately one-third of the research studies have been conducted in the southern United States.  Therefore, in looking at the available national statistics related to adolescent motherhood, it appears that the professional literature on career development is representative and sensitive to the mothers based on racial group membership, socioeconomic status, and geographic location.

**Research on the Career Development of Adolescent Mothers**

The variety of research conducted on the career development of adolescent mothers is considerable with respect to theoretical framework and several aspects of research design. Even in synthesizing the wide variety of theoretical frameworks into three primary categories of theories (Feminist, Social/Contextual, and Cognitive), the variety in theoretical orientation is not diminished. The number of different theories represented draws attention to the fact that numerous theoretical approaches that have been used to frame research related to the career development of adolescent mothers. This variety suggests that an integrated theoretical framework may be necessary to fully address the complex contextual factors (e.g., lack of family support or lack of material resources), developmental considerations, and individual differences of adolescent mothers with respect to career development.

As for research design, with an almost equal split of quantitative and qualitative research designs and a variety of data collection methods, the published literature provides a rich base of information. The number of participants for the studies varied from a qualitative single subject case study (Schilling, 2008) to a large scale quantitative study with 204 participants (Klaw & Rhodes, 1995). This variety in study size reinforces the usefulness of both small and large scale studies to better understand the career development of adolescent mothers.

The quantitative studies tended to use a larger number of participants and be non-experimental, primarily cross-sectional and comparative in design (e.g., Hansford & Drummond, 1992; Klaw & Rhodes, 1995). The data collection methods were typically interviews (e.g., White & Cummings, 1995) or focus groups (e.g., Blinn, 1990) with only one study not using some form of verbal communication with participants to gather data (Hansford & Drummond, 1992). Several researchers developed questionnaires to gather specific information of interest from participants (e.g., Klaw, Rhodes, & Fitzgerald, 2003). Formal measures were used in more than half of the studies to gather data from participants (e.g., Klaw & Rhodes, 1995) but none assessed career skills (i.e., planning, exploration or decision making) or career knowledge (i.e., information about specific careers).

The qualitative studies focused on developing a better understanding of career development from a single adolescent mother (Schilling, 2008) to a medium size group of adolescent mothers (e.g., Brosh et al., 2009). While one researcher used notes, logs, and records

to collect data (Blinn-Pike, Kuschel, Mingus, & Mutti 1998), most researchers used focus groups and/or interviews to gather information from participants (e.g., Stiles, 2005).  Only one qualitative researcher used a formal measure, The Obstacle Survey, to gain information from participants (Klaw, 2008).  While qualitative studies typically provide great insight into a small sample of adolescent mothers, they often do not provide or intend to produce data about career development that can be generalized to the larger population of adolescent mothers.

When the quantitative and qualitative studies are looked at as a whole, the depth, breadth, and variety of research on the career development of adolescent mothers is impressive. However even with this wide spread body of research, gaps in the research literature remain.   For example, one concern is the lack of consistent instrumentation and absence of traditional instruments used to measure adolescent career development (e.g., *Career Development Inventory* or *Career Maturity Inventory*).  None of the researchers presented in the content analysis chose to look at the career development of adolescent mothers using traditional measures that assess the career related skills of adolescents.  However, some researchers did advocate for the use of such traditional career instruments with adolescent mothers (Hellenga et al., 2002).  Using such measures may help to provide more information about the specific strengths and weaknesses in the career development of adolescent mothers.

**Pressing Immediate Needs**

As the body of research was examined as a whole, two areas of concern emerged with respect to the career development of adolescent mothers.  First, pressing immediate needs were identified as here-and-now obstacles to overcome and, second, certain contextual factors (e.g., SES, race/ethnicity) were delineated as areas of potential concern.   The most prevalent obstacle identified that impedes the career development of adolescent mothers was the pressing immediate needs of child care, transportation, financial constraints, housing, and new parenting responsibilities. These pressing immediate needs typically interfered with the career development of adolescent mothers in the studies reviewed (e.g., Stiles, 2005).

Ten studies reported that the majority of adolescent mothers were unable to focus beyond meeting the immediate needs of motherhood (i.e., child care, housing, new role responsibilities) (Merrick, 1995).  A large number of the adolescent mothers involved in the studies were from lower socioeconomic backgrounds (66%) where the addition of a child could cause significant financial and emotional stress (e.g., Klaw et al., 2003).  In addition, given that a majority of the

participants in these studies were mothers of color (84%), factors such as racial/ethnic discrimination were cited as potential obstacles to career development (e.g., Smith-Battle & Leonard, 1998).

One suggestion was made to address immediate and short-term needs in the early stages of parenthood in order to be able introduce more long-term life planning and career development skills later. However, the article was theoretical in nature and did not provide concrete steps for implementation (Kiselica & Murphy, 1994). Based on the information gathered from the studies, it is recommended that the programs be on-going in order to address the immediate and more crisis orientated needs of early motherhood as well as the long-term needs of career and life planning.

**Limited Career Development Skills**

In addition to the previously identified pressing immediate needs, a lack of career knowledge/development was indicated in 17 studies making it the most prevalent finding across all the research on the career development of adolescent mothers (e.g., Kissman, 1990). Researchers have identified some shortcomings in adolescent mothers' career development such as; insufficient skills (i.e., decision making, problem solving, goal setting), limited knowledge (i.e., lack of career awareness, limited exposure to careers), and discrepancies between lofty career goals and reality (i.e., wanting to be physician while failing high school science courses). Based on these shortcomings, areas for improvement in the career development of adolescent mothers were identified as developing a vocational/future identity, learning to compromise between goals and reality when necessary, and improving career development skills (i.e., decision making skills, problem solving skills, goals setting skills).

Over half of the studies cited the need for adolescent mothers to develop a vocational and/or future identity in order to articulate the types of career and future they envision for themselves in light of their newly acquired role as a parent (e.g., Hanford & Drummond, 1992). A quarter of the studies also cited a delay in career development and/or career immaturity due primarily to parenting status that contribute to a lack of future identity (e.g., Blinn, 1990). When compared with non-parenting peers, adolescent mothers were less optimistic and prepared for their future, which demonstrates the need for specific career development interventions for adolescent mothers (Ortiz & Bassoff, 1987).

Another concern about the career development of adolescent mothers appeared in six studies that cited the lack of congruence between the career goals/aspirations of adolescent mothers and reality (e.g., Blinn, 1990). Researchers cited that adolescent mothers expressed career goals (e.g., to become a physician) that were unattainable without careful planning and often would require some degree of compromise. To illustrate this point, consider an adolescent mother who indicated she aspired to be a physician but lacked the high level of school performance necessary to enter a four year college; however, with some compromise, she may be able to attend a training program for paraprofessional medical personnel and then continue her education and move up in job status within the medical field.

One-third of the researchers indicated that, when measured and/or observed, the career development skills of adolescent mothers are in need of further development (e.g., White & Cummings, 1995). For instance, in one study, 80% of the participants identified career goals for the future but indicated they did not know how to achieve their goals (Ortiz & Bassoff, 1987). In addition to goal setting skills, concerns were noted with career skills/knowledge, such as decision making skills and problem solving skills (Stiles, 2005). These skills are considered important as both career and life skills that are required to be successful and self-supporting members of society. However, none of these career-related skills were quantitatively measured in any study.

**Mentoring and Social Support**

Mentoring relationships were cited as one of the most often used and effective interventions in furthering the career development of adolescent parents (e.g., Bogat et al., 2008). The eight studies examining mentor relationships evaluated naturally occurring or matched volunteer mentoring relationships with adult women in the community (Blinn-Pike et al., 1998). While mentoring was shown to be effective, mentor relationships proved to be difficult to maintain when they did not occur naturally (Bogat et al., 2008).

Given the challenges of forming effective mentoring relationships, other studies advocated for expanding social support systems and facilitating more informal mentor-like relationships with adults (i.e., teachers) already present in the lives of adolescent mothers to further their career development (e.g., Schilling, 2008). Researchers advocate for the development and strengthening of socially supportive relationships, such as those with family members and peers, to support the career development of adolescent mothers (e.g., Brosh et al.,

2009; Carey, Ratliff, & Lyle, 1998). These positive strategies suggest that mentoring and other socially supportive relationships could be important components in successful interventions designed to further the career development of adolescent mothers.

**Interventions: Being Strength Based and Fostering Resilience**

The one common recommendation that emerged from 100% of the studies in the content analysis was the need for interventions to address the limited career related skills and knowledge of adolescent mothers. It is clear from the information gathered about the pressing immediate needs of adolescent mothers that these interventions would need to be comprehensive enough to encompass here-and-now needs in order to attempt to address future planning and career development needs. In addition, seven studies cited that any intervention developed and/or implemented to further the career development of adolescent mothers should be positive in focus and strength-based in nature (e.g., Smith-Battle & Leonard, 1998); five studies identified self-efficacy and/or resilience as a necessary ingredient for the future career success of adolescent mothers (e.g., Carey et al., 1998). Fostering resiliency is thought to be one possible avenue that addresses both the immediate needs and the career development needs of adolescent mothers based on the work of Schilling (2008). There is still much to be learned about the career development of adolescent mothers in order to develop and implement an effective career development component for current and future programs designed to support adolescent mothers.

Prior research shows that implementation of career development program components are effective in generating positive long-term outcomes for adolescent mothers. Although parenting programs have demonstrated success in furthering the career development of adolescent mothers, it is unclear what intervention strategies were used and why such interventions proved to be effective. A longitudinal study conducted by Horwitz, Klerman, Kuo, and Jekel (1991) sought to locate and gather information from participants in an adolescent parenting program and to describe the long-term outcomes for this population. The results were positive. Twenty years later, 82% of the adolescent mothers were self-supporting and 62% met the success criteria of being gainfully employed and having at minimum a high school education. The majority of the program participants attributed their educational and vocational success to their involvement in the parenting program.

It is widely supported that one of the most important components to a successful parenting program is providing adolescent mothers with the skills and knowledge to become

self-supporting and successful through the inclusion of career development components such as career planning, exploration and decision making skills (e.g., Horwitz et al., 1991). Furthermore, most of the studies encourage the development and implementation of interventions designed for adolescent mothers and that these interventions are positive in focus, developmentally appropriate, comprehensive, and based on the individualized needs of the each adolescent mother (e.g., Kiselica & Murphy, 1994). However, few specifics have emerged as a guide in designing and implementing these types of comprehensive interventions that include career development components for adolescent mothers.

## Conclusion

The studies presented in this content analysis are a positive contribution to the small but growing body of professional literature on the career development of adolescent mothers. Based on the national statistics and the variety of the research endeavors, there is a small body of research in the past 25 years that has been associated with the career development of adolescent mothers. While immediate needs remain a constant concern, positive interventions like mentoring and strengthening social support networks are proving to be effective for some adolescent mothers.

It is clear that additional comprehensive, positive, and strength-based intervention strategies are needed to fully address the complex issues associated with the career development for adolescent mothers. Before developing such interventions, more research is needed to gain a better understanding of the current state of the career development of adolescent mothers. Both small and large scale studies are needed to pinpoint the strengths and weaknesses of the career related skills and knowledge of adolescent mothers as well as the obstacles that impede career and life planning. For example, a lack of standardized career instruments (e.g., *Career Development Inventory*) traditionally used to assess adolescent career development skills and knowledge was noted in the studies presented. The use of these existing instruments may be one avenue for gathering the missing data on career awareness and knowledge, decision making, problem solving, and goal setting to better understand the career knowledge and skills of adolescent mothers. Another avenue of exploration could be to develop an integrated theoretical framework from which to implement specific and effective intervention strategies to assist in the career development of adolescent mothers.

The documented concerns and negative outcomes associated with adolescent parenthood and the primary focus of the existing literature on prevention of and intervention with pregnant and parenting adolescents gave rise to an interest in reviewing and synthesizing the professional literature from the last 25 years that would focus on a more positive, future orientation, namely through career development of adolescent mothers. The results from this content analysis can be summarized in four key findings that include the following: (a) research has been conducted that is reflective of the demographics for this population; (b) a variety of research designs have been used to better understand this population; (c) adolescent mothers have pressing immediate needs and limited career knowledge and skills which impede career development; (d) a theoretical framework that favors cognitive and social/relational approaches and values individual difference/perspective seems to be favored; and (e) there is a need for comprehensive, positive interventions that focus on the strengths and resiliency of adolescent mothers in order to foster their career development. The results clearly point to the need to gain more information about the current state of career knowledge and skills of adolescent mothers in order to develop strategies and interventions.  Doing so will ensure that adolescent mothers can gain career awareness and knowledge as well as the skills for decision making, problem solving, and goal setting as a positive framework for future scenarios built on lives of possibilities.

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Table 2.1

*Characteristics of Articles in the Content Analysis*

| Article | Participants[1] | Focus[2] | Theoretical Framework[3] | Findings | Recommendations |
|---------|------------------|----------|---------------------------|----------|------------------|
| *Quantitative Studies* | | | | | |
| Blinn (1990) | N=179<br>100% C | *7,9,10* | *k, l* | *lack of knowledge; pressing needs* | *comprehensive interventions; assess/teach skills* |
| Hansford & Drummond (1992) | N=47<br>100% A | *2,3,10* | *b, l* | *contextual factors; pressing needs; lack of knowledge* | *comprehensive interventions; assess/teach skills* |
| Hellenga, Aber, & Rhodes (2002) | N=160<br>100% A | *1,5,7,810* | *e, b, f* | *contextual factors; lack of knowledge* | *comprehensive interventions; assess/teach skills* |
| Horwitz, Klerman, Kuo, & Jekel (1991) | N=121<br>100% A | *4,5,6* | *g* | *family support; positive long term results* | *comprehensive programs* |
| Kissman (1990) | N=118<br>91% A; 5% C | *3,6,7,10,11* | *c, g* | *pressing needs; lack of knowledge; family support* | *comprehensive interventions; positive focus; assess/teach skills* |
| Klaw & Rhodes (1995) | N=204<br>100% A | *1,3* | *b, d, l* | *mentoring* | *improve mentoring; comprehensive interventions* |
| Klaw, Rhodes, & Fitzgerald (2003) | N=198<br>100% A | *1,3* | *b, d, l* | *mentoring* | *improve mentoring; comprehensive interventions* |
| Low, Moely, & Willis (1989) | N=62<br>68% C; 32% A<br>N=77<br>73% C; 27% A | *2* | *b, l* | *parenting as career choice; family support* | *assess/teach skills* |
| Ortiz & Bassoff (1987) | N=53<br>47% A; 23% C; 24% L | *2, 7* | *c, m* | *lack of knowledge; pressing needs* | *comprehensive programs; positive focus; civil/political action; assess/teach skills* |
| White & Cummings (1995) | N=151<br>62% l; 31% C; 3% A | *2,9,10,11* | *l* | *lack of knowledge; pressing needs; family support* | *comprehensive interventions; assess/teach skills* |

| Article | Participants[1] | Focus[2] | Theoretical Framework[3] | Findings | Recommendations |
|---------|-----------------|----------|--------------------------|----------|-----------------|
| *Qualitative Studies* | | | | | |
| Blinn-Pike, Kuschel, McDaniel, Mingus, & Mutti (1998) | N=20 75% C; 20% A; 5% L | *1,10,11* | *b* | *mentoring* | *improve mentoring; comprehensive interventions* |
| Bogat, Liang, & Rigol-Dahn (2008) | N=51 63% A; 18% C; 12 % L | *1* | *a, b* | *mentoring* | *improve mentoring* |
| Brosh, Weigel, & Evans (2007) | N=54 55% L; 20% C; 10% A  N=18 83% L; 11% C; 6% A | *2,6,9,10* | *b, l* | *lack of knowledge; pressing needs; family support; obstacles* | *comprehensive interventions; assess/teach skills* |
| Carey, Ratliff, & Lyle (1998) | N=6 67% L; 17% A; 16% C | *4,5,6* | *l* | *family support; resilience* | *further research; comprehensive interventions* |
| Klaw (2008) | N=30 90% A; 10% M | *2,3,5,8,9,10* | *j* | *meaningfulness; pressing needs; mentoring* | *improve mentoring; comprehensive interventions; assess/teach skills* |
| Schilling (2008) | N=1 100% A | *1,3,4,5,10,11* | *l* | *meaningfulness; lack of knowledge; mentoring* | *comprehensive programs; assess/teach skills* |
| Smith-Battle & Leonard (1998) | N=13* A; C (N=2 A) | *3,4,5,6* | *b* | *meaningfulness* | *comprehensive interventions; positive focus; civil/political action* |
| Stiles (2005) | N=5 80% A; 20% C | *6,9,10,11* | *b* | *lack of knowledge; pressing needs; family support* | *comprehensive programs; assess/teach skills* |
| Zippay (1995) | N=20 90% A; 5% C; 5% L | *1,4,11* | *g, h* | *lack of knowledge; mentoring* | *improve mentoring programs; comprehensive interventions; assess/teach skills* |
| *Theoretical* | | | | | |
| Kiselica & Murphy (1994) | N/A | *2,7,9,10,11* | *l* | *pressing needs; lack of knowledge* | *comprehensive interventions; assess/teach skills* |
| Merrick (1995) | N/A | *2, 3* | *c ,d, l* | *meaningfulness* | *comprehensive interventions; positive focus* |

Participants[1]: *A African American; C Caucasian; L Latina; M Mexican American; * percentages not given*

Focus[2]: *1 Mentoring; 2 Vocational future/identity; 3 Sociocultural; 4 Self efficacy/resilience 5 Positive focus; 6 Social support; 7 Delayed vocational development; 8 Obstacles, lack of knowledge; 9 Compromise reality & goals; 10 Pressing immediate needs; 11 Decision-making, problem solving, goal setting*

Theoretical Framework[3]: *a Stages of mentoring; b Sociocultural; c Feminist (Gilligan); d Ecological (Bronfenbrenner); e Status attainment; f Compromise (Gottfredson); g Social networking theory; h Corporate research; i "Forshortened future"; j Possible selves; k Future time perspective; l Cognitive development theory; m Social learning theory*

Table 2.2

*Type of Research, Data Collection Methods, and Instruments for Research Articles*

| Article | Type of Research | Data Collection Method[1] | Formal Instruments[2] |
|---|---|---|---|
| *Quantitative Studies* | | | |
| Blinn (1990) | Comparative | *3* | *a, b* |
| Hansford & Drummond (1992) | Comparative | *7* | *c* |
| Hellenga, Aber, & Rhodes (2002) | Comparative | *1, 3* | *d, e, f* |
| Horwitz, Klerman, Kuo, & Jekel (1991) | Descriptive | *1* | *None* |
| Kissman (1990) | Relational | *3* | *None* |
| Klaw & Rhodes (1995) | Relational | *1* | *g, h* |
| Klaw, Rhodes, & Fitzgerald (2003) | Comparative | *1, 3, 6* | *e* |
| Low, Moely, & Willis (1989) | Comparative | *1* | *None* |
| Ortiz & Bassoff (1987) | Comparative | *1* | *None* |
| White & Cummings (1995) | Comparative | *1* | *i, j, k* |
| *Qualitative Studies* | | | |
| Blinn-Pike, Kuschel, McDaniel, Mingus, & Mutti (1998) | Grounded Theory | *4* | *None* |
| Bogat, Liang, & Rigol-Dahn (2008) | Phenomenology | *1, 2, 4* | *None* |
| Brosh, Weigel, & Evans (2009) | Phenomenology | *1, 2, 3* | *None* |
| Carey, Ratliff, & Lyle (1998) | Ethnography | *1* | *None* |
| Klaw (2008) | Phenomenology | *1, 2, 5* | *l* |
| Schilling (2008) | Case Study | *1, 2* | *None* |
| Smith-Battle & Leonard (1998) | Phenomenology | *1* | *None* |
| Stiles (2005) | Micro-ethnography | *1, 2* | *None* |
| Zippay (1995) | Case study | *1, 3* | *None* |

Data Collection Method[1]*: 1 Interview; 2 Focus Group; 3 Researcher Designed Survey/Questionnaire; 4 Mentor Records/Notes/Logs; 5 Art Projects; 6 Academic Record; 7 Formal Measures Only*

Formal Instruments[2]: *a Interpersonal Future Likelihood Inventory; b Work Future Likelihood Inventory; c Values Scale; d Pearlin's Economic Strain Scale; e Social Support Network Questionnaire; f Symptom Checklist 90-R; g The Scale of Concrete Beliefs About Opportunity Structure; h Life Orientation Test; i Goal Q-Sort; j Goal Orientation Scale; k Children's Nowicki-Strickland Internal-External (locus of control scale); l Obstacle Survey*

## CHAPTER 3

## The Career Development of Adolescent Mothers:
## A Study of Career Adaptability, Resiliency, and Perceived Obstacles

**Abstract:** The focus of this survey study was to examine the relationship among career adaptability, resiliency, and perceived obstacles to the career development of adolescent mothers. Career development was conceptualized using life roles with specific focus on the skills necessary to create and modify the working role.  Results of this purposeful sample (N=101) indicate adolescent mothers are similar to peers in the planning and decision making dimensions of career adaptability but lower in exploration.  Traits of personal resiliency and emotional reactivity are comparable to peers, but relational resiliency is lower.  A discussion of programmatic and research considerations is presented to address the career adaptability and resiliency needs of adolescent mothers taking into consideration the obstacles and opportunities related to the working life role.

