The Career Beliefs of Inner-City Adolescents

This research explored the career beliefs of inner-city adolescents (N = 97). Results identified six types of beliefs: success is related to effort, job satisfaction, work interest and liking, flexibility/adaptability, achievement and persistence, and tolerance of uncertainty. A majority of these young people believed that their success was not related to their efforts and had beliefs inconsistent with flexibility/adaptability. Findings are interpreted in light of Happenstance Learning Theory (Krumholz 2009).

Inner cities is a general term for impoverished areas of large cities. The inner city is “characterized by minimal educational opportunities, high unemployment and crime rates, broken families, and inadequate housing” (American Heritage New Dictionary of Cultural Literacy, 2005, p. 435). Researchers have highlighted the importance of studying inner-city adolescents’ career development in order to assist them to successfully plan and prepare for careers that are economically viable in our quickly changing world of work (Lapan, 2004; Turner & Conkel, 2010; Turner et al., 2008). In particular, studying career development among inner-city young people is important for school counselors because career planning and career interventions are one-third of the ASCA National Models’ (American School Counselor Association, 2005) counseling priorities. It is also highly relevant in light of the importance of focusing on career and college readiness plans and creating a career- and college-ready culture in schools, particularly in high-minority and high-poverty schools, such as are found in the inner cities (Holcomb-McCoy, 2010).

As a whole, compared to adolescents from other demographic groups, inner-city adolescents encounter barriers that hinder access to viable career paths. For example, inner-city adolescents as a group have lower academic achievement than do suburban adolescents who are more affluent (Greene, 2002; Uzzell et al., 2011). Further, these young people have less opportunity to engage in career exploration, less information regarding those career options in which they are interested, and less opportunity to understand the links between working and successfully reaching their goals. This is the case, in part, because of the high rates of unemployment in the inner cities that give inner-city young people less access to working role models who can share how their efforts helped them meet their own career objectives (Savage, 2008; Wilson, 1996). Moreover, inner-city adolescents often do not achieve academically (Green, 2002; Uzzell et al., 2011); city school districts across the country have a graduation rate of approximately 50%. Thus, many inner-city young people are underprepared educationally to find meaningful, satisfying work. They are also less likely to have developed the flexibility and adaptability, which are also related to exploration and prior academic and career planning, to make successful school-to-work and job-to-job transitions (Blustein, 2006; Blustein, Juntunen, & Worthington, 2000; Bureau of Labor Statistics, 2009; Turner, 2007). Thus, they may be in a less advantageous position than adolescents from other groups to pursue the occupational options afforded by the changing opportunity structures that comprise the current and future world of work.

In this rapidly changing world of work, jobs are continuing to become more short term, project driven, and contractual in nature, with successful workers able to make transitions quickly to new tasks or employment opportunities (Lapan, 2004). Employees are expected to be interested in their work, educationally prepared, self-directed, achievement and goal oriented, and able to work collaboratively with others who are different from themselves. They are also expected to be flexible, adaptable, and able to tolerate the uncertainty in both employment prospects and employment direction (Lapan; Turner & Conkel, 2010).

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In addition to the environmental barriers that inner-city youth face, their career development behaviors can also be maladaptive based on the limiting career beliefs they develop. For example, researchers have suggested that the pervasive stress experienced by inner-city adolescents predisposes them to believe they have little control across the various contexts of their lives (Deardorff, Gonzales, & Sandler, 2003), and to not believe that academic effort will bring them future career rewards (Jackson, Kacanski, Rust, & Beck, 2006). Just as internal locus of control beliefs are associated with academic success, external locus of control beliefs (Rotter, 1966) can lead to academic failure (Perry & Penner, 1990; Stayhorn, 2010). Additionally, external locus of control beliefs are negatively related to career planning. These types of beliefs can curtail inner-city young people’s exploration of and planning for occupations because they believe they have little control over gaining the type of employment they want (Hirschi, 2010; Noe & Steffy, 1987).

In contrast, adolescents who believe they have more control over their vocational development tend to engage in more career exploration activities, and have greater career decision-making self-efficacy (Millar & Shevlin, 2007; Trice & Morand, 1989). They may put forth more effort in their academic pursuits, have greater school satisfaction, and may be more likely to attain jobs that are consistent with their career interests and aspirations (Huebner & Gilman, 2006; Luzzo & Ward, 1995).

Krumbolz’s Happenstance Learning Theory (HLT; originally known as Social Learning Theory; Krumbolz, 1994a, 1996, 2009) can help counselors conceptualize how career beliefs either hinder or enhance young people’s career development processes. While Bandura’s Social Cognitive Theory (2006) conceptualizes how self-efficacy and outcome expectation beliefs affect academic and career development, Krumbolz more broadly defines beliefs as sets of beliefs, assumptions, and generalizations that people develop about themselves and the work world based on their limited experience (Krumbolz, 1991; Walsh, 1994).

Krumbolz’s theory proposes that less adaptive career beliefs can have a powerful and detrimental impact on young people’s career development. Career beliefs are formed and organized through interactions with the environment, which provide access to selective learning experiences (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Krumbolz, 1996). Career beliefs are acquired via young people’s academic and social experiences and the subjective meanings they give to these experiences (Bandura et al., 2001). People act according to their beliefs, whether accurate or inaccurate. Accurate, constructive beliefs help people achieve their goals, and inaccurate, self-defeating beliefs hinder achievement and prevent people from taking advantage of opportunities (Krumbolz, 1991, 1999). Thus, according to Krumbolz, career beliefs can affect the direction of motivation to prepare for, attain, and persist in careers that are satisfying and rewarding.

Additionally, Krumbolz (1996) and those researchers who have examined his theory (e.g., Jackson & Nutini, 2002) have suggested that members of the same demographic groups to which young people belong often share career beliefs. This is because different groups are exposed to different environmental realities and therefore may develop disparate views of career possibilities (e.g., “Opportunities exist for me in the work world” versus “Opportunities do not exist for me in the work world”). Moreover, members of specific groups may share beliefs that are dimensionally different (i.e., comprising different miscellaneous beliefs that together form sets of beliefs) or that are more salient to those group members than they would be to members of other demographic groups. Examples of this can be seen by examining the belief factors that emerge when factor analyzing Krumbolz’s Career Beliefs Inventory (CBI, 1994b), which operationalizes HLT/SLT using samples from different populations.

In one study that used this method to assess career beliefs among Italian high school students, five factors emerged that represented beliefs regarding confidence in one’s career decisions, the benefits of taking a more active approach to one’s career development, the importance of relying on oneself, the opportunities to choose one’s own career, and the importance of liking one’s work (Hess, Tracey, Nota, Ferrari, & Soresi, 2009). In a study of United States college students with disabilities, only two beliefs factors emerged. These were self- affirming career beliefs (i.e., “I can do it”), and self-doubting career beliefs (“I cannot do it”) (Enright, 1996). Among already-working adults in the United States, beliefs factors emerged about the importance of vocational achievement, being flexible in one’s job, and satisfying one’s employer (Walsh, Thompson, & Kapes, 1997). Thus, by examining the results from this prior research, counselors are able to ascertain differences in career beliefs among the groups represented in