*Keywords:* adolescent mothers, career development, career adaptability, resiliency, obstacles

Adolescent pregnancy and birth rates are on the rise for the first time in more than a decade (Guttmacher Institute, 2010).  This growth indicates there will be an increase in the number of adolescent girls adding the role of mother to the already complicated transition from child to adult (Guttmacher Institute, 2010).  Becoming a parent during adolescence has been described as a premature and non-normative life event that can present either life-long challenges or growth opportunities in the career development of adolescent mothers (Ketterlinus, Lamb, & Nitz, 1991; Zachry, 2005). Taylor (2009) reported the most prevalent negative outcomes associated with adolescent parenthood as lowered high school graduation rates, limited educational opportunities after high school, and difficulty achieving stable work and financial independence, which are important career development considerations for this population.

The Guttmacher Institute (2010) has reported the national statistics with respect to racial/ethnic groups indicating elevated birth rates among adolescents of color with African American adolescents currently at 6.5% and Latina adolescents at 8.3%.  These birth rates are significantly higher than the 2.7% of Caucasian (non-Hispanic) adolescents.  Race and ethnicity may influence how an adolescent pregnancy is perceived by the adolescent mother and those around her further contributing to the mother's obstacles to and opportunities for career development (McAdoo, 2007; Rivera, Arrendondo, & Gallardo-Cooper, 2002).

Support from families has been shown to be a positive factor in furthering the career development of adolescent mothers (Brosh, Weigel, & Evans, 2007). African American families traditionally place a high value on having children, tend to not encourage termination of pregnancies, and offer help and support to adolescent mothers despite the frustrations associated with the premature nature of adolescent parenting (McAdoo, 2007). Similarly, Latino families tend to be supportive of adolescent mothers due to solid collectivist world views, deep religious beliefs, and the strength of family bonds (Rivera et al., 2002). Although, this support for Latina adolescent mothers is often followed by a period of anger due to the premature nature of the pregnancy if it occurs out of wedlock (Rivera et al., 2002). Little is known about Caucasian adolescent mothers except that they have the highest rates of formal adoptions outside the family, suggesting that family support may be lower for attempting to combine motherhood and career development than that for adolescent mothers in other racial/ethnic groups (Low, Moely, & Willis, 1989).

Adolescent mothers typically report more challenges with life planning related issues when compared to non-parenting peers (Spear, 2004). Life planning related issues for the purposes of this study were viewed through the lens of obstacles and opportunities to career development for adolescent mothers. These "obstacles" include completing an education, finding employment, and experiencing an increased financial strain. Conversely, becoming a mother during adolescence can stimulate resiliency and growth opportunities in the working role (Zachry, 2005). These "opportunities" include an increase in thoughts about being able to provide financially for self and child and more positive attitudes towards her future after becoming a mother (Brubaker & Wright, 2006). Therefore, adolescent parenting can be simultaneously stressful and meaningful (Perrin & Dorman, 2003), and it impacts all areas of life including the working role.

Contemporary writers are using a social constructivist framework to expand the concept of career development beyond exclusively focusing on finding a job (e.g., Brott, 2004; McMahon, Watson, & Patton, 2005; Savickas, 1993). Career development can be viewed as a holistic, dynamic and life long process in which individuals construct meaning and determine the most appropriate expression of their life roles (Savickas et al., 2009). The concept of life roles (e.g., working, learning, relating to family and others) is a long standing and continually evolving theme in career counseling (Brott, 2005). Currently, life roles are conceptualized as a

constellation of interacting enactments that have relative importance to the individual within the context in which these roles occur (Brown, 2002). This is particularly applicable to adolescent mothers because the addition of the parenting role can influence the dynamics between and the perceived importance of other life roles with particular impact on the working role (Savickas, 1997).

There are a variety of programs and services designed to meet the unique needs of adolescent mothers (e.g., Emihovich & Fromme, 1998), which have been implemented in both school (Kaplan, Blinn-Pike, Wittstruck, Berger, & Leigh, 2002) and community settings (Sarri & Phillips, 2004). Adolescent mothers have reported that parenting programs are moderately helpful in providing information relevant to their parenting role, such as medically related advice and nutritional information to improve the health of both the mother and the child (Sarri & Phillips, 2004). However, adolescent mothers report little or no assistance in career related matters, such as finding employment and/or educational training opportunities.

Longitudinal studies investigating the career outcomes (i.e., being employed and self-supporting adults) for adolescent mothers participating in parenting programs have produced mixed results. In one study, Horwitz, Klerman, Kuo, and Jekel, (1991) reported that 82% of the mothers who participated in an adolescent parenting program were financially self-supporting 20 years later. However, Taylor (2009) reported that, when compared with peers who were not adolescent parents, the outcomes 20 years later for adolescent parents included lower incomes and less prestigious occupations. However, neither Horowitz et al. nor Taylor indicated which program components helped or hindered participants' career outcomes. Thus, more information is needed to provide theoretically based intervention strategies for improving the career development outcomes of adolescent mothers.

It appears that adolescent mothers participating in parenting programs are aware of the need to develop their career skills and knowledge; however, there is limited literature about how and which particular strategies should be implemented in these programs (Brindis & Philliber, 2003; Scholl, 2000). In the current study, *career adaptability* and *resiliency* were used to better understand the career development of adolescent mothers as they are adjusting to this new role as a mother in relation to other life roles with particular focus on the working role. *Career adaptability* was defined by the dimensions of planning, exploring, and decision making (Savickas, 1997). *Resiliency* was defined by the attributes to develop personal and relational

strengths in the process of overcoming adversity (Prince Embury, 2007). Attention was given to the unique *obstacles* in career development of the adolescent mother as she constructs meaningful expression of her working role (Klaw, 2008; Savickas et al., 2009). From previous research, it appears that adolescent mothers struggle to learn the career adaptability skills necessary to implement an expression of the envisioned working role with the addition of the parenting role (Perrin & Dorman, 2003; Savickas, 2005).

## Conceptual Framework

A number of articles have been published on the prevention of adolescent pregnancy (e.g., Gilliam, 2007) as well as personal issues of adolescent mothers, such as stress (e.g., Ketterlinus et al., 1991) and academic achievement concerns (e.g., Zachry, 2005). However, few authors have focused specifically on the career development and adaptability of adolescent mothers (e.g., Bogat, Liang, & Dahn, 2008). In a recent review of the literature, 21 articles were found related to the career development of adolescent mothers (see Chapter 2). Based on a content analysis of this literature, several common themes emerged. First, adolescent mothers who participate in these research studies are representative of the racial group membership and geographic location identified by national statistics. Second, a variety of theories and research methods have been used. Third, impediments to career development of adolescent mothers have been identified as pressing immediate needs (i.e., housing, transportation, child care), limited career development skills (e.g., decision making skills), and lack of career related knowledge (e.g., occupational information). Fourth, some success has been found with programs that offer mentoring and other socially supportive relationships while other researchers have made more general suggestions about making interventions strength-based and positively focused. While these studies relate to the career development of adolescent mothers and contribute to the body of professional literature on the subject, there are further opportunities to better understand this population.

While adolescent mothers face many challenges, studies have shown that adolescent mothers attribute positive life changes to their newly acquired role of parent (Brubaker & Wright, 2006; Rosengard, Pollock, Weitzen, Meers, & Phipps, 2006). Positive themes revealed by adolescent mothers in one study included: (a) a new and better sense of self, (b) an increase in maturity and responsibility, (c) an improvement in relationships with family members, and (d) a new sense of commitment to improving self and situation (Brubaker & Wright, 2006).

Rosengard et al. (2006) found that adolescent mothers felt the advantages of having a child during adolescence were: (a) having an attachment to another person (the baby); (b) having someone to love, be loved by, and be connected with; (c) being close in age to the baby helped them to feel more attached and connected; (d) getting more support from family members; (e) having more energy than older mothers; and (f) feeling more mature and purposeful about the future. These and other perceived positive aspects of adolescent motherhood need to be validated and incorporated into the construction of programs and services to meet the career development needs of adolescent mothers.

Becoming an adolescent mother presents both challenges and opportunities for successful career development across the various life roles with a particular focus on the working role. A conceptual framework for the career development of adolescent mothers must be carefully selected (a) to address the challenges (e.g., obstacles), (b) to capitalize on opportunities and strengths (e.g., increased sense of maturity/responsibility), and (c) to develop positive intervention strategies and programs to better the long-term outcomes of adolescent mothers. Two possible constructs that meet these selection criteria include *career adaptability* and *resiliency*. Career adaptability is a contextually and culturally responsive approach that assesses the skills and knowledge that support and addresses the challenges that could impede adolescent mothers' career development (Brown, 2002). Resiliency is a concept derived from positive psychology that may assist in better understanding the positive attributes (e.g., increase sense of responsibility) that adolescent mothers have acquired as a result of becoming a parent (Carey, Ratcliff, & Lyle, 1998). These positive attributes of resiliency can help individuals overcome adverse or stressful situations and be successful because they are able to adapt and adjust (Greene, Galambos, & Lee, 2003; Richardson, 2002).

**Career Adaptability**

A central construct in adolescent career development is career adaptability (Hirschi, 2009). Career adaptability is defined as the ability to adjust oneself to fit new and/or changed circumstances in one's career by planning, exploring, and making decisions about one's future, such as being a parent, getting an education, and being employed (Brown, 2002; Savickas, 1997). For adolescent mothers, career adaptability is a developmental concept that is especially applicable given the number of life events that are occurring, in particular the added life role of

parenting, which could either encourage or stifle career adaptability (Patton & Creed, 2001; Zachry, 2005).

Career adaptability focuses attention on developing coping skills that encompass planning, exploring, and decision making in order to attain satisfaction in all life roles (Savickas, 1993; Savickas, 1997). In career adaptability, *planfulness* is defined as a learned skill that allows individuals to develop a future orientation in order to increase adaptability (Savickas, 1997). Career adaptability theorists contend that *exploration* be viewed from a more dynamic perspective in order to understand the relationships between individual differences and contextual factors that influence career development (Blustein, 1997). With respect to career adaptability, *decision making* is expanded beyond the traditional models of career development to consider the multiple alternatives and objectives that are present in the career decision making process (Phillips, 1997). Phillips (1997) highlights the need for career decision making to be viewed as an adaptive process that is both complex and subjective.

Career adaptability provides a more process orientated and dynamic perspective to understand the relationships between individual differences and contextual factors that enhance the development of the working role for adolescent mothers (Bluestein, 1997; Phillips, 1997). Career adaptability is currently the theoretical basis for both (a) the assessment of career related skills and knowledge and (b) the development and implementation of intervention strategies for adolescents (Creed, Fallon, & Hood, 2008; Hirschi, 2009; Kenny & Bledsoe, 2004). The concept of career adaptability is applicable to adolescent mothers because it focuses on developing skills to address the individual and contextual factors associated with career development. These career adaptability skills (planning, exploring, decision making) are most relevant to the working role, but they can easily be generalized and utilized in considering other life roles (i.e., parenting).

**Resiliency**

Resiliency is the result of a paradigm shift from looking at risk factors associated with problematic situations to searching for more strength-based personal attributes that help individuals overcome adverse or stressful situations (Richardson, 2002). Resiliency is defined as one's ability to overcome adversity and be successful (Greene et al., 2003). Some researchers believe that resiliency is a combination of protective factors (i.e., personal characteristics and interpersonal relationships) and areas of vulnerability (i.e., ability to self-regulate when faced

with adversity) that can help individuals grow stronger as a result of adversity (Prince Embury, 2007; Richardson, 2002; Zachry, 2005). Prince Embury (2007) has operationally defined resiliency for purposes of assessment with two constructs for protective factors, namely *mastery* (i.e., internalized personal characteristics in optimism, self-efficacy and adaptability) and *relatedness* (i.e., social and relational experience related to trust, support, comfort and tolerance), and one construct for vulnerability, namely *emotional reactivity* (i.e., level of sensitivity, recovery, and impairment to self-regulation in response to adverse events or circumstances). For consistency and clarity in the current study, mastery was referred to as *personal resiliency*, relatedness was referred to as *relational resiliency*, and emotional reactivity was referred to as *emotional vulnerability* (Green et al. 2003; Richardson, 2002). These three resiliency constructs (personal resiliency, relational resiliency, emotional vulnerability) are helpful in understanding the attributes that are displayed by resilient individuals who are able to adapt and adjust as a result of difficult or stressful situations (Prince Embury, 2007; Richardson, 2002).

Resiliency has been associated with adolescent motherhood with researchers using a variety of conceptualizations for resiliency. For Kennedy (2005), resiliency was paired with the assessment of risks to better understand both the risks and protective factors that promote resiliency, thus moderating the negative effect of adolescent motherhood. For Black and Ford-Gilboe (2004), resiliency was used to validate and predict theoretical relationships among variables associated with creating a healthy family environment of some adolescent mothers. Griffin (1998) paired resiliency with self-efficacy to develop a program designed for parenting adolescents to balance the demands of the parenting, learning, and working life roles with 82% of the participants finding success in graduating from high school, building parenting skills, and planning for future transitions to work or continued education. Furstenberg, Brooks-Gunn, and Morgan (1987) found that a substantial portion of adolescent mothers demonstrated resiliency by overcoming the challenges of adolescent parenthood by maintaining regular employment and establishing financial stability without the need for public assistance (as cited in Kennedy, 2005). In summary, resiliency is thought to be one of the factors influencing the degree of success adolescent mothers experience as adults (e.g., Schilling, 2008).

**Career Adaptability and Resiliency**

A career resiliency model has been suggested to promote career adaptability with high-risk individuals who are experiencing a dramatic life event (Rickwood, 2002; Rickwood,

Roberts, Batten, Marshall, & Massie, 2004). This approach that links resiliency to career adaptability may be more favorable to adolescent mothers than more traditional approaches, which focus on risk factors, problems associated with adolescent motherhood, and/or career related skill deficits (Perrin & Dorman, 2003). However, even resilient mothers can find the day-to-day demands of motherhood overwhelming. Without attention to the obstacles they may encounter (e.g., childcare, transportation), adolescent mothers will be unable to attend to career adaptability skill development (Klaw, 2008). Recognizing and making provisions to meet these pressing immediate needs helps adolescent mothers gain the ability to focus attention and effort on developing their personal career adaptability (Klaw, 2008).

Further, adolescent mothers need to cultivate their own personal and relational attributes in order to foster and encourage resiliency (Zippay, 1995). Personal characteristics (i.e., optimism, self-efficacy, adaptability) can influence levels of resiliency (Prince Embury, 2007). Socially supportive relationships based on trust, support, comfort, and tolerance with family members and/or mentors have been proven to help further the career adaptability of adolescent mothers by providing them with career-related information and developing career related skills (Klaw & Rhodes, 1995; Klaw, Rhodes, & Fitzgerald, 2003; Prince Embury, 2007). Both career adaptability skills and higher levels of personal and relational resiliency may be helpful in overcoming the obstacles experienced by adolescent mothers.

Therefore, a research study was undertaken to examine the relationships among career adaptability, resiliency, and potential obstacles to better understand the career development of adolescent mothers. The research questions that guided the study included the following: (1) What are the relationships between the dimensions of career adaptability (i.e., planfulness, exploration, decision making), resiliency, and the obstacles to career development of adolescent mothers? (2) Can measures of resiliency predict career adaptability in adolescent mothers? (3) What is the relationship between a single measure of career adaptability and three measures of the factors of career adaptability (planfulness, exploration, and decision making) for a sample of adolescent mothers?

## Methods

A survey research design was used to explore the current state of career adaptability, resiliency, and potential obstacles to career development among a purposive sample (N=101) of adolescent mothers from one state in the mid-Atlantic region of the United States. Data on the

career adaptability of adolescent mothers were gathered using the Career Planning Scale from the *Career Development Inventory-School Form* (CDI-S; Super, Thompson, Lindeman, Jordaan, & Myers, 1979); Self-Exploration and Environmental Exploration Scales from the *Career Exploration Survey* (CES; Stumpf, Colarelli, & Hartman, 1983); *Career Decision Making Self Efficacy Scale-Short Form* (CDSE-SF; Betz, Hammond, & Multon, 2005; Betz & Klein, 1996); and *Career Futures Inventory* (CFI; Rottinghaus, Day, & Borgen, 2005). Resiliency of adolescent mothers was measured using the *Resiliency Scales for Children and Adolescents* (RSCA; Prince-Embury, 2007). The perceived obstacles to developing career adaptability skills of adolescent mothers were measured with the *Obstacle Survey* (Klaw, 2008). A demographic questionnaire was given to gather information about the participants.

## Community-Based and School-Based Parenting Programs

Data were collected from parenting programs for adolescent mothers in a community and two school settings within one school district. The community parenting program was founded and developed in 1982 by volunteers. It is a support and self-help organization whose aim is to assist members in becoming self-sufficient. Currently, the program components are designed to: (a) assist with educational planning, (b) teach the importance of prenatal care, (c) facilitate child care, (c) teach parenting skills, and (e) facilitate access to community and medical resources. The program's staff provides services to pregnant and parenting young people up to the age of 21. It is currently staffed by two full-time social workers who run weekly group sessions for program members in the schools and community as well as make frequent home visits. Current data from a self-study show the program has helped to decrease school dropout rates for pregnant and parenting teens. The program staff recognized the need to develop a career development program in order to help the adolescent mothers they serve to be self-sufficient.

The school-based parenting program was developed by the school system to address the unique academic, career, and personal issues of parenting students. Participation in the program is voluntary. Students enrolled in the parenting program complete the requirements for a high school diploma in an alternative school setting. A mentor program, group and individual counseling, and elective courses in parenting and employability skills are among the services provided. Other support services include an on-staff public health nurse and social worker, day care assistance, transportation, and homebound instruction.

**Participants**

All female participants under the age of 21 participating in the community-based and school-based parenting programs were approached to participate in the study. A total of 101 adolescent mothers from these selected programs agreed to participate in the study. Participant ages ranged from 15 to 21 years old: four were 15 years old, 16 were 16 years old, 17 were 17 years old, 29 were 18 years old, and 35 were between 19 and 21 years old.

All of the participants in the study had at least one child at the time of data collection. In addition, one mother reported having three children, and 12 mothers reported having two children. At the time of the study, 87 participants stated they were not currently pregnant. Ethnically, 74% were of Hispanic, Latino, or Spanish origin; 22% were African American; 2% were Caucasian; 1% was Asian American; and 1% identified as bi-racial. Roughly, half (52%) of the participants indicated that English was not the primary language used in their home.

When asked about their current living situation, 57% were living with a parent or grandparent, 20% were living with the baby's father, 9% were in foster care with their children, 8% were living with the family of the baby's father, and 6% of the mothers were living on their own with their children. The primary source of income included 38% supported by parents and or family, 32% supported by the baby's father or his family, 20% self-supporting, and 10% supported by assistance programs. Regarding, financial assistance received, 84% of participants and their children were on Medicaid, 66% of participants received WIC, 30% received help from family (e.g., money, diapers, food, or childcare), 21% had a voucher for free or reduced childcare, and 16% received assistance with food (i.e., food stamps). As to current employment, 63% (n=63) of the participants were not currently employed, but 53 of those participants indicated they were actively looking for a job. Thirty participants work on a part-time basis, and six work full-time. One participant indicated that she earned money by cutting hair and giving manicures/pedicures on a sporadic basis.

Participants' educational descriptions ranged from being enrolled in high school to college students: 11% ninth graders, 16% tenth graders, 26% eleventh graders, 31% twelfth graders, and 9% were currently enrolled in college on a full-time or part-time basis. Seven participants indicated they were high school graduates but had no additional schooling. None of the participants indicated that she had dropped out of school before completing high school. When asked about educational plans for the future, four participants indicated they did not think

they would graduate from high school, 23 planned to graduate from high school and not pursue any additional education, 26 anticipated earning a two-year college degree, 40 participants expressed interest in pursuing a four-year college degree or higher, and seven participants were unsure of their future educational plans.

**Instruments**

Six different instruments were selected for data collection.  Specific scales and related items from two instruments were extracted from the full item set because of the applicability to career planning and exploring.  Four instruments were used in their entirety to gather information from the participants on career decision making, career adaptability, resiliency, and obstacles.  An overview of the instruments, scales, and subscales with regards to the number of items and psychometric properties is presented in the Appendix A.

*Career Development Inventory-School Form* (CDI-S). The CDI-S was developed in the 1970s and has been widely used to assess the career development and adaptability of adolescents with documented research efforts using the CDI in more than a dozen countries (Super et al., 1979; Thompson & Lindeman, 1981).  For the purposes of this study, the Career Planning (CP) scale of the CDI-S was used to assess career planfulness.  The Career Planning scale contains 20 items: 12 items for Career Planning Engagement and eight items for Career Knowledge.  Items are rated on a five-point Likert type scale: Career Planning Engagement ranging from (1) *I have not yet given thought to this* to (5) *I have made definite plans and know what to do to carry them out*; Career Knowledge ranging from (1) *hardly any knowledge* to (5) *a great deal of information*.

The reliability of the CDI-S is reported in the CDI manual by gender and grade level using Cronbach alpha coefficients (Thompson & Lindeman, 1981).  The reliability of the CDI-S is reported by gender and grade level with alphas for female students in grades nine to twelve for the Career Planning scale ranging from .87 to .90 (Thompson & Lindeman, 1981).  Other studies confirm similar and sufficient reliability for the Career Planning Scale (Betz, 1988).  The reliabilities for the current study were .89 for both Career Planning subscales and .90 for the total scale.  The content validity of the instrument was tested using an expert panel and was judged to be valid on all scales and demonstrated subgroup differences (Thompson & Lindeman, 1981).  The factor structure of the instrument was validated as the scale items appropriately loaded on

the subscales (Thompson & Lindeman, 1981).  Both content and construct validity has been supported (Savickas & Hartung, 1996).

*Career Exploration Survey* **(CES).**  The CES (Stumpf et al., 1983) was developed to measure aspects of the career exploration process, gauge reactions to career exploration, and explore beliefs about career exploration (Stumpf et al., 1983).  Two subscales from the instrument were used to measure career exploration behaviors: the six-item Environmental Exploration (e.g., information about specific jobs/careers) and the five-item Self-Exploration (e.g., reflecting on future career choice based on past experiences).

Frequency of career exploration behaviors are self-rated on a five-point Likert scale with responses of (1) *little* (2) *some,* (3) *a moderate amount*, (4) *a substantial amount*, or (5) *a great deal*.  The reliabilities reported for the Self-Exploration subscale and the Environmental-Exploration subscale are .87 and .88, respectively (Stumpf et al., 1983).  The reliabilities in the current study ranged from .91 to .93 for the two subscales and total scale score.  Acceptable content and construct validity has been established (Creed et al., 2008; Stumpf et al., 1983.

*Career Decision Making Self-Efficacy Scale-Short Form* **(CDSE-SF).**  The purpose of the CDSE-SF (Betz et al., 2005; Betz & Klein1996) is to measure one's confidence in making career related decisions.  The instrument consists of 25 items that measure self-reported career decision making behaviors on five subscales: Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving.  Reponses indicate the level of confidence in making career related decisions and are rated on a five-point Likert scale from (1) *no confidence at all* to (5) *complete confidence* (Betz et al., 2005; Betz & Klein, 1996).  Reported reliabilities for the subscales range from .73 to .83 and .94 for the total score (Taylor & Betz, 1983).  In the current study, the subscale reliabilities ranged from .87 to .90 and .90 for the total scale.  Validity of the CDSE-SF has been studied extensively and evidence supports the content, concurrent, and construct validity of the instrument (Betz, Klein, & Taylor, 1996; Taylor & Betz, 1983).

*Career Futures Inventory* **(CFI).**  Based on the career adaptability model proposed by Savickas (1997), the CFI is a 25-item questionnaire developed by Rottinghaus et al. (2005) that assesses critical factors in career adaptability across three scales:  Career Adaptability as the way an individual views her capacity to cope with and capitalize on change in the future (11 items), Career Optimism as one's disposition to expect the best possible outcome or emphasize the most positive characteristics in terms of her career/future (11 items), and Perceived Knowledge (three

items) to assess perceptions/knowledge about job market and employment trends (Rottinghaus et al., 2005). The primary interest in using the CFI in this study was to explore whether the 11-item Career Adaptability scale accurately measures the three dimensions of career adaptability, namely planfulness, exploration, and decision making (Rottinghaus et al., 2005). Responses are measured using a five-point Likert scale and range from (1) *strongly agree* to (5) *strongly disagree*. Higher mean scores indicate higher levels of career adaptability, optimism, and perceived knowledge (Rottinghaus et al., 2005). Cronbach alpha reliabilities for the instrument scales are .85 for Career Adaptability, .87 for Career Optimism, and .73 for Perceived Knowledge. In the current study, reliabilities ranged from .73 to .85 for the scales. Adequate validity of the *Career Futures Inventory* was reported by Rottinghaus et al. (2005) after completing studies using factor analysis and comparison with other measures of career adaptability (e.g., *Revised Life Orientation Test).*

**Resiliency Scales for Children and Adolescents (RSCA).** This instrument was designed to identify resiliency attributes in children and adolescents (Prince Embury, 2007) and is composed of three scales: Sense of Mastery (MAS), Sense of Relatedness (REL), and Emotional Reactivity (REA). The MAS, used to assess personal resiliency, has 20 items divided into three subscales (Optimism, Self-Efficacy, Adaptability). The REL, designed to assess relational resiliency, has 24 items representing four subscales (Sense of Trust, Support, Comfort, Tolerance,). The REA, which measures emotional vulnerability, has 20 items comprising three subscales (Sensitivity, Recovery, Impairment). All items are rated on a five-point Likert scale with the following response choices: (0) *never*, (1) *rarely*, (2) *sometimes*, (3) *often*, and (4) *almost always*. The sum of item scores from subscales became the raw score for the respective scale (MAS, REL, REA), which was converted to a T score and compared to a norm group by age. Higher T scores on the MAS and REL scales and lower scores on the REA indicate more resiliency resources.

The *Resiliency Scales for Children and Adolescents* reliability alphas ranging from .79 to .90 for 15-18 year old females were considered acceptable (Prince Embury, 2007). For the current study, the subscale reliabilities ranged from .57 to .87 and the scale reliabilities ranged from .84 to .93. Convergent and divergent validity has been correlated with conceptually similar instruments that measure resiliency (e.g., *Reynolds Bully Victimization Scale*). The criterion validity was established by comparing groups of clinical samples to matched nonclinical groups

of children and adolescents. The *Resiliency Scales for Children and Adolescents* (Prince Embury, 2007) are considered to be an effective screening tool for resiliency traits (Prince Embury, 2006; Prince Embury, 2007).

>  ***Obstacle Survey.*** This instrument was used to gain a perspective on the realities of adolescent motherhood (Klaw, 2008). The *Obstacle Survey* (Klaw, 2008) was designed to determine the specific obstacles that adolescent mothers encounter in daily life that could potentially impede an adolescent mother's career adaptability, such as needing child care and facing discrimination because of my race. The survey consists of 26 items that could potentially impact career adaptability with participants rating each item as *1 = not a concern for me, 2 = somewhat of a concern,* or *3 = a large concern*.

>  The *Obstacle Survey* was specifically intended to more accurately measure the pressing needs and contextual concerns that may impede adolescent mothers' career adaptability (Klaw, 2008). This instrument is a relatively new instrument designed to be used with adolescent mothers; therefore, there is little information available about the survey's psychometric properties. However, the information provided by this instrument was expected to be helpful in developing a better understanding of the perceived obstacles to the career adaptability of adolescent mothers.

>  ***Demographic Questions.*** The demographic items contained 12 questions designed to gather information about the participants. Information about the participants' age, racial/ethnic identity, language used in the home, number and age of child(ren), living situation, socioeconomic status, current school status, and employment status was requested.

**Procedure**

>  Approvals were obtained from the university's Institutional Review Board (IRB), the community-based parenting program, and the school-based parenting programs. All members of the parenting programs were contacted by their current social worker or school counselor via phone or in-person to provide information about the study and to give members the opportunity to participate. The two social workers who coordinate the community-based parenting program and the school counselors involved in the school-based programs were given a brief written summary of the study and met with the principal investigator to discuss how to explain the study to the potential participants. If interested in being a part of the study, potential study participants were given a parental permission form if under the age of 18 or an informed consent form if over

the age of 18.  When required, the social workers and/or school counselor contacted parents to explain the purpose of the study and the need for parental permission to participate.  To encourage participation in the study, mothers who completed all aspects of the study were given $10.00 in compensation.

After parental permission or informed consent was granted, participants were given instructions on how to complete all instruments via the computer using an online questionnaire created in Survey Monkey®, with the exception of the *Resiliency Scales for Children and Adolescents* (RSCA; Prince Embury, 2007).  The latter instrument was completed using a paper and pencil version as required by the publisher.  All instruments were untimed, giving participants as much time as needed to complete the measures in the session.  Participants were given contact information for the study and were able to ask any questions about the study.  Once all of the participants completed all aspects of the study, information from all of the instruments was imported into an Excel document with each participant's information under an assigned numeric ID code.

## Results

Descriptive statistics were used to describe the study participants and to report results on the respective instrument scales and subscales.  The participants' mean scores and standard deviations on each dimension of career adaptability (Career Planfulness, Career Exploration, Career Decision Making) and related subscales, attributes of resiliency (Mastery, Relatedness, Reactivity), a single measure of career adaptability, and perceived obstacles to career development are displayed in Table 3.1.  Correlations were computed to determine the relationships between career adaptability and resiliency (see Table 3.3) and to examine the relationship between one single measure of career adaptability and three separate measures of the career adaptability dimensions (see Table 3.6).  Multiple regression analysis was used to determine the extent career adaptability can be predicted by resiliency (see Tables 3.4 and 3.5).

The Career Planfulness scale and subscale scores for the adolescent mothers in this study (see Table 3.1) were slightly higher than the average score for the norm sample of female adolescents as reported in the CDI manual (Thompson & Lindeman, 1981): Career Planfulness (*M*=3.34, *SD*=0.78), Career Planning Engagement subscale (*M*=3.15, *SD*=0.93), and Career Knowledge subscale (*M*=3.61, *SD*=0.88).  This suggests that the adolescent mothers in the study

are similar when compared to peers in terms of career planfulness (Thompson & Lindeman, 1981).

The overall Career Exploration mean of 2.73 indicates participants self-reported some career exploration with their responses indicating (2) *some* or (3) *a moderate amount* of career exploration behaviors.  Self-exploration (*M*=3.16) is conceptualized as being reflective about one's future career and past experiences.  Environmental exploration (*M*=2.34) involves investigating career possibilities in terms of specific jobs, opportunities in the local area, and areas of specified career interest.  These results suggest that the adolescent mothers in this study show a need for increased career exploration skills of both self and the environment with a more pronounced need in environmental exploration.

In terms of Career Decision Making, there was little variation between the total score (*M*=3.26) and each of the subscale scores ranging from 3.12 to 3.37.  Examples of career decision making skills include selecting a college major, determining one's ideal job, deciding on values related to occupations, and preparing for a job search.  According to the authors, scores of 3.5 or higher are predictive of a willingness to approach and/or try new career related behaviors; scores below 3.0 indicate an inadequate approach to career related decision making behaviors (Betz et al., 1996).  It appears that participants in this study are not particularly strong or weak in terms of decision making skills.

Regarding resiliency, participant T scores for the scales and scaled scores for the subscales (see Table 3.1) were compared to the female adolescent norm group (Prince Embury, 2007).  T scores over 60 are ranked as *high*, 50 to 59 are *above average*, 46 to 49 are *average*, 41 to 45 are *below average*, and below 40 are *low*.  The reported T scores for the participants were *average* for Sense of Mastery (*M* = 48.29, *SD* = 7.93) and Emotional Reactivity (*M* = 49.44, *SD* =10.58) and *below average* for Sense of Relatedness (*M* = 44.47, *SD* = 10.11).  The manual reports that scaled scores for the subscales over 16 are ranked as *high*, 13 to 15 are *above average*, 8 to 12 are *average*, 5 to 7 are *below average*, and 4 and below are *low*.  The related subscale scores for Sense of Mastery (MAS) were *average* (*M* = 9.45 to 9.75); subscales for Sense of Relatedness (REL) were *average* (*M* = 8.12 to 8.75); and subscales for Emotional Reactivity (REA) were average (*M* = 9.80 to 10.39).

Obstacles to the career development of adolescent mothers (see Table 3.2) were measured using the *Obstacle Survey* (Klaw, 2008).  A total of 25 perceived obstacles were rated

by the participants. In this study, the individual obstacles were organized into seven categories plus "other" to capture the themes that have been reflected in the literature (e.g., pressing immediate needs, work related concerns, education related concerns). Ratings of 2 (*somewhat of a concern*) and 3 (*a large concern*) were combined and categorized for a descriptive and contextual purpose (Table 3.2). The most frequent concerns for adolescent mothers were related to *pressing immediate needs* identified as "childcare" (73%) and "transportation" (72%); *work-related concerns* identified as "need for more job training" (72%) and "not many jobs available in my area" (72%); and *education-related concerns* identified as "need more preparation to continue my education" (71%) and "need money to continue my education" (68%). Another identified concern was "general health concerns for mother or child" (68%). Of lesser concern for these adolescent mothers was *discrimination* as "facing discrimination because I am a woman" (26%) and "facing discrimination because of where I live" (20%); and *relationship concerns* as "parents wanting me to work full-time" (27%) and "my baby's father doesn't want me to work" (19%). In addition, more deviant behaviors do not appear to be a concern for the majority of the adolescent mothers surveyed: *education related concerns* as "suspended/expelled from school" (14%) and *community concerns* as "fear of community violence" (21%), "being in jail or in trouble with the police" (14%), "being part of a gang" (5%). For use in the statistical calculations, a single overall mean obstacle score was calculated (see Table 3.1). Results from analysis of the distribution data did not reveal any relationship between the mother's age and number of perceived obstacles.

**Relationships between Career Adaptability, Resiliency, and Obstacles**

The mean scores for the dimensions of career adaptability (planfulness, exploration, decision making) were correlated with the three resiliency scales scores (Sense of Mastery [MAS], Sense of Relatedness [REL], and Emotional Reactivity [REA]) and a mean score for obstacles (see Table 3.3). Within the resiliency measures, MAS and REL demonstrated a moderately strong positive correlation ($r = 0.65$) while REA was only weakly and negatively related to the other two. The relationships among the career adaptability measures suggest that, while each dimension of career adaptability measured is a separate aspect of career adaptability, they are in some respects related ($r = 0.56$ to $0.70$) with the strongest correlation between Career Exploration and Career Decision Making ($r = 0.70$). The interrelationships among career

adaptability dimensions and the three resiliency attributes were found to moderately correlate with Sense of Mastery ($r = 0.29$ to $0.49$) and Sense of Relatedness ($r = 0.26$ to $0.35$); Emotional Reactivity was not related to any of the scales for career adaptability. Career Decision Making demonstrated the strongest positive relationship (MAS $r = 0.49$, REL $r = 0.35$) followed by Career Exploration and then Career Planfulness. The obstacles did not show statistically significant relationships with any of the resiliency or career adaptability variables.

**Predictive Power of Resiliency for Career Adaptability**

Multiple regression was used to examine the predictive power in the three constructs of resiliency (Sense of Mastery [MAS], Sense of Relatedness [REL], and Emotional Reactivity [REA]) to the three dimensions of career adaptability, namely planfulness, exploration, and decision-making (see Table 3.4). The three resiliency measures explained a statistically significant 25% of the variance in Career Decision Making, 15% of the variance in Career Exploration, and 9% of the variance in Career Planfulness. The Sense of Mastery (MAS) was the only resiliency scale that produced statistically significant results in two of the three career adaptability measures (see Table 3.4). The lack of statistical significance for REL is due to its high correlation with MAS ($r = 0.65$) in comparison to the relationship with the criteria.

In order to further explore the predictive power of the MAS resiliency scale, multiple regression was used to examine each of the subscales (Optimism [OPT], Self-Efficacy [S-E], and Adaptability [ADP]) with the dimensions of career adaptability (see Table 3.5). The results of the overall model using the MAS subscales also were statistically significant and slightly better than using the three resiliency scales (Sense of Mastery, Sense of Relatedness, and Emotional Reactivity). The three MAS subscales explained a statistically significant 27% of the variance in Career Decision Making, 19% of the variance in Career Exploration, and 14% of the variance in Career Planfulness. In looking at the MAS subscales individually, Self-efficacy (S-E) was related to all three career adaptability dimensions and Optimism (OPT) was related to Career Decision Making. Given the results of both regressions, it appears that adolescent mothers who possess higher personal resiliency as measured by a Sense of Mastery, and more specifically self-efficacy, possess higher levels of career adaptability.

**Career Adaptability: Single and Multiple Measures**

In this study, career adaptability was measured as dimensions of planfulness, exploration, and decision making using three separate instruments. To examine whether a single instrument

based on career adaptability could be used in place of these three separate measures, the *Career Futures Inventory* (CFI; Rottinghaus, Day, & Borgen, 2005) was selected.  The CFI contains three scale scores, namely Career Adaptability, Career Optimism, and Career Knowledge.  While the Career Adaptability scale was a main area of interest in this study, all three of the CFI scales were entered into the correlation matrix with the three separate instruments measuring Career Planning, Career Exploration, and Career Decision Making to examine if other relationships existed between the other *Career Futures Inventory* scales and the dimensions of career adaptability and/or resiliency (see Table 3.6).

All of the variables demonstrated statistically significant relationships; however, the relationships were moderate to weak.  The Career Adaptability scale shared the strongest relationship with Career Decision Making, with a moderately positive relationship ($r = 0.63$).  The relationship between Career Adaptability scale and the dimensions of Career Exploration ($r = 0.46$) and Career Planfulness ($r = 0.39$) were moderate and weak, respectively.  The Career Optimism scale demonstrated moderately positive correlations with Career Decision Making ($r = 0.64$), Career Planfulness ($r = 0.52$), and Career Exploration ($r = 0.50$).  The Career Knowledge scale was weakly correlated with all three dimensions of career adaptability.

During data analysis, it was noted that the *Career Futures Inventory* subscales of Career Adaptability and Career Optimism shared similar language to the Sense of Mastery resiliency subscales of Adaptability and Optimism.  Given this use of common language, the Sense of Mastery scale and subscales were added to the correlation matrix of the *Career Futures* subscales and the measures of Career Planfulness, Career Exploration, and Career Decision Making (see Table 3.6).  The Sense of Mastery scale showed moderate to weak correlations with the *Career Futures Inventory* subscales of Career Adaptability ($r = 0.48$), Career Optimism ($r = 0.38$), and Career Knowledge ($r = 0.30$).  The Sense of Mastery subscales (Optimism, Self-Efficacy, and Adaptability) showed low moderate to weak correlations with the *Career Futures Inventory* subscales ranging from $r = 0.46$ to $r = 0.21$.  The three separate measures of career adaptability demonstrated moderate to weak relationships with the Sense of Mastery scale and subscales ranging from $r = 0.48$ to $r = 0.06$ (see Table 3.6).

## Discussion

The results of this study help to shed light on the career adaptability, resiliency, and perceived obstacles of adolescent mothers and may prove helpful for researchers and

practitioners who want to assess and advance the career adaptability and resiliency of adolescent mothers while being mindful of perceived obstacles. To summarize, statistically significant correlational relationships and predictive power were demonstrated between the dimensions of career adaptability and attributes of resiliency, perceived obstacles were not related to other variables, and a single measure of career adaptability was less effective than individual instruments designed to measure the career adaptability dimensions of planfulness, exploration, and decision making.

In terms of career adaptability skills, the adolescent mothers participating in this study had similar skills to their peers in both career planfulness and career decision making but lower scores in career exploration. On the whole, the adolescent mothers appeared to be average in their career planfulness skills, including engagement in career planning and career knowledge. This suggests that adolescent mothers are just as competent with respect to career planfulness as non-parenting peers in the normative sample of the Planning Scale of the *Career Development Inventory-School Form* (Thompson & Lindeman, 1981). Therefore, it would be expected that adolescent mothers would demonstrate similar levels of responsiveness to intervention strategies designed to enhance career planning skills as non-parenting peers.

The career exploration scores indicate that environmental exploration (i.e., gathering information about careers of interest, jobs/careers in a local geographical region, jobs/careers with specific companies, career training opportunities, and making contact with professionals in career areas of interest) is the most pressing of the exploration needs. However, Porfeli and Skorikov (2010) stress the importance of developing both aspects of career exploration; thus, developing self-exploration skills (i.e., reflecting and connecting past experiences to future career choices and plans) would also be beneficial. As consistent with the findings of Creed, Fallon, and Hood (2009), targeted exploration initiatives are recommended to develop effective environmental and self-exploration skills in order to help adolescent mothers to improve overall career explorations skills.

For career decision making, participants indicated feeling the most confident in assessing their own interests and abilities, conducting career-related research on the internet, and planning and goal setting. They indicated feeling the least confident in navigating issues related to college, preparing a resume, clarifying values, knowing about salary and wages for specific careers/jobs, and identifying potential employers. Several of the skills participants felt least

confident about were reflected in the lower environmental exploration scores (e.g., knowledge of specific career information, such as salary and being able to identify potential employers). Consistent with the findings of Fouad, Cotter, and Kantamneni (2009), interventions with adolescent mothers surrounding career decision making skills should be targeted on areas of reported need.

In terms of resiliency, the participant profiles offered some consistent information about the areas of strength and concern. Overall, the adolescent mothers in the study possess a similar level of personal resiliency and emotional vulnerability as same-age and gender peers within the normative sample of the *Resiliency Scales for Children and Adolescents* (Prince Embury, 2007). However, there appear to be some differences between the study sample and the norm group on relational resiliency; adolescent mothers may need to develop skills to initiate and maintain socially supportive and healthy relationships. The adolescent mothers indicated they had more trouble communicating with others, a less effective support system of friends and/or family, a less favorable view of interpersonal relationships, and difficulty initiating and maintaining socially supportive and healthy relationships with family and friends, which is consistent with previous research findings (Gee & Rhodes, 2007; Klaw & Rhodes, 1995; Klaw et al., 2003). It is unclear if the inability to develop and maintain healthy interpersonal relationships is a result of contextual factors related to adolescent pregnancy/parenthood, inadequate social skills present before the pregnancy/parenthood, or a combination of factors.

The multiple regressions showed that all of the resiliency measures had statistically significant power in predicting the career adaptability dimensions. Personal resiliency, a relative strength for this sample of adolescent mothers, showed the most predictive power of all the resiliency scores used. The relational resiliency scores demonstrated less predictive power and were lower than same age peers indicating that the adolescent mothers in this study have difficulty initiating and maintaining interpersonal relationships that are comforting, supportive, tolerant, and trusting, which is consistent with the findings of other researchers (Gee & Rhodes, 2007). This raises questions about the relationship between below average relational resiliency scores and average career adaptability scores. If the relatedness scores were higher, indicating that the adolescent mothers had strong interpersonal relationships, would the career adaptability scores also be higher? Looking at the relationship between career adaptability and resiliency in larger groups of adolescents, both parenting and non-parenting, may provide more information

about correlational or predictive relationships between the two variables (e.g., supportive relationships may provide adolescent mothers with more career related skills and knowledge).

The data collected from adolescent mothers on their perceived obstacles is helpful in understanding the challenges of motherhood. Consistent with Klaw (2008), the most frequently cited challenges were pressing immediate needs (i.e., transportation, childcare, caring for the baby, and healthcare). The next most mentioned obstacles were career and education related concerns (i.e., job training and difficulty in school) also similar to Klaw's findings. Furthermore, adolescent mothers in this sample indicated that deviant and unlawful behaviors (i.e., expulsion from school, trouble with the police, and gang membership/activity) were not a concern for most of these participants. Although the perceived obstacles were shown to be statistically unrelated to career adaptability and resiliency, understanding the obstacles encountered by adolescent mothers may be helpful in designing and implementing strategies to further develop career adaptability and foster resiliency.

Results from the research question designed to explore the possibility of using a newer and shorter instrument to measure the career adaptability of adolescent mothers did not show strong enough relationships between the new instrument and the three other established instruments to measure dimensions of career adaptability (i.e., planfulness, exploration, and decision making). It was thought that, if a more concise measure of career adaptability was available, the assessment of career adaptability skills would be less time consuming with adolescent mothers. However, the low levels of correlations suggest that at this time the multiple measures provide a more accurate assessment of planfulness, exploration, and decision making skills.

The low levels of correlation between single and multiple measures used to measure career adaptability have raised questions about the operational definition of some of the variables associated with this study. Several of the instruments used the terms adaptability and optimism, but correlations between the same named scales on different instruments did not indicate similarity. In addition, the correlations between a single scale purported to measure career adaptability was only moderately correlated with three separate instruments used to measure the three dimensions of career adaptability (i.e., planfulness, exploration, and decision making). Such confusion in terminology makes it difficult for researchers to know if concepts related to career adaptability and resiliency are being defined consistently. For career adaptability, this

inconsistency in terminology may be reflective of the continuous evolution of the theory of career adaptability (Savickas, 1997, 2005; Savickas et al., 2009). Currently, career adaptability is conceptualized as a small portion of life designing and career construction theory and termed career concern, control, curiosity, confidence, and commitment (Savickas et al., 2009). However, reliable instruments designed to measure career adaptability are still based on the previous terminology of planfulness, exploration, and decision making. In response to the changing definition of career adaptability, instruments such as the *Career Futures Inventory* are under revision (Rottinghaus, Buelow, Matyja, & Hees, 2009) and upon revision may provide a more concise means to accurately assess the construct of career adaptability.

The results from the current study show that the dimensions of career adaptability (planfulness, exploration, and decision making) can be quantitatively measured and used for assessment purposes to inform future intervention strategies. However, these dimensions no longer provide a complete definition for the construct of career adaptability (Savickas, 1997; Savickas et al., 2009). The theory related to career adaptability within the field of career development is expanding and changing; and it is incorporating concepts from other disciplines outside of career development theory, which includes attributes of resiliency (Rottinghaus et al., 2009; Savickas, 1997; Savickas et al., 2009). Theorists are moving away from the linear definition of career adaptability as planfulness, exploration, and decision making skills to create a more holistic, contextual, and developmental conceptualization of career adaptability (Savickas, 2003; Savickas et al., 2009).

This modern definition of career adaptability, which is reflective of the personal resiliency attributes of optimism, self-efficacy, and adaptability (Rottinghaus et al., 2009), is based on a subjective and social constructivist framework (Savickas et al., 2009) and may provide a better way to conceptualize the career development of adolescent mothers in terms of both assessment and intervention strategies. It encompasses a more culturally and contextually sensitive approach that focuses on a broader definition of adaptability that is not solely related to work or the worker role (Savickas, 1997, Savickas et al., 2009). This constructivist framework requires that additional qualitative assessment strategies be implemented and intervention strategies be more narrative (Savickas et al., 2009), which appear to be compatible with the requests of study's participants for qualitative assessment strategies. The continued development and expansion of the construct of career adaptability within the life designing and career

construction theories provides exciting opportunities for the application of this construct to the career development of adolescent mothers, which may hold the promise of better assessment and intervention strategies. Thus, a positive and strength-based way to conceptualize the career development of adolescent mothers as suggested by many (e.g., Zachry, 2005) may be realized with the utilization of the current conceptualization of career adaptability that also includes attributes of personal resiliency.

### Limitations

Study specific limitations were identified during the data collection phase.  One limitation is that the assessment data were gathered from a convenience sample at one community-based and two school-based programs in a limited geographical region. Another important limitation was identified through observations made throughout the data collection phase. During the data collection phase of the study, there was one common challenge present at each of the collection sites, namely, not all of the scheduled participants attended data collection sessions.  As demonstrated by the result of the *Obstacle Survey* (Klaw, 2008), the lack of childcare and reliable transportation was evident during the data collection. Many participants brought their children to the data collection sites or were unable to get transportation to the site. Program staff at all program sites, community and school, indicated that attendance was a challenge with adolescent mothers because of these obstacles (i.e., childcare and/or transportation).  Highlighting the need to address the obstacles that more that 70% of adolescent mothers face in order for future researchers and clinical practitioners to work effectively with adolescent mothers.

In the broader context of career development and resiliency theory, this study highlights generalized limitations that could be interpreted as both possibilities for future research and as cautions for researchers.  The lack of consistent terminology in career development provides future researchers with the opportunity to develop operationalized definitions that are reflective of the changes in theory.  For example, the term career adaptability is used frequently in career development and counseling; however, as shown in the results of this study, the different instruments purported  to measure career adaptability did not produce similar results, which suggests the definition of career adaptability used by researchers may not be consistent.  Since career adaptability may be conceptualized differently, instruments need to be developed and/or revised so it is clear how career adaptability is defined and what skills, attitudes, knowledge, and

behaviors are being assessed.  Similarly, scales to measure adaptability and optimism in both the career adaptability and resiliency instruments did not demonstrate a strong relationship, which highlights potential discrepancies in conceptualization of adaptability and optimism. Researchers and practitioners should exercise caution when selecting measures to assess career adaptability and resiliency as variable definitions may be instrument specific and may not be generalized or easily compared with other instruments using similar terminology.

## Implications

Based on observations during the data collection, three study specific recommendations were generated for researchers and practitioners working directly with adolescent mothers in further research, assessment, or intervention endeavors.  First, the adolescent mothers indicated they would have much preferred a qualitative interview rather than the written questionnaire format of the survey.  While interviewing was not practical for the amount and type of data collected in this study, the desire for verbal communication over written communication may provide insight into the most effective means to provide assessment and intervention strategies. The adolescent mothers were open in verbal interactions and freely offered information about sensitive topics, such as their children, living situation, career plans, relationship troubles, school problems, other challenges, and triumphs.  They were forthcoming with information and were ready to share and discuss issues suggesting that verbal interaction may be an effective means to gather and present information to adolescent mothers.

Second, immediate results of the assessments were not readily available to the study participants and the professionals working with the adolescent mothers.  Many of the participants were interested in the results of the study, including both personal and overall results related to career adaptability strengths and weaknesses.  These inquiries suggest that adolescent mothers are interested and committed to developing career adaptability skills and capitalizing on this initial enthusiasm may be a key factor in structuring assessment and intervention strategies. Delays in providing results and subsequent interventions to participants may diminish interest in further developing career adaptability skills.

Third, accurate assessment of the career adaptability, resiliency, and perceived obstacles of adolescent mothers is a necessary first step in designing and implementing effective intervention strategies.  Compiling career adaptability assessment data for a group of adolescent mothers in a specific school or community based program can be helpful in programmatic

planning.  However, for more individualized interventions, such as counseling or case management, individual interpretations would be helpful to identify each mother's strengths and weaknesses.

## Summary

All of the information gathered in this study highlights the need for assessment to accurately measure the career adaptability and resiliency of adolescent mothers and to develop intervention strategies to help adolescent mothers to have higher levels of career adaptability and resiliency.  Some aspects of their career adaptability and resiliency may not differ from non-parenting peers; however, adolescent mothers face some additional obstacles that necessitate intervention strategies that are carefully constructed based on both theoretical and contextual considerations.  The combination of resiliency and career adaptability may provide the positive and strength-based assessment and intervention strategies framework necessary to assist adolescent mothers in overcoming obstacles and becoming self-supporting adults.

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Table 3.1

*Career Adaptability, Resiliency, and Obstacles: Instruments, Scales, and Subscales*

| Scales | Subscales | # Items | Cronbach Alphas[1] | Participant Responses (N=101) |
|---|---|---|---|---|
| **Career Adaptability** | | | | **Mean (SD)** |
| Career Planfulness<br>Career Planning Scale from Career Development Inventory-School Form | | 20 | .90 | 3.34 (0.78) |
| | Career Planning Engagement | 12 | .89 | 3.15 (0.93) |
| | Career Knowledge | 8 | .89 | 3.61 (0.88) |
| Career Exploration<br>Career Exploration Survey | | 11 | .93 | 2.73 (0.99) |
| | Environmental Exploration | 6 | .92 | 2.34 (1.08) |
| | Self-Exploration | 5 | .91 | 3.16 (1.12) |
| Career Decision Making<br>Career Decision Making Self-Efficacy Scale-Short Form | | 25 | .98 | 3.26 (0.95) |
| | Self-Appraisal | 5 | .89 | 3.30 (0.95) |
| | Occupational Information | 5 | .87 | 3.37 (0.97) |
| | Goal Selection | 5 | .90 | 3.29 (1.00) |
| | Planning | 5 | .90 | 3.28 (1.02) |
| | Problem Solving | 5 | .89 | 3.12 (0.99) |
| **Resiliency**<br>Resiliency Scale for Children and Adolescents | | | | **Mean (SD)** |
| | | | | **Scaled Scores**    **T Scores** |
| Sense of Mastery (MAS) | | 20 | .84 | 48.29 ( 7.93) |
| | Optimism (OPT) | 7 | .57 | 9.45 (2.19) |
| | Self-efficacy (S-E) | 10 | .87 | 9.72 (2.53) |
| | Adaptability (ADP) | 3 | .72 | 9.75 (2.91) |
| Sense of Relatedness (REL) | | 24 | .93 | 44.47 (10.11) |
| | Sense of trust | 7 | .86 | 8.23 (2.85) |
| | Support | 6 | .81 | 8.58 (3.27) |
| | Comfort | 4 | .83 | 8.75 (3.02) |
| | Tolerance | 7 | .78 | 8.12 (3.10) |
| Emotional Reactivity (REA) | | 20 | .87 | 49.44 (10.58) |
| | Sensitivity | 6 | .73 | 10.39 (2.63) |
| | Recovery | 4 | .72 | 9.80 (2.77) |
| | Impairment | 10 | .86 | 10.08 (2.66) |
| **Alternative Career Adaptability Measure**<br>Career Futures Inventory | | | | **Mean (SD)** |
| Career Adaptability | | 11 | .85 | 3.68 (0.64) |
| Career Optimism | | 11 | .73 | 3.56 (0.62) |
| Perceived Knowledge | | 3 | .77 | 3.21 (0.80) |
| **Obstacles to Career Adaptability**<br>Obstacle Survey | | | | **Mean (SD)** |
| Obstacles | | 26 | .85 | 1.63 (0.33) |

[1] Cronbach alphas for reliability are for current study

Table 3.2

*Perceived Obstacles of Adolescent Mothers*

| Obstacle | % Participants Identified as a Concern[1] |
|---|---|
| **Pressing Immediate Needs** | |
| • Childcare | 73% |
| • Transportation | 72% |
| **Work Related Concerns** | |
| • Need more job training | 72% |
| • Not many jobs available in my area | 72% |
| **Education Related Concerns** | |
| • Need more preparation to continue my education | 71% |
| • Need money to continue my education | 68% |
| • Need higher grades | 58% |
| • Difficult high school work | 51% |
| • School is boring | 32% |
| • Difficult to return to home school | 24% |
| • Being suspended or expelled | 14% |
| **Health Related Concerns** | |
| • General health concerns (mother or child) | 68% |
| • Other health needs | 60% |
| • This pregnancy/child | 57% |
| • Future pregnancies/children | 53% |
| • Sexually Transmitted Diseases (STDs) | 40% |
| • AIDS | 34% |
| **Discrimination** | |
| • Facing discrimination because of my race | 36% |
| • Facing discrimination because I am a woman | 26% |
| • Facing discrimination because of where I live | 20% |
| **Relationship Concerns** | |
| • Parents wanting me to work full-time | 27% |
| • My baby's father doesn't want me to work | 19% |
| **Community Concerns** | |
| • Fear of community violence | 21% |
| • Being in jail or in trouble with the police | 14% |
| • Being part of a gang | 5% |
| **Other concerns** | 35% |

N=101
[1] Combined ratings of (2) somewhat of a concern and (3) a large concern

Table 3.3

*Intercorrelations between Resiliency, Dimensions of Career Adaptability, and Obstacles*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| **Resiliency Measures**[1] | | | | | | | |
| 1. Sense of Mastery (MAS) | (.84) | | | | | | |
| 2. Sense of Relatedness (REL) | 0.65* | (.93) | | | | | |
| 3. Emotional Reactivity (REA) | -0.22* | -0.26* | (.87) | | | | |
| **Career Adaptability** | | | | | | | |
| 4. Career Planfulness[2] | 0.29* | 0.27* | -0.10 | (.90) | | | |
| 5. Career Exploration[3] | 0.39* | 0.26* | -0.11 | 0.61* | (.93) | | |
| 6. Career Decision Making[4] | 0.49* | 0.35* | 0.19 | 0.56* | 0.70* | (.98) | |
| **Obstacles** | | | | | | | |
| 7. Obstacle Survey[5] | -0.11 | -0.16 | 0.16 | -0.13 | 0.02 | -0.05 | (.85) |

Note. Reliability values for this study are shown on diagonal (Cronbach alphas)

N=101

* $p < 0.05$

[1] RSCA: Prince-Embury, 2007          [4] CDSE-SF: Betz & Klein, 1996; Betz, Hammond, & Multon, 2005

[2] CDI: Super et al., 1979          [5] Obstacle Survey (Klaw, 2008)

[3] CES: Stumpf, Colarelli & Hartman, 1983

Table 3.4

*Predicting Career Adaptability by Resiliency Scores*

| | β | *t* | *p*-value | $R^2$ | *F* | *p*-value |
|---|---|---|---|---|---|---|
| ***Career Planfulness*** | | | | 0.09 | 3.37 | 0.0217* |
| • MAS | 0.191 | 1.50 | 0.1373 | | | |
| • REL | 0.139 | 1.08 | 0.2840 | | | |
| • REA | -0.023 | -0.23 | 0.8178 | | | |
| ***Career Exploration*** | | | | 0.15 | 5.84 | 0.0010* |
| • MAS | 0.385 | 3.12 | 0.0024* | | | |
| • REL | -0.001 | -0.01 | 0.9922 | | | |
| • REA | -0.026 | -0.27 | 0.7857 | | | |
| ***Career Decision-Making*** | | | | 0.25 | 10.96 | <0.0001* |
| • MAS | 0.455 | 3.93 | 0.0002* | | | |
| • REL | 0.035 | 0.30 | 0.7667 | | | |
| • REA | -0.080 | -0.88 | 0.3812 | | | |

N=101

MAS= Sense of Mastery; REL Sense of Relatedness; REA=Emotional Reactivity

*p<0.05

Table 3.5

*Predicting Career Adaptability by Sense of Mastery Resiliency Subscales*

| | β | t | p-value | $R^2$ | F | p-value |
|---|---|---|---|---|---|---|
| ***Career Planfulness*** | | | | 0.14 | 5.08 | 0.0026* |
| • OPT | 0.003 | 0.03 | 0.9796 | | | |
| • S-E | 0.421 | 3.19 | 0.0019* | | | |
| • ADP | -0.158 | -1.43 | 0.1547 | | | |
| ***Career Exploration*** | | | | 0.19 | 7.39 | 0.0002* |
| • OPT | 0.170 | 1.47 | 0.1459 | | | |
| • S-E | 0.340 | 2.65 | 0.0095* | | | |
| • ADP | -0.075 | -0.71 | 0.4814 | | | |
| ***Career Decision-Making*** | | | | 0.27 | 12.03 | <0.001* |
| • OPT | 0.251 | 2.29 | 0.0243* | | | |
| • S-E | 0.340 | 2.80 | 0.0061* | | | |
| • ADP | -0.025 | -0.25 | 0.8063 | | | |

N=101
OPT=Optimism; S-E=Self-Efficacy; ADP=Adaptability
* p< 0.05

Table 3.6

*Intercorrelations between Sense of Mastery Scale and Subscales, Career Futures and Career Adaptability*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Resiliency[1]** | | | | | | | | | | |
| 1. Sense of Mastery | (.84) | | | | | | | | | |
| 2. Optimism (OPT) | .77* | (.57) | | | | | | | | |
| 3. Self-Efficacy (S-E) | .94* | .61* | (.87) | | | | | | | |
| 4. Adaptability (ADP) | .62* | .31* | .51* | (.72) | | | | | | |
| **Career Futures[2]** | | | | | | | | | | |
| 5. Career Adaptability | .48* | .46* | .43* | .31* | (.85) | | | | | |
| 6. Career Optimism | .38* | .33* | .33* | .27* | .71* | (.73) | | | | |
| 7. Career Knowledge | .30* | .27* | .25* | .21* | .46* | .57* | (.77) | | | |
| **Career Adaptability** | | | | | | | | | | |
| 8. Career Planfulness[3] | .29* | .21* | .34* | .06 | .39* | .52* | .35* | (.90) | | |
| 9. Career Exploration[4] | .39* | .35* | .41* | .15 | .46* | .50* | .34* | .61* | (.93) | |
| 10.Career Decision Making[5] | .50* | .45* | .48* | .23* | .63* | .64* | .38* | .56* | .70* | (.98) |

Note. Reliability values for the current study are shown on diagonal (Cronbach alphas)
N=101
* $p < 0.05$
[1] RSCA: Prince-Embury, 2007
[2] CFI: Rottinghaus, Day & Borgen, 2005
[3] CDI: Super et al., 1979
[4] CES: Stumpf, Colarelli & Hartman, 1983
[5] CDSE-SF: Betz & Klein, 1996; Betz, Hammond, & Multon, 2005

# CHAPTER 4
## Bridging the Research to Practice Gap

Growing concern about the gap between research and practice exists in the general social sciences, mental health, and professional counseling literature (Jensen & Foster, 2010; Newnham & Page, 2010). While it has been suggested that practitioners should be active consumers of the professional literature, participate in on-going research and evaluation, and report findings to the larger professional community, these activities are often considered a luxury that is neither practical nor customary (Cunningham, 2008; Newnham & Page, 2010).  Similarly, the notion that researchers make their results, findings, and recommendations easily accessible and useful to practitioners is considered the exception rather than the rule (Long, 2008).

Currently, the timeline for research results being implemented in evidence-based practice is 17 years and only 14% of original research directly impacting client care (Green, 2008). Green (2008) attributes a variety of reasons for this shortfall: investigators failing to publish negative results due to their being perceived as non-publishable, low publication acceptance rates among many professional journals, lengthy journal submission acceptance and publication timelines, and the time necessary for studies to be incorporated into other sources (i.e., reviews, guidelines, textbooks).  Conversely, a predominant suggestion to foster the distribution of information in a timely manner from researcher to practitioner is to have researchers engage and collaborate with practitioners in participatory or action based research (Frazier, Formoso, Birman, & Atkins, 2008; Green, 2008).  While collaborative research partnerships are one means of closing the research to practice gap, these partnerships may be challenging to initiate and maintain in the school setting (Palladino Schulthesiss, 2005) and/or community setting (Cassell et al., 2005).  Therefore, it is important for researchers to consider other means to close the research to practice gap (e.g., Lochman, 2006).

The research to practice gap and the challenges associated with collaborative research have brought a shift in focus to strengthening dissemination and implementation processes for evidence-based practices (Armstrong & Webb, 2006).  As defined by Saul et al. (2008), dissemination is the spreading of ideas or innovations (i.e., programs, processes, recommendations/guidelines, research findings) from the original source to an intended user or audience.  Implementation is defined as putting innovations to use and involves multiple steps,

management of resources, delivery or use of an assessment or intervention strategy, and the capacity to do so (Saul et al., 2008). For example, intentional and carefully planned dissemination and implementation models have been successful in identifying high risk groups of children and adolescents in need of evidence-based prevention and/or intervention services (Dingfelder & Mandell, 2011; Lochman, 2006) and implementing evidence-based adolescent pregnancy prevention programs (Lesesne et al., 2008; Rolleri, Wilson, Paluzzi, & Sedivy, 2008). In order to be successful at disseminating and implementing research results, several factors must be considered to include the following: (a) potential barriers for researchers and practitioners, (b) individual practitioner considerations, (c) organizational considerations, and (d) communication of research (Osterling & Austin, 2008).

**Potential Barriers for Researchers and Practitioners**

Both researchers and practitioners face potential barriers to dissemination and implementation of evidence-based practices that encompass four major themes: knowledge, lack of fit, suspicion, and resources. Knowledge barriers are typically viewed in terms of the practitioner and revolve around the practitioner's accessibility, comfort, knowledge, and skills related to research (Bellamy, Bledsoe, & Taube, 2006). Practitioner concerns typically include the inability to commit a significant amount of time to locating and reading published research, the practitioners' perceived skill deficit to fully comprehend the professional literature, the lack of accessibility to professional research, and/or the uncertainty of how to develop theoretically based assessment and intervention strategies (Cunningham, 2008). While some practitioners may experience a level of discomfort with their knowledge and skills related to research, this may not be a barrier for all practitioners. As demonstrated by findings of Lau, Ogrodniczuk, Joyce, and Sochting (2010), some practitioners may be enthusiastic about delving into the professional literature, implementing theoretically based assessment and intervention strategies, and understanding the theoretical underpinnings of assessment and intervention strategies. Thus, barriers other than knowledge may be the challenge for dissemination and implementation of evidence-based practices.

Lack of fit can be related to the reason practitioners believe that the available evidence-based practices or research are not helpful in their work setting (Bellamy et al., 2006). Given the increasing demand for evidence-based practice in counseling and education, practitioners in these fields want and may even feel pressured to provide services that are deemed both effective

and efficient (Long, 2008; Miller et al., 2007).  However, some practitioners do not feel that the evidence-based practices are compatible with the contextual or cultural needs of their clients (Bellamy et al., 2006).  Jensen and Foster (2010) concluded that researchers who develop evidence-based practices sometimes have little knowledge of how to establish and/or adapt their recommendations or interventions to be feasible and sustainable in the practice setting.  This disconnect between researchers and practitioners can sometimes lead to lack of trust between the two (Bellamy et al., 2006).

This lack of trust can lead to suspicion and a circle of misgivings: the practitioner has a distrustful attitude towards evidence-based practice that contributes to the researcher distrusting the practitioner (Bellamy et al., 2006).  Practitioners may perceive that either the motivation behind the research is not in alignment with the best interests of their clients or that their own personal model of intervention or professional insight may be more applicable than a more generalized approach suggested by researchers (Bellamy et al., 2006).  On the other hand, researchers may feel pressured to develop assessment and intervention strategies that are broader in focus in order to be generalized to a wider audience for profitability, which may become less useful for each individual practitioner (Bellamy et al., 2006).   The ideas of profitability and accessibility of assessment and intervention strategies lead to allocation of resources (Osterling & Austin, 2008).

The amount of resources available to both practitioners and researchers may be hampered by lack of staffing, training, funding, time, materials, or technology (Bellamy et al., 2006). Researchers may lack the time and funding to adequately disseminate and assist in the implementation of research findings and recommendations for assessment and intervention strategies for practitioners to use (Bellamy et al., 2006).  The lack of resources, in combination with the previously mentioned potential barriers, should be considered from both researcher and practitioner perspectives for dissemination and implementation of evidence-based practices (Bellamy et al., 2006).

**Considerations About Individual Practitioners**

There are a number of practitioner considerations to be aware of in the dissemination and implementation process (Osterling & Austin, 2008; Wandersman et al., 2008).  These considerations include: (a) awareness of the current research (Osterling & Austin, 2008); (b) ability to evaluate the quality of research and select evidence-based assessment and intervention

strategies (Osterling & Austin, 2008; Wandersman et al., 2008); and (c) capacity to implement assessment and intervention strategies or techniques (Wandersman et al., 2008).  Researchers must become aware of these practitioner considerations and work to make sure that they do not impede the dissemination and implementation process.

  **Current research.**  Evidence-based practice requires that practitioners are familiar with and have access to current research and professional literature (Miller et al., 2007).  Steps have been implemented to help practitioners become familiar with the professional literature and current research, such as journal issues specifically developed for practitioners (Miller et al., 2007).  These practitioner issues were designed to publish "useful, relevant, and practical evidence-based information on topics of significant interest and importance to school-based practitioners" (Miller et al., 2007, p. 1).  In addition, computer-based training programs (e.g., web-based supervision, webinar trainings, interactive CD trainings) have been developed to assist practitioners in independently obtaining and evaluating the professional literature and research findings on topics relevant to their day-to-day clinical practice, such as teaching cognitive-based therapy skills (Long, 2008).  It is suggested that researchers be responsible for synthesizing existing research and current literature and translating it into a form that is easily accessible and understandable to practitioners (Wandersman et al., 2008).  This may take many forms given the research topic, population of interest, practitioner willingness, and intended audience (Wandersman et al., 2008).  Researchers should be prepared to meet a variety of interest and ability levels when providing research to practitioners (Cunningham, 2008).

  **Selecting evidence-based techniques.**  While providing information to practitioners about current research findings from the professional literature is an important step in the dissemination and implementation process, it typically is not enough to change current practices (e.g., Ringwalt et al., 2002).  Helping practitioners to investigate and select evidence-based assessment and intervention techniques requires clinical expertise on the part of the practitioner and support on the part of the researcher (Levant, 2004; Wandersman et al., 2008).  Clinical expertise draws upon the previous experience of the practitioner to use skills to assess client issues, implement interventions, and evaluate progress (Levant, 2004).  Support from the researcher is necessary in helping practitioners investigate assessment and intervention strategies that have valid theoretical frameworks and have demonstrated reliable and valid results in the professional literature and relevant research studies (Wandersman et al., 2008).  Researchers

need to work with practitioners to generate and evaluate potential assessment and intervention strategies (Osterling & Austin, 2008).

Encouraging practitioners to adopt evidence-based assessment and intervention techniques has been shown to be difficult when reliance is only on clinical expertise (Newnham & Page, 2010). Often cited is the lack of time available to practitioners to effectively and accurately investigate and assess evidence-based practices for specific clients and/or specific areas of need (Newnham & Page, 2010; Reese & Miller, 2010). Green (2008) suggested that incentives or educational credit should be given to practitioners who adopt theoretically based and clinically proven assessment and intervention strategies. However, support is stronger to involve practitioners in the research process to strengthen the link between evidence-based techniques and clinical practice/application (Jensen & Foster, 2010). For example, Reese and Miller (2010) advocated for researchers to involve practitioners in research studies that utilize evidence-based assessment and intervention techniques in order to encourage practitioners to use such techniques in their practice after the study. Green (2008) concurred with the findings of Reese and Miller and further suggested that practitioners are more likely to adopt evidence-based practices that have been proven successful in settings and with clients similar to their own, as opposed to more sterile research environments. Finally, Frazier, Formoso, Birman, and Atkins (2008) advocated for involving practitioners in the research process in order to assess feasibility of intervention strategies and to gather data on the implementation of evidence-based practices.

**Implementing evidence-based techniques into practice.** In addition to helping practitioners evaluate and select evidence-based techniques for assessment and intervention, researchers should be prepared to continue to assist in the implementation process (Wandersman et al., 2008). Researchers should be sure that interventions are appropriate for the specific practice and that attention is given to individual practitioner considerations. These considerations include level of education, amount of experience, overall attitude, and motivation towards implementation (Keefer & Stone, 2009; Wandersman et al., 2008). Individual practitioners vary on these factors, and studies designed to assess these factors have produced results that are difficult to generalize (Cunningham, 2008; Wandersman et al., 2008). However, these individualized factors can impact how practitioners respond to assessment and intervention implementation (Cunningham, 2008; Lau et al., 2010). For example, if a practitioner does not have the experience of working with a particular population and/or intervention technique, the

practitioner may be less likely to implement the technique (Lau et al., 2010). Greenhalgh, Robert, Macfarlane, Bate, and Kyriakidou (2004, as cited in Wandersman et al., 2008) suggested that attention to contextual factors is an important consideration when looking at individual practitioner factors. According to Long (2008), contextual factors are most often related to either practice setting (e.g., large case loads, productivity expectations) or clients (e.g., diverse populations, socioeconomic status, culture, motivation). Researchers are wise to become aware of these individual practitioner and contextual factors in order to identify and address any potential barriers to implementation (Wright & Davis, 2008).

Researchers should attempt to meet with practitioners to assess their willingness in implementing assessment and intervention strategies by talking with practitioners about education, experience, and motivation related to research (Cunningham, 2008; Wandersman et al., 2008). Hunter, Paddock, Ebener, Burkhart, and Chinman (2009) identified practitioner characteristics that negatively impacted implementation as lack of exposure, inadequate training, and perception that the intervention strategy was too complex. Understanding the individualized concern of practitioners can help researchers to make implementation successful (e.g., providing exposure, increasing training opportunities, reducing perceived complexity). Researchers should also inquire about any contextual factors perceived by practitioners that may impact implementation (Shea, Winnie Ma, Yeh, Lee, & Pituc, 2009). Lesesne et al. (2008) found that such bi-directional discussions between researchers and practitioners helped to identify potential areas of personal concern and to develop strategies to overcome such barriers to implementation.

**Organizational Considerations**

Organizational factors tend to be more related to implementation rather than dissemination (Osterling & Austin, 2008). Organizational factors that influence implementation include leadership, goals, vision, size, climate, structure, willingness, and readiness (Wandersman et al., 2008). Even if practitioners are willing to implement strategies identified in the support system, organizational limitations may prevent implementation (Stockton & Morran, 2010).

Researchers need to carefully assess the capacity of the organization both generally and specifically to determine if potential barriers to implementation exist (Livet, Courser, & Wandersman, 2008; Wandersman et al., 2008). General capacity concerns are characterized by practitioners of an organization having an overall willingness and openness to trying new things

(Wandersman et al., 2008).  Specific capacity considerations of practitioners within the organization include the knowledge base, skill set, and motivation towards implementation of a specific intervention (Wandersman et al., 2008).  While both types of capacity play an important role in determining willingness towards implementation, it is necessary to distinguish between the two types in order to assess readiness to implement.  If concerns are present related to general capacity, it may indicate that the practitioners of the organization even with researcher assistance may be hesitant to try new things as indicated by an overall resistance to change.  Concerns related to specific capacity may be more easily remedied by making changes to the intervention plan, as these concerns are more intervention related.

   Organizational capacity must be assessed by researchers in a systematic manner given the many interactional and interrelated dynamics within an organization (Lesesne et al., 2008).  Discussions with groups of practitioners within an organization as well as administrators can be beneficial in understanding the relevant factors related to organizational capacity.  Wandersman (2009) developed a 10-step approach to results-based accountability, namely *Getting to Outcomes* (GTO).  According to Wandersman (2009), "By asking and answering ten key questions, interventions can be guided to achieve results-based accountability and program improvement" (p. 12).

   Although the GTO "is designed to help states and communities achieve results-based accountability" (Wandersman, 2009,  p.13) through a series of 10 accountability questions, researchers could use these 10 questions with practitioners to gather information about their program and organization to determine any potential barriers to implementation of new prevention, assessment, or intervention strategies/techniques.  The focus of the questions relates to needs/resource assessment, goal setting, evidence-based practice, collaboration/cultural competence, capacity building, planning, process evaluation, outcome evaluation, quality management/improvement, and sustainability (Wandersman, 2009).  These questions can be openly discussed with practitioners in smaller settings or, for larger practice settings, a GTO workbook is available that contains tools and measures to address each question (Wandersman, 2009).  Based on previous research using the GTO, different types of organizations have differing identified barriers and capacity considerations, thus resulting in the need for more specific strategies tailored to specific organizations to ensure effective dissemination of the professional literature and current research findings  and implementation of evidence-based

prevention, assessment, or intervention strategies (Hunter et al., 2009; Ozer, Ritterman, & Wanis, 2010).

**Communication of Research**

Just as researchers must approach individual practitioner and organizational considerations differently, communication of research findings must be tailored to the specific audience of interest (Kreuter & Bernhardt, 2009). Community science is one method to bridge the gap between research and practice by creating an interdisciplinary framework for strengthening communication in order to improve the quality of treatment, prevention, health, and education (Flaspohler, Anderson-Butcher, Paternite, Weist, & Wandersman, 2006). Community science is a response to several national initiatives related to mental health, health care, and school related services for children and adolescents and is a framework to help various stakeholders in the community (i.e., practitioners, organizations, policy makers, funding sources) to effectively communicate about prevention and intervention services (Flaspohler et al., 2006). Researchers are an integral part of how supporters of community science propose to close the research to practice gap, but Kreuter and Bernhardt (2009) caution that researchers must reframe how research findings are disseminated based upon the audience of interest, namely practitioners, organizations, policy makers, and/or funding sources.

Researchers, who are perceived to have control over their research, often need to specifically cater their dissemination and implementation strategies to the intended audience (Brown, 1994). Policy makers often expect research findings to provide specific and practical recommendations that can be put into practice immediately and can be disappointed when researchers do not present such concrete information (Brown, 1994). Brown also points out that, from a researcher's perspective, most are trying to provide the highest quality of research possible to accurately assess and/or address the topic at hand. However, these findings and the way they are communicated in written or verbal form may seem confusing or complicated to many policy makers (Brown, 1994). It is suggested that researchers present their research findings and recommendations in a manner that is specifically designed to be useful to policy makers and takes into consideration the political climate, resources available, and pressures from other sources (Brown, 1994). Kreuter and Bernhardt (2009) advocate that researchers should consider partnering with marketing and distribution professionals in order to make research findings and recommendations more accessible and applicable to policy makers.

Similar recommendations can be applied to communication between researchers and potential sources of funding (Kerner, 2006; Kreuter & Bernhardt, 2009).  According to Kerner (2006), there is a desire to bridge the research to practice gap on the part of research funding sources; however, the effort tends to be a time limited passive dissemination of research findings and/or recommendations (e.g., a single publication of research findings or recommendations with little further information available).  Nevertheless, more government and private research funding agencies recognize the important benefits of active dissemination and implementation efforts and even offer funding to researchers who are interested in research studies on the process of dissemination and implementation (Kerner, 2006).  In working with potential funding sources, researchers need to be prepared to communicate current and relevant research literature and findings into language that can promote a common understanding among all stakeholders (Kerner, 2006).

Communication must be a priority for researchers if there is to be any progress in bridging the research to practice gap.  These efforts may vary depending on intended audience, resources available to researchers, and relevance/importance of research findings.  For example, even the dissemination of the results of a small scale study with a specific population of interest can be valuable in shortening the research to practice timeline.  There are models that researchers can utilize to disseminate research findings and work towards implementation of prevention, assessment, and/or intervention strategies/techniques.

### Interactive Systems Framework: A Model to Bridge Research to Practice

Effective dissemination and implementation models designed to bridge the research to practice gap must attend to the needs of both researchers and practitioners.  There are several existing models designed to address the research to practice gap, including feasibility of collaborative research (Frazier et al., 2008), practitioner training (Long, 2008), the REACH Institute dissemination approach (Jensen & Foster, 2010), and the Interactive Systems Framework for Dissemination and Implementation (ISF; Wandersman et al., 2008).  The three system structure of the ISF model provides a detailed approach on bridging the research to practice gap.

The Interactive Systems Framework (ISF) for Dissemination and Implementation was developed as a framework that includes a set of activities "intended to be used by different types of stakeholders (e.g., funders, practitioners, researchers) (Wandersman, 2008, p. 180) and

consists of the following three systems: *Synthesis and Translation*, *Support*, and *Delivery*. *Synthesis and Translation* involves collecting and synthesizing existing professional literature and research, then translating that information into a concise and useful format usable by practitioners, who may have limited time or skills to independently assimilate this information, given the training and time limitations of their current work settings (Wandersman et al., 2008). Presenting information to practitioners is insufficient to bring about a change in current practice, as support is necessary to assist in designing and implementing new techniques and strategies (e.g., Keefer & Stone, 2009). *Support* involves providing user-friendly information, training, and guidance on proposed new strategies and techniques so that practitioners can decide if the suggested strategies and techniques may be beneficial to implement in their practice setting (Wandersman et al., 2008). *Delivery* is necessary for practitioners to efficiently and effectively be able to implement new strategies and techniques (Wandersman et al., 2008). Long (2008) found that practitioners may be unsure how to independently select and implement evidence-based practices.

**Proposed Use of the ISF**

Using the recently completed research studies described in Chapters 2 and 3 of this dissertation, the ISF model will be used in the future to communicate the research findings and proposed assessment and intervention strategies on the career adaptability of adolescent mothers. The key findings to be communicated to practitioners include the following: (a) a review of the current professional literature on the career adaptability of adolescent mothers; (b) a theoretical framework to conceptualize the career adaptability of adolescent mothers; (c) the need to select theoretically based, reliable, and valid assessment measures of the career skills and knowledge of adolescent mothers; and (d) a plan to implement comprehensive and developmentally appropriate intervention strategies to further the career adaptability of adolescent mothers based on their assessment results. The following sections articulate how applying the three-part ISF model might be done as an example of bridging research to practice through *Synthesis and Translation*, *Support*, and *Delivery*.

**Synthesis and Translation in the Context of Career Adaptability**

Wandersman et al. (2008) suggested that researchers be responsible for synthesizing research and literature and translating it into a form that is easily accessible and understandable to practitioners. This *Synthesis and Translation* may take many forms given the research topic,

population of interest, practitioner willingness, and intended audience (Wandersman et al., 2008). Researchers should be prepared to meet a variety of interest and ability levels when providing research to practitioners (Cunningham, 2008). As an example of using the ISF *Synthesis and Translation* system, it is important to communicate a theoretical framework based on career adaptability, an analysis of the current literature, a summary of research findings related to the career development of adolescent mothers, a culturally sensitive approach to examine adolescent motherhood, and a means to disseminate information to practitioners related to the career development of adolescent mothers.

     **Theoretical framework.** Career adaptability is a concept derived from the theoretical framework of career construction (Savickas, 2005) and is defined through four dimensions, namely concern, control, curiosity, and confidence. Career concern is conceptualized as the first and most important of the career adaptability dimensions and is defined as a positive future orientation that leads to the desire to prepare for the future (Savickas, 2005). It is an expanded and more comprehensive view of the initial concept of planfulness, in which future planning is subjectively based on the individual's past and current situation in order to encourage a positive future orientation and develop competencies in planning for the future. A negative future orientation or lack of career concern is called "career indifference" and is characterized by a pessimistic attitude about the future and the inability or unwillingness to engage in planful behavior. The central career question involved in career concern is "Do I have a future?" (Savickas, 2005, p. 53).

     Career control is the second most important feature in the concept of career adaptability (Savickas, 2005). Career control is defined as the ability to be responsible for making decisions in order to construct a career (Savickas, 2005). It is a more contextually orientated view of career decision making, recognizing that the individual may not be autonomous in making career-related decisions based on circumstances or worldviews (Cardoso & Moreira, 2009; Savickas, 2005; Shea, Winnie Ma, Yeh, Lee, & Pituc, 2009). A lack of career control is termed "career indecision" and is characterized by the inability to make choices/decisions. The central question indicative of career control is "Who is in control of my future?" (Savickas, 2005, p. 53).

     Career curiosity is the third aspect of career adaptability, defined as the exploration of self and environment related to career (Savickas, 2005). Career curiosity encompasses both self-exploration and environmental exploration, and these dimensions of exploration are important to

understand the individual and what environments the individual prefers.  There is not a specific term for the lack of career curiosity, but it can be characterized by inaccurate perceptions of self and unrealistic or uninformed views of career.  The central question for career curiosity is "What do I want to do with my future?" (Savickas, 2005, p. 53).

Career confidence is the final dimension, a more recent addition to the concept of career adaptability (Savickas, 2005), is characterized as the anticipation of overcoming challenges and obstacles by developing self-efficacy and problem solving skills.  Interestingly, the concept of career confidence appears to be closely related to some of the characteristics of resiliency theory studied previously in conjunction with career adaptability (see Chapter 3).  The most related aspect of resiliency to career adaptability was the personal resiliency trait of self-efficacy (see Chapter 3).  Given the similarities between the two concepts, data collected on resiliency may be applicable to career confidence, such as measures of self-efficacy and problem solving.  There is not a specific term for a lack of career confidence, but it can be characterized by career shyness and self-consciousness.  The pivotal question of career confidence is "Can I do it?" (Savickas, 2005, p. 53).

Many assessment techniques and intervention strategies have been generated based on this model of career adaptability.  The dimensions of career adaptability (career concern, career control, career curiosity, and career confidence) outlined in the career construction theory of Savickas (2005) are a solid theoretically based model that can be used to assess and enhance the career adaptability of adolescent mothers.

**Analysis of current research in the career development of adolescent mothers.**  A content analysis, which was completed on the career development of adolescent mothers, is detailed in Chapter 2.  The following is a summary of that study, which began with a search of the professional counseling, educational, and health related literature on the career development of adolescent mothers.  Findings indicated a smaller number of articles retrieved were on career development when compared with other issues related to adolescent motherhood (i.e., academic achievement, personal issues, and parenting practices).  Twenty-one articles were found related to the career development of adolescent mothers.  A content analysis of these articles revealed several common themes.

First, the articles in the professional literature that focused on the career development of adolescent mothers were representative of the needs revealed by the national statistics in terms of

racial group membership and geographic location.  Second, the studies included in the content analysis varied with regard to theoretical framework and research methodology.  Third, the pressing immediate needs (i.e., housing, transportation, and child care), limited career development skills (e.g., decision making skills), and lack of career related knowledge (e.g., limited information about occupations of interest) were highlighted as impediments to career development.  Fourth, some researchers focused on intervention strategies showing some success with developing mentoring and other socially supportive relationships, while others made more general suggestions about making interventions strength-based and positively focused.  While all of the studies represented in the content analysis related to the career development of adolescent mothers and contribute to the body of professional literature on the subject, there are still limitations in developing a realistic picture of the career development of adolescent mothers. Based on the findings of the content analysis, a quantitative research study was designed to further investigate the career development of adolescent mothers (see Chapter 3).

**A study of career adaptability, resiliency, and perceived obstacles.**  The quantitative study on the career adaptability of a group of volunteer adolescent mothers in three settings was designed to examine the relationship among career adaptability, resiliency, and perceived obstacles to the career development of adolescent mothers.  The following is a summary of the study, which is fully detailed in Chapter 3.  Career development was conceptualized using the three dimensional model of career adaptability (i.e., planfulness, exploration, decision making) of Savickas (1997).  In order to communicate findings more effectively to practitioners, a change to a more recent version of career adaptability, a four dimension model, is suggested in place of the three dimensional career adaptability model used in the research study (see Chapter 3). Moving from the three dimension to four dimension model, career planfulness is updated to career concern, career exploration is updated to career curiosity, career decision making is updated to career control, and career confidence is added as a new dimension.  This change to a later version of the career adaptability work of Savickas (2005) should be made in order to incorporate some of the resiliency findings from Chapter 3 into the dissemination and implementation efforts for career confidence.  It is important to note that in more recent writings Savickas et al. (2009) added a fifth dimension to the career adaptability model, namely commitment.  However, for the purposes of ease and clarity of communication with practitioners

and to include the resiliency findings, the four dimension career adaptability model appears to be the most applicable (Savickas, 2005).

Results from the purposeful sample of 101 participants indicated that, in terms of career adaptability, adolescent mothers in the study were similar to their peers in planning and decision making but lower in exploration. Resiliency profiles indicated that adolescent mothers were similar to their peers in terms of personal resiliency and emotional reactivity but slightly lower than their peers in relational resiliency. Data collected on the obstacles to career development faced by adolescent mothers indicated pressing immediate needs were most prevalent followed by educational and career related concerns.

In looking more specifically at career adaptability skills, the adolescent mothers appeared to be average in their career planfulness skills, including engagement in career planning and career knowledge. Consistent with the findings of Thompson and Lindeman (1981), the results implied that adolescent mothers are just as competent and responsive to intervention strategies with respect to career planfulness as non-parenting peers. According to the study results, participants indicated a need for more overall, self, and environmental exploration. However, scores reported for self-exploration, which includes reflecting and connecting past experiences to future career choices and plans (Stumpf, Colarelli, & Hartman, 1983), were the highest among the exploration scores. This suggested that environmental exploration was the most pressing of the exploration needs. Environmental exploration is defined as learning about careers and the world of work (e.g., gathering information about careers of interest, jobs/careers in a local geographical region, jobs/careers with specific companies, and career training opportunities) and making contact with professionals in career areas of interest (Stumpf et al., 1983).

The scores for career decision making indicated neither strong nor weak skills based on the career decision making instrument used (CDSE-SF; Betz, Hammond, & Multon, 2005; Betz & Klein, 1996), which prompted a more focused examination of participants' responses. Results indicated that study participants felt the most confident in assessing their own interests and abilities, conducting career-related research on the internet, and planning and goal setting. They were the least confident in navigating issues related to college, preparing a resume, clarifying values, knowing about salary and wages for specific careers/jobs, and identifying potential employers.

In terms of resiliency, the participant profiles offered some consistent information about the areas of strength and concern as measured by the three resiliency scales. Overall, the adolescent mothers in the study had similar levels of personal resiliency and emotional vulnerability as their same-age and non-parenting female peers (Prince Embury, 2007). However, the overall score for relational resiliency was below average for this sample. The adolescent mothers indicated they had more trouble communicating with others, a less effective support system of friends and/or family, and a less favorable view of interpersonal relationships. These results suggested that adolescent mothers may have some difficulty initiating and maintaining socially supportive and healthy relationships with family and friends, which is consistent with previous research findings (Gee & Rhodes, 2007; Klaw & Rhodes, 1995; Klaw, Rhodes, & Fitzgerald, 2003).

The data collected from adolescent mothers on their perceived obstacles were helpful in describing the perceived challenges of motherhood. Consistent with Klaw (2008), the most frequently cited challenges were pressing immediate needs (i.e., transportation, childcare, caring for the baby, and healthcare). The next group of most mentioned obstacles were career and education related concerns (i.e., job training and difficulty in school) also similar to Klaw's (2008) findings. Furthermore, adolescent mothers in this sample indicated that deviant and unlawful behaviors (i.e., expulsion from school, trouble with the police, and gang membership/activity) were not a concern for most. Understanding the obstacles encountered by adolescent mothers may be helpful in designing and implementing strategies to further develop career adaptability and foster resiliency.

**Culturally sensitive approach.** Adolescent pregnancy and parenthood needs to be viewed as multidimensional issue that is not a societal problem as it is often conceptualized (Hockaday, Crase, Shelly, & Stockdale, 2000). It is helpful for researchers and practitioners to look at the multiple factors that may contribute to adolescent pregnancy and motherhood using an organized framework. Researchers can help practitioners using Bronfenbrenner's (1977) ecological framework, which illustrates the numerous contextual considerations that influence the parenting status and career development especially for adolescent girls of color. The intent of giving attention to these influences is not to marginalize adolescent mothers but to more fully understand the complex and multidimensional nature of their reality in order to further their career development. Bronfenbrenner's ecological perspective consists of four levels of

interacting variables: microsystem, mesosystem, exosystem, and macrosystem.  Corcoran, Franklin, and Bennett (2000) contend that variables from three of the system levels of Bronfenbrenner's ecological perspective (1977), excluding the exosystem, were influential in contributing to adolescent pregnancy and parenting status.

The microsystem consists of characteristics of the individual, his/her immediate setting, life roles, and time (Bronfenbrenner, 1977).  Individual characteristics at the microsystem level that have been studied with adolescent pregnancy and motherhood include (a) psychological variables (e.g., self-esteem, substance use/abuse); (b) academic achievement/ability; and (c) individualized strengths, interests, and abilities (Berry, Shillington, Peak, & Hohman, 2000; Breheny & Stevens, 2000; Corcoran, Franklin & Bennett, 2000).  The mesosystem is described as the environment in which an individual interacts (Bronfenbrenner, 1977).  Mesosystem variables that can influence pregnancy and parenting status among adolescents include family dynamics (e.g., Browning & Burrington, 2006), religious beliefs (e.g., Aaron & Jenkins, 2002), peer relationships (e.g., Corcoran et al., 2000), education and schools (e.g., Merrick, 1995), neighborhood (e.g., Browning & Burrington, 2006), and level of acculturation (e.g., Dehlendorf, Marchi, Vittinghoff, & Braverman, 2010).  The macrosystem is the overarching patterns of culture that impact the individual (Bronfenbrenner, 1977).  Socioeconomic status (e.g., Corcoran, 1999) and race/ethnicity (e.g., Berry et al., 2000) are the two main variables that can influence adolescent pregnancy and parenting status at the macrosystem level.  More detailed information on each system of the ecological perspective framework and its relationship to adolescent pregnancy and motherhood is presented in Chapter 1.

**Dissemination of information.**  A brochure was developed for this dissertation (see Appendix C) as an example of how to share information from a researcher to the four practitioners who facilitated entry and data collection. The brochure includes a theoretical framework to conceptualize the career development of adolescent mothers, short descriptions of relevant literature from a content analysis, and research findings from a survey study to explore the career adaptability, resiliency, and obstacles faced by a sample of adolescent mothers. Translation of this information from the researcher to the practitioners could be through face-to-face meetings or via phone or virtual conversations.

The *Synthesis and Translation* system of the ISF model appears to have the potential to be an efficient and effective means of communicating the theoretical framework of career

adaptability and the results of the research studies to practitioners. Consistent with the findings of Cunningham (2008), practitioners' interest level in the theoretical framework, content analysis, and research findings may range from polite disinterest to high levels of intellectual curiosity including requests for additional sources of information. Three of the four practitioners in this case were highly interested in receiving the results and learning how to utilize them in their practice with adolescent mothers. The fourth was not. Accordingly, researchers should be prepared to adjust the amount and depth of information presented in the *Synthesis and Translation* system.

**Support**

While *Synthesis and Translation* are important in providing information to practitioners about theoretical frameworks and current research found in the professional literature, it is usually not enough to change current practices (e.g., Ringwalt et al., 2002). The *Support* system of the ISF model, designed to be used at an organizational level, can be used to help researchers consult with practitioners in order to generate and evaluate potential assessment and intervention strategies. In the ISF model, *Support* has two primary functions, namely innovation-specific support and generalized support (Wandersman et al., 2008).

Applied to a specific case, innovation-specific support may be used by the researcher to: (1) provide information about an assessment/intervention technique so practitioners can decide if it is something they wish to utilize, (2) train practitioners on how to implement proposed techniques, and (3) continue to be available to practitioners for support or assistance after techniques are put into practice (Wandersman et al., 2008). Generalized support is characterized as support for the practitioner and/or organization (e.g., creating strong working relationships or providing assistance in securing funding), but this does not directly relate to the proposed assessment or intervention strategy. In addition, Wandersman et al. (2008) suggested that researchers give attention to both individual practitioner needs/concerns and overall organizational issues during the *Support* system in order to encourage a higher degree of adoption of evidence-based practices. For the purposes of addressing the career development of adolescent mothers, *Support* would consist of presenting information on proposed assessment and intervention strategies based on the dimensions of career adaptability (concern, control, curiosity, and confidence) from the theoretical framework of career construction of Savickas (2005). Each dimension of career adaptability can be assessed using a variety of empirically-

tested instruments and evidence-based methods (see Chapter 3).  Based on the findings from the career adaptability assessments, a variety of techniques and strategies could be presented to help practitioners select and implement effective and evidence-based interventions to further the career adaptability of adolescent mothers in one or more of the dimensions as needed.

   **Assessment of career adaptability.**  Considering Savickas' (2005) dimensions of career adaptability (i.e., concern, control, curiosity, and confidence),  quantitative measures of the first three dimensions of career adaptability (i.e., concern, control, curiosity) can be obtained by examining the subscales of instruments such as the *Career Development Inventory* (CDI; Super, Thompson, Lindeman, Jordaan, & Myers, 1979).  Suggested instruments to assess career confidence should be presented separately, as career confidence is not measured using the CDI. The CDI is a well-researched instrument that has been used for over 30 years to assess the dimensions of career adaptability of adolescents with documented research efforts using the CDI in more than a dozen countries (Super et al., 1979; Thompson & Lindeman, 1981).  Career concern is the most important dimension of career adaptability according to Savickas (2005) and is characterized by an orientation towards the future and planful attitudes and behaviors.  Career planning attitudes and behaviors can be measured quantitatively using the Career Planning Scale of the CDI (Super et al., 1979).  Career control is conceptualized as decision making skills and can be measured by the Decision Making Scale of the CDI (Savickas, 2005; Super et al., 1979). Career curiosity or career exploration of self and environment can be measured quantitatively by the Career Exploration Scale of the CDI (Savickas, 2005; Super et al., 1979).

   The CDI and other career assessment instruments (e.g., *Saliency Inventory*, *Career Maturity Inventory*, *Work Adjustment Test*) are available for use at no cost through [www.vocopher.com](http://www.vocopher.com) (Glavin & Savickas, 2010).  Vocopher is a career collaboratory of the National Career Development Association (NCDA) involving academic professionals, career counselors, and professional web developers (Glavin & Savickas, 2010).  The purpose of Vocopher is to provide researchers and counselors with resources that further their research and assist their clients, respectively.  Instruments are scored by computer providing practitioners with immediate and accurate scores.  The website also offers brief interpretations of the scores as a starting point for intervention.  Practitioners must complete a brief application process to have access to the website for use with career adaptability assessment.

In addition to the ease in which practitioners can assess career adaptability using technology for administering standardized assessments, it should be noted that computer assisted technology for the assessment of career development has been endorsed by the NCDA and researchers for use with individuals and groups (Harris-Bowlsbey, 2003). While Vocopher is one website that offers many career related assessments (Glavin & Savickas, 2010), there are other potential websites that provide career information at no cost that could be used to further the career adaptability of adolescent mothers (e.g., O*NET at www.onetonline.org, Virginia Career View at www.vaview.vt.edu).

Consistent with the findings of Rosell, Scarborough, and Lewis (2010), social workers and counselors who work with adolescent mothers may find time and financial constraints as the two most important considerations in programming. While other computer-based and paper and pencil assessment tools are available to assess career concern (i.e., planfulness), career control (i.e., decision making), and career curiosity (i.e., exploration), the costs of these instruments may be prohibitive (Betz & Borgen, 2009; Rosell, Scarborough, & Lewis, 2010). Accessing the CDI through the Vocopher website offers practitioners an efficient, effective, and endorsed means to quantitatively assess three dimensions of career adaptability (Glavin & Savickas, 2010).

Career confidence, conceptualized as self-efficacy in problem solving and overcoming obstacles, is the one dimension of career adaptability that is not able to be assessed using the CDI (Savickas, 2005; Super et al., 1979). Savickas (2005) suggested the *Career Decision Making Self-Efficacy Scale-Short Form* (CDSE-SF; Betz & Klein, 1996; Betz, Hammond, & Multon, 2005) be used to assess career confidence. The CDSE-SF can be obtained for a relatively low cost by contacting Dr. Nancy Betz at Ohio State University. The CDSE-SF consists of 25 questions that can be easily scored and may be administered in written form or via computer (Betz & Klein, 1996; Betz, Hammond, & Multon, 2005). Scores from both the CDI and CDSE-SF can be used to generate a quantitative profile of career adaptability for individuals and/or groups of adolescent mothers in an efficient and effective manner (Savickas, 2005). In addition, because some of the personal attributes related to career confidence are closely related to resiliency theory, instruments designed to measure resiliency (e.g., *Resiliency Scales for Children and Adolescents*) also may be utilized. Specifically, the Sense of Mastery Scale of the *Resiliency Scales for Children and Adolescents*, which measures personal resiliency (i.e., optimism, self-efficacy, and adaptability), may be helpful in determining levels of career

confidence (Prince Embury, 2007; Rickwood, 2002; Rottinghaus, Buelow, Matyja, & Hees, 2009).

In addition to the quantitative assessment measures previously mentioned, a number of qualitative assessment strategies are also available to assess career adaptability. Qualitative assessment is generally viewed as a more open-ended, flexible, holistic, and non-statistical approach to assessment (McMahon, Watson, & Patton, 2003). Instruments such as the *My System of Career Influences* were designed to assess one's current career situation including reflecting on self, culture, social influences, and past experiences (McMahon et al., 2003). Other narrative and constructivist techniques, such as life lines, card sorts, life role circles, and goal maps, can also be used in qualitative career assessment (Brott, 2004, 2005; Whiston & Rahardja, 2005). Benefits of qualitative career assessment include attention to contextual influences, suitability to the career development of women and adolescents, and having a positive focus (McMahon et al., 2003). Concerns about qualitative career assessment include lack of validation, potential for misinterpretation, and abstract philosophical underpinnings (Whiston & Rahardja, 2005).

Given the benefits and limitations of both quantitative and qualitative career assessment, researchers like Savickas (2003) have advocated for integrated assessment practices. Finally, as with any assessment, care should be exercised to be sure that methods of assessment and interpretation are culturally sensitive when working with diverse populations (Flores, Spanierman, & Obasi, 2003). Specific to the career assessment of women of color, Flores, Spanierman, and Obasi (2003) outlined a four-step assessment model that guides information gathering, selection of instruments, administration of measures, and interpretation of data to be sure that the assessment process is sensitive to gender, race, ethnicity, and culture. Accurate assessment, quantitative and/or qualitative, is the foundation for developing effective intervention strategies (Glavin & Savickas, 2010; Watson, Duarte, & Glavin, 2005).

**Intervention strategies to further career adaptability.** Strategies to further the career adaptability of adolescent mothers in the areas of career concern, career control, career curiosity, and career confidence begin with quantitative and qualitative assessments that measure these dimensions of career adaptability. As career confidence involves several attributes that are closely related to resiliency theory (Rottinghaus et al., 2009), effective intervention strategies to enhance career confidence may also be drawn from the research on resiliency. Selected

intervention strategies should be theoretically based, as well as developmentally and culturally appropriate for use with adolescent mothers (Muskin, 2004).

Career concern is conceptualized as a future orientation and concern about one's vocational future. A lack of career concern is characterized by inadequate planning skills and is termed "career indifference" (Savickas, 2005, p. 53). Interventions need to include the following: (a) foster future orientation and optimism, (b) reinforce positive attitudes towards planning, and (c) teach and provide practice in planning and goal setting skills (Muskin, 2004; Savickas, 2005). While Muskin (2004) advocated for more generalized interventions designed to teach adolescents long and short term goal setting, Savickas (2005) recommended specific interventions to develop career concern, like the Real Game (Jarvis & Richardt, 2001). The Real Game is a product designed for children and adolescents to explore future possibilities that utilizes individualized computer-based activities and interactive group exercises (Jarvis & Richardt, 2001). Reese and Miller (2010) suggested the use of a cognitive information processing model (CIP; Sampson, Peterson, Lenz, & Reardon, 1992) to increase self and occupational knowledge through strategies like writing assignments and mentoring activities. Others suggested the use of computerized intervention strategies (Harris-Bowlsbey, 2003) like those found on the Vocopher website (Glavin & Savickas, 2010) to foster career concern.

Career control is characterized by being responsible and active in making career related decisions. A lack of career control is the inability to make career related decisions and is termed "career indecision" (Savickas, 2005, p. 53). Interventions to foster career control must consider how differing perspectives on decision making (i.e., collectivist or individualistic) can impact the decision making process (Cardoso & Moreira, 2009). For many adolescents of color, a more collectivist world view makes the inclusion of family members important in the decision making process (Cardoso & Moreira, 2009; Shea et al., 2009). Other interventions such as assertiveness training, decisional training, teaching time and self-management skills, and discussion groups can be used to foster career decision making skills (Muskin, 2004; Savickas, 2005). Additionally, assessment data from instruments like the CDI and CDSE-SF can be used to identify specific areas of concern (e.g., writing a resume) in order to create targeted intervention strategies for both individuals and groups (Fouad, Cotter, & Kantamneni, 2009).

Career curiosity is conceptualized by an interest in exploring self, the world of work, and the fit between the two (Savickas, 2005). While there is no specific term for a lack of career

curiosity, it can lead to unrealistic ideas about the world of work and inaccurate perceptions of self (Savickas, 2005). Interventions to help foster career curiosity include activities designed to help adolescents learn more about themselves (specific exploration) and the world of work (diversive exploration) with exercises designed to encourage both types of exploration (Porfeli & Skorikov, 2010). Specific exploration interventions may include clarifying values, reflecting on past exploration experiences, and assessing personal interests and abilities (Porfeli & Skorikov, 2010; Savickas, 2005). Job shadowing, volunteering, and reading about various careers can provide diversive exploration experiences (Porfeli & Skorikov, 2010; Savickas, 2005). Shea et al., (2009) developed an exploration group for adolescents to provide opportunities for both self and environmental exploration. The group participants had an overall positive experience, enjoyed the group discussions, found the information helpful, and requested more exploration opportunities (Shea et al., 2009). Savickas (2005) advocated for using career theory models like Holland's RIASEC hexagon to help bring the concepts of specific and diversive career exploration together to clarify the connection between self and the world of work for adolescents.

Career confidence is defined as self-assurance and is reflected by an anticipation of success in overcoming challenges (Savickas, 2005). One of the fundamental attributes of career confidence is self-efficacy, which is an attribute of personal resiliency in resiliency theory (Prince Embury, 2007). A lack of career confidence is termed "career inhibition" (Savickas, 2005, p. 53). Interventions to foster career confidence focus on building self-efficacy in order for adolescents to feel that they are strong enough to handle current and future situations and typically include role modeling, encouragement, anxiety reduction, and developing problem solving skills (Savickas, 2005). In addition to building self-efficacy, Cardoso and Moreira (2009) suggested that identifying barriers or obstacles to career adaptability is necessary to build self-efficacy. Obstacles such as gender issues and role conflict between the worker and family roles are two barriers that were identified as factors influencing self-efficacy for female adolescents (Cardoso & Moreira, 2009). An intervention called barrier management was suggested to identify potential barriers and reduce their influence in order to enhance self-efficacy (Cardoso & Moreira, 2009). A survey of adolescent mothers revealed that they perceive a number of barriers to career adaptability including pressing immediate needs (i.e., childcare and transportation) as well as educational and career related obstacles (see Chapter 3). Brown

(2009) recommended a customized career model that seeks to reduce barriers and capitalize on self-efficacy and resiliency with disabled youth that could be adapted to fit the needs of adolescent mothers.  Additional research with adolescent mothers showed that group counseling interventions in both school-based (Wright & Davis, 2008) and community-based (McDonald et al., 2009) programs were effective in creating a supportive environment.  This supportive environment has been shown to enhance the self-efficacy of adolescent mothers that, given the connection between self-efficacy and career confidence, should increase career confidence (Shea et al., 2009).

The *Support* system of the ISF model appears to be an effective and efficient tool to communicate with practitioners about evidence-based assessment and intervention techniques (Wandersman et al., 2008).  The model allows for researchers to provide important information about assessment and intervention techniques to practitioners that are specific to the population they serve, and practitioners are able to openly communicate needs and concerns about specific techniques or strategies.  For example, some practitioners may express an interest in learning more about the Vocopher website, as it offers a number of career related assessment tools and was free to use (Glavin & Savickas, 2010); while other practitioners may prefer qualitative assessment and intervention techniques, like the *My System of Career Influences* (McMahon et al., 2003).  *Support* tends to be the most involved system of the ISF model and is thought to generate the highest degree of practitioner interest and participation (Wandersman et al. 2009) It is the hope that practitioners who work with adolescent mothers will view this step in the ISF model as practical, as it would allow them to develop a better understanding of the career adaptability of adolescent mothers through discussions about assessment strategies and intervention techniques.

**Delivery**

Following the review of the current professional literature and relevant research and the selection of evidence-based assessment and intervention techniques, researchers can continue to assist practitioners and organizations with implementation (Wandersman et al., 2008).  *Delivery* is the final system in the ISF model and is designed to help address any barriers that could impede implementation within the practice setting (Wandersman et al., 2008).   As confirmed by Lesesne et al. (2008), this phase of the ISF model is the least well developed and lacks information on how to address such barriers.  The ISF system of *Delivery* delineates those

activities necessary to implement techniques in practice settings with attention given to both individual practitioner and organizational considerations.  The information provided in the *Delivery* system about assessing individual practitioners and organizational considerations is similar to the information previously presented (e.g., Osterling & Austin, 2008).

   **Individual practitioner considerations.**  Researchers can learn about individual factors by building relationships with practitioners (Stockton & Morran, 2010) in both school-based and community-based programs for adolescent mothers.  Highlighting the professional literature, current research, and evidence-based assessment and intervention techniques in the other systems (i.e., *Synthesis and Translation* and *Support*) will help practitioners communicate with researchers about what is happening on both an individual level and more generally in their practice setting (Lesesne et al., 2008).  As individualized factors are different for each practitioner regardless of setting, researchers follow the same procedures to assess individual practitioner characteristics related to level of education, amount of experience, overall attitude, and motivation towards implementation (Keefer & Stone, 2009; Wandersman et al., 2008).  Researchers are wise to become aware of these individual practitioner and contextual factors in order to identify and address any potential barriers to implementation (Wright & Davis, 2008).

   **Organizational considerations.**  Unlike the individual practitioner considerations, the organizational considerations may vary depending on the practice setting (Wandersman et al., 2008).  The GTO, as previously described, is an effective tool to assess organizational considerations (Wandersman, 2009).  Consistent with previous research, it is expected that school-based and community-based programs for adolescent mothers may have differing organizational considerations (Cunningham, 2008; Hunter et al., 2009; McDonald et al., 2009; Ozer et al., 2010; Wright & Davis, 2008).  The following sections present several anticipated organizational considerations for researchers to be aware of in school-based or community-based programs for adolescent mothers.

   *School-based programs.*  School based programs may have more organizational barriers related to climate, structure, and willingness due to the confines of operating within a school system (Wright & Davis, 2008).  Ozer et al. (2010) identified concerns related to existing school climate, school culture, academic policies, school structure, school size, and the lack of attention to non-academic programming.  Practitioners working with adolescent mothers in school-based programs may have similar concerns to those found by Ozer et al., with the greatest concern

being the amount of time and funding dedicated to non-academic programs within the school setting.  Specifically, school-based practitioners may question the sustainability of career development interventions if a direct link to student academic achievement and/or graduation rates cannot be demonstrated.  However, support may also be found in the school setting to further the career development of adolescent mothers based on the American School Counselor Association (ASCA) National Model: Framework for School Counseling Programs (ASCA, 2005).  The ASCA model supports the planning, designing, and implementing of assessment and intervention in the area of career development for all students (ASCA, 2005).  Some of the career adaptability assessment and intervention strategies suggested for use with adolescent mothers in the *Support* system may already be in practice as part of the comprehensive school counseling program.  For example, adolescent mothers may participate in career planning activities with their peers in classroom lessons provided by the school counselor who does not work directly with the parenting program. In working with school-based practitioners, researchers need to inquire about any school or district policies and/or programs that may prevent (i.e., barriers) or assist (i.e., supports) in implementation.

   ***Community-based programs.***  Community-based programs may have fewer restrictions than school-based programs (Hunter et al., 2009); however, organizational concerns may be related to limited leadership, size, resources, and willingness (Cunningham, 2008; McDonald et al., 2009).  Hunter et al. (2009) noted that community-based programs had less flexibility than school-based programs to implement new interventions.  Using the GTO process, Hunter et al. were able to identify concerns about implementation in a community-based program that may approximate the concerns of practitioners in a community-based program for adolescent mothers. Concerns were noted in the areas of motivation, training, consistency, sustainability, and resources (Hunter et al., 2009).

   Researchers should be aware that practitioners in the community-based program for adolescent mothers may have differing levels of interest and motivation leading to questions about training, consistency, and sustainability (Hunter et al., 2009).  Community-based programs may be staffed by only one or two practitioners and have vaguely defined leadership (Cunningham, 2008).  Given the small size and limited leadership of these programs, as noted by Cunningham (2008) and McDonald et al. (2009), individualized factors become more influential and can greatly impact implementation.  Researchers must assess practitioner motivation in order

to determine if implementation will be successful (i.e., effective, consistent, sustained over time) given proper training and monitoring (Lesesne et al., 2008).

Researchers can use the GTO questions to assess the overall structure of community-based programs in order to determine how decisions are made about implementation and any related concerns (i.e., budget, staffing, openness to change). For example, researchers should inquire about resources such as time, technology, and finances as these may be scarce in community-based programs for adolescent mothers (McDonald et al., 2009). It is imperative that researchers communicate with practitioners in order to carefully select assessment and intervention strategies that take the program's resources into consideration.

**Implementing *Delivery*.** It is anticipated that the *Delivery* system would helpful in identifying practitioner specific characteristics and organizational considerations that could positively or negatively impact implementation if practitioners appeared to be willing to participate in the process (Wandersman et al., 2008) Specific to practitioner characteristics, Hunter et al. (2009) found that practitioner motivation appeared to overshadow other characteristics (i.e., expertise and experience) in gauging perceived likelihood of implementation. According to previous research, it is anticipated that organizational considerations would vary based on program setting. It is likely that school-based programs would be more likely to be concerned about the pressure to establish connections between career development for adolescent mothers and academic achievement and graduation in order to maintain allotted program time and funding (Ozer et al., 2010; Wright & Davis, 2008). However, school-based programs, also appear to be able to use other school staff and resources (i.e., school counselors and technology) to implement career development interventions for adolescent mothers (ASCA, 2005; Ozer et al., 2010; Wright & Davis, 2008). The community-based programs may struggle more with resources and openness to implementing career development assessment and intervention for adolescent mothers (McDonald et al., 2009). Wandersman et al. (2008) acknowledge that the ISF is still evolving and improving. Hopefully, in the future more information will be made available about the *Delivery* system and the ISF model to assist researchers in closing the research to practice gap through dissemination and implementation.

**Summary**

The gap between research and practice is a concern for many researchers in the social sciences looking to impact direct service with clients. Seventeen years is far too long for research to reach clients (Green, 2008). Researchers must give attention to the potential barriers for the dissemination of current and relevant research findings and implementation of evidence-based practices such as knowledge, lack of fit, suspicion, and limited resources. In addition, researchers must consider factors surrounding individual practitioners, organizations, and communication of research to policy makers and potential funding sources. Utilizing models for dissemination and implementation may help to minimize the research to practice gap by guiding researchers to assist practitioners in becoming knowledgeable about the current research, selecting evidence-based practices, and implementing evidence-based practices. The ISF model appears to be an efficient and effective means to help close the research to practice gap by providing a framework for communication among the different stakeholders. The use of the ISF model is proposed here as a potential means to disseminate research findings and implement evidence-based practice, particularly related to the career development of adolescent mothers.

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# APPENDIX A

## ADDITIONAL TABLES FOR RESEARCH STUDY (CHAPTER 3)

Table A.1

*Career Adaptability, Resiliency, and Obstacles: Instruments, Scales and Subscales*

| *Career Adaptability – Criterion Variables* | *Subscales* | *# items* | *Alpha*[7] | *Test-retest*[8] |
|---|---|---|---|---|
| Planfulness[1] | | 20 | .87-.90 | .72-.85 |
| | Career Planning Engagement | | | |
| | Career Knowledge | | | |
| Career Exploration[2] | | | | |
| | Environmental Exploration | 6 | .88 | .24 |
| | Self-Exploration | 5 | .87 | .54 |
| Career Decision Making[3] | | 25 | .94 | .83 |
| | Self-Appraisal | 5 | .73 | - |
| | Occupational Information | 5 | .78 | - |
| | Goal Selection | 5 | .83 | - |
| | Planning | 5 | .81 | - |
| | Problem Solving | 5 | .75 | - |
| *Resiliency Measures[4] – Predictor Variables* | | | | |
| Sense of Mastery (MAS) | | 20 | .89-.90 | .79-86 |
| | Optimism (OPT) | 7 | .78-.89 | .68-.82 |
| | Self-efficacy (S-E) | 10 | .83-.91 | .78-.83 |
| | Adaptability (ADP) | 3 | .61-.82 | .62-.76 |
| Sense of Relatedness (REL) | | 24 | .90-.91 | .84-.86 |
| | Sense of trust | 7 | .83-.90 | .74-.84 |
| | Support | 6 | .73-.85 | .69-.74 |
| | Comfort | 4 | .81-.88 | .75-.77 |
| | Tolerance | 7 | .75-.87 | .72-.77 |
| Emotional Reactivity (REA) | | 20 | .94-.95 | .88-.88 |
| | Sensitivity | 6 | .80-.86 | .73-.79 |
| | Recovery | 4 | .81-.87 | .75-.80 |
| | Impairment | 10 | .88-.92 | .83-.85 |
| *Alternative Career Adaptability Measures[5]* | | | | |
| Career Adaptability | | 11 | .85 | .63 |
| Career Optimism | | 11 | .87 | .85 |
| Perceived Knowledge | | 3 | .73 | .69 |
| *Impediments to Career Adaptability* | | | | |
| Obstacle Survey[6] | | 26 | - | - |

[1] *Career Planning Scale from Career Development Inventory-School Form*
[2] *Career Exploration Survey*
[3] *Career Decision Making Self-Efficacy Scale-Short Form*
[4] *Resiliency Scale for Children and Adolescents*
[5] *Career Futures Inventory*
[6] *Obstacle Survey*

[7] For CDI-S (Thompson & Lindeman, 1981) for females grades 9-12 (N=655)
For CES (Stumpf, Colarelli, & Hartman, 1983) (N=185)
For CDSE-SF (Betz, Klein & Taylor, 1996)(N=346)
For RSCA (Prince Embury & Courville, 2008) ages 12-18 (N= 100)
For CFI (Rottinghaus, Day, & Borgen, 2005) (N= 663)

[8] For CDI-S (Thompson & Lindeman, 1981) 3 weeks for females grades 9-12 (N=330)
For CES (Stumpf, Colarelli, & Hartman, 1983) 7 weeks (N=55)
For CDSE-SF (Betz, Klein, & Taylor, 1996) 6 weeks test-retest
For RSCA (Prince Embury & Courville, 2008) average 12 days (range 5-61 days) for ages 15-18 (N=35)
For CFI (Rottinghaus, Day, & Borgen, 2005) 3 weeks (N= 36)

Table A.2

*Resiliency Means of Scaled Scores*

|  | Mean of Scaled Scores for Study Sample[1] | Standard Deviation for Study Sample[1] | Mean of Scaled Scores for Norm Group[2] | Standard Deviation for Norm Group[2] |
|---|---|---|---|---|
| **Sense of Mastery (MAS)** | **48.29** | **7.93** | **52.8** | **9.6** |
| • Optimism | 9.45 | 2.19 | 10.8 | 2.8 |
| • Self-Efficacy | 9.72 | 2.53 | 10.8 | 2.9 |
| • Adaptability | 9.75 | 2.91 | 10.7 | 2.4 |
| **Sense of Relatedness (REL)** | **44.47** | **10.11** | **51.7** | **9.7** |
| • Trust | 8.23 | 2.85 | 10.5 | 3.1 |
| • Support | 8.58 | 3.27 | 10.4 | 3.0 |
| • Comfort | 8.75 | 3.02 | 10.3 | 2.8 |
| • Tolerance | 8.12 | 3.10 | 10.6 | 2.8 |
| **Emotional Reactivity (REA)** | **49.44** | **10.58** | **49.5** | **9.7** |
| • Sensitivity | 10.39 | 2.63 | 9.9 | 2.5 |
| • Reactivity | 9.80 | 2.77 | 9.9 | 3.1 |
| • Impairment | 10.08 | 2.66 | 9.8 | 3.0 |

[1] N=101
[2] Norms from RSCA Manual for female adolescents ages 15-18 (Prince Embury, 2007)

Table A.3

*The Resiliency Scales for Children and Adolescents: Scales and Subscales*

**Sense of Mastery Scale (MAS)**

| | |
|---|---|
| **Optimism** | **7 items (1, 2, 3, 4, 18, 19, 20)** |

Optimism about life and own competence.
(e.g., Life is fair, I can get the things I need, My life will be happy)

| | |
|---|---|
| **Self-Efficacy** | **10 items (5, 6, 7, 8, 9, 10, 11, 12, 13, 14)** |

Self-efficacy is associated with problem solving attitudes and strategies.
(e.g., I do things well, I make good decisions, I can adjust when plans change )

| | |
|---|---|
| **Adaptability** | **3 items (15, 16, 17)** |

Adaptability is ability to accept criticism and learn from mistakes
(e.g., I can learn from my mistakes, I can ask for help when I need to, I can let others help me when I need to)

**Sense of Relatedness (REL)**

| | |
|---|---|
| **Sense of Trust** | **7 items (6, 7, 8, 9, 10, 23, 24)** |

Sense of trust is the degree to which others are seen as reliable and accepting.
(e.g., I like people, Other people treat me well, I can trust others)

| | |
|---|---|
| **Support** | **6 items (5, 18, 19, 20, 21, 22)** |

Support is the belief that there are others to turn to when dealing with adversity.
(e.g., I have a good friend, There are people who love and care about me, There are people who will help me if something bad happens)

| | |
|---|---|
| **Comfort** | **4 items (1, 2, 3, 4)** |

Comfort is the degree to which one can be around others without anxiety.
(e.g., I can meet people easily, People like me, I feel calm with people)

| | |
|---|---|
| **Tolerance** | **7 items (11, 12, 13, 14, 15, 16, 17)** |

Tolerance is the belief on can safely express differences in a relationship.
(e.g., I can calmly tell others I don't agree with them, I can make up with friends after a fight, I can depend on people to treat me fairly)

**Emotional Reactivity (REA)**

| | |
|---|---|
| **Sensitivity** | **6 items (1, 2, 3, 4, 5, 6)** |

Sensitivity is threshold and intensity of reaction.
(e.g., It is easy for me to get upset, People say that I am easy to upset, I get very upset when things don't go my way)

| | |
|---|---|
| **Recovery** | **4 items (10, 11, 12, 13)** |

Recovery is the ability to bounce back from emotional disequilibrium.
(e.g., When I get upset I stay upset for an hour, When I get upset I stay upset for a whole day, When I get upset I stay upset for several days)

| | |
|---|---|
| **Impairment** | **10 items (7, 8, 9, 14, 15, 16, 17, 18, 19 , 20)** |

Impairment is the degree to which one can maintain emotional equilibrium.
(e.g., I get so upset I lose control, When I am upset I hurt myself, When I am upset I get into trouble)

Source: Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths Manual (Prince Embury, 2007, 2006)

**APPENDIX B**

**DEMOGRAPHIC QUESTIONS**

## Career Development of Adolescent Mothers

### 3. All About You

Please complete the following 12 items to tell us a little bit about you and your life.

**1. What is your age?**

○ 14    ○ 15    ○ 16    ○ 17    ○ 18    ○ Over 18

**2. What is your current grade level?**

☐ 8th

☐ 9th

☐ 10th

☐ 11th

☐ 12th

☐ College Student

☐ Graduated from High School

☐ Dropped out of High School

**3. Are you of Hispanic, Latino, or Spanish origin?**

○ Yes

○ No

If Yes, please list your country or countries of origin

[                    ]

**4. What is your racial identity?**

○ Asian American or Pacific Islander

○ Black/African American

○ White

○ Other

Other (please specify)

[                    ]

**5. Is English the primary language used in your home?**

○ Yes                    ○ No

# Career Development of Adolescent Mothers

## 6. Are you currently pregnant?

○ Yes ○ No ○ Maybe

If yes, how many months

[                    ]

## 7. Tell me about your children:

|  | Age of Child | Gender of Child |
|---|---|---|
| Child 1 | [        ] | [        ] |
| Child 2 | [        ] | [        ] |
| Child 3 | [        ] | [        ] |

## 8. What is your current living situation?

○ Live on my own with my child(ren)

○ Live with a parent/grandparent

○ Live with father of my child(ren)

○ Live with father's parent/grandparent

○ Other

Other (please explain)

[                    ]

## 9. Are you currently employed?

○ No, I am not employed and have no immediate work plans

○ No, I am not employed, but I am looking for work

○ Yes, I work part-time

○ Yes, I work full-time

○ Other Situation

Other Situation (please explain)

[                    ]

## 10. What is your primary source of financial support?

○ Self-Supporting

○ Parents/Family

○ Baby's Father/Father's Family

○ Assistance Programs

## Career Development of Adolescent Mothers

**11. Are you or your child(ren) currently receiving any of the following? (Check all that apply)**

☐ Medicaid

☐ Food Assistance

☐ Housing Assistance

☐ WIC

☐ Child Care Voucher

☐ Help from Family (money, diapers, childcare or food)

☐ Other Assistance

Other (please explain)

[                    ]

**12. How far do you think you will go in school?**

○ Will not finish high school

○ Certificate of attendance (not a diploma)

○ High school diploma

○ Complete practical training after High School (trade/skill)

○ 2-year college degree (Associate's degree)

○ 4-year college degree (Bachelor's degree)

○ More than a 4-year degree (Master's degree or PhD or MD)

○ Don't know

# APPENDIX C

# CAREER ADAPTABILITY BROCHURE

## CURRENT LITERATURE

The current professional literature on the career development of adolescent mothers reveals:

◇ Research mirrors current needs (e.g., geographic location of need, selection of study participants based on birth rates)

◇ Theoretical framework and research designs vary

◇ Pressing immediate needs (e.g., childcare, transportation)

◇ Limited career development skills (e.g., knowledge about specific jobs, how to make plan for the future)

◇ Mentoring and social support

## RESEARCH FINDINGS ABOUT ADOLESCENT MOTHERS' CAREER ADAPTABILITY

**Career Adaptability:**

♦ Same as peers in Career Planfulness and Decision Making
♦ Slightly lower in Career Exploration (Mostly Environmental)

**Resiliency:**

♦ Same as peers in Personal Resiliency and Emotional Vulnerability
♦ Slightly lower in Relational Resiliency

**Obstacles:**

♦ Pressing Immediate Needs
♦ Work and Education Related Concerns

## ISF Model (Wandersman et al., 2008)

The ISF Model consists of three systems (Synthesis and Translation, Support, and Delivery) and helps researchers and practitioners to communicate about research.

Researchers can use the model to:

1. disseminate information about the current professional literature and relevant research findings,

2. help practitioners to select evidence-based assessment and intervention strategies, and

3. assist in implementation of selected interventions

The hope is that more effective communication between researchers and practitioners will help to close the research-to-practice gap.
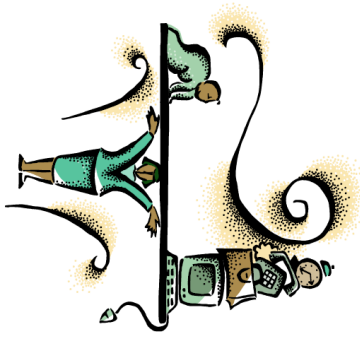
**Bronfenbrenner's Ecological Framework**

Levels of interacting variables that can impact the parenting status and career development of adolescent mothers

**Microsystem**
Individual Characteristics
Strengths, Abilities, and Interests

**Mesosystem**
Family, Religion, Neighborhood, Peers, Education School and Level of Acculturation

**Macrosystem**
Socioeconomic Status
Race/Ethnicity

# The Career Development of Adolescent Mothers

Heather H. Barto, Ph.D.
Phone: (XXX) XXX-XXXX
E-mail: hbarto@vt.edu

# Career Adaptability

Career adaptability is a concept derived from career construction (Savickas, 2005) and is defined in terms of four dimensions; namely concern, control, curiosity, and confidence.

Savickas, M. L. (2005). The theory practice of career construction. In S. Brown & R. Lent (Eds.) *Career development and counseling: Putting theory and research to work* (pp. 42–70). Hoboken, NJ, US: John Wiley & Sons Inc.

## Career Concern:

### "Do I have a future?"

Career concern is conceptualized as the first and most important of the career adaptability dimensions and is defined as a positive future orientation that leads to the desire to prepare for the future. It is an expanded and more comprehensive view of the initial concept of planfulness, in which future planning is subjectively based on the individual's past and current situation in order to encourage a positive future orientation and develop competencies in planning for the future. A negative future orientation or lack of career concern is called "career indifference" and is characterized by a pessimistic attitude about the future and the inability or unwillingness to engage in planful behavior.

## Career Control:

### "Who is in control of my future?"

Career control is the second most important feature in the concept of career adaptability. Career control is defined as the ability to be responsible for making decisions in order to construct a career. It is a more contextually orientated view of career decision making, recognizing that the individual may not be autonomous in making career-related decisions based on circumstances or worldviews. A lack of career control is termed "career indecision" and is characterized by the inability to make choices/decisions.

## Career Curiosity:

### "What do I want to do with my future?"

Career curiosity is the third aspect of career adaptability, defined as the exploration of self and environment related to career. Career curiosity encompasses both self exploration and environmental exploration, and these dimensions of exploration are important to understand the individual and what environments the individual prefers. There is not a specific term for the lack of career curiosity, but it can be characterized by inaccurate perceptions of self and unrealistic or uninformed views of career.

## Career Confidence:

### "Can I do it?"

Career confidence is the final dimension, and is characterized as the anticipation of overcoming challenges and obstacles by developing self-efficacy and problem solving skills. Interestingly, the concept of career confidence appears to be closely related to some of the characteristics of resiliency theory with the most related aspect of resiliency to career adaptability being self-efficacy. There is not a specific term for a lack of career confidence, but it can be characterized by career shyness and self-consciousness.

**APPENDIX D**

**IRB DOCUMENTATION**
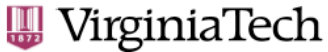
**VirginiaTech**

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, Virginia 24060
540/231-4606 Fax 540/231-0959
e-mail irb@vt.edu
Website: www.irb.vt.edu

**MEMORANDUM**

**DATE:** May 26, 2010

**TO:** Pamelia E. Brott, Heather Barto

**FROM:** Virginia Tech Institutional Review Board (FWA00000572, expires June 13, 2011)

**PROTOCOL TITLE:** The Career Adaptability, Resiliency, and Obstacles to Career Development of Adolescent Mothers

**IRB NUMBER:** 10-457

Effective May 26, 2010, the Virginia Tech IRB Chair, Dr. David M. Moore, approved the new protocol for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at http://www.irb.vt.edu/pages/responsibilities.htm (please review before the commencement of your research).

**PROTOCOL INFORMATION:**
Approved as: **Expedited, under 45 CFR 46.110 category(ies) 7**
Protocol Approval Date: **5/26/2010**
Protocol Expiration Date: **5/25/2011**
Continuing Review Due Date*: **5/11/2011**
*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

**FEDERALLY FUNDED RESEARCH REQUIREMENTS:**
Per federally regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals / work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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IRB Number 10-457 page 2 of 2 Virginia Tech Institutional Review Board

| Date* | OSP Number | Sponsor | Grant Comparison Conducted? |
|---|---|---|---|
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|  |  |  |  |

*Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

cc: File

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Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
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IRB Number  10-457                    page 2 of 2                    Virginia Tech Institutional Review Boar

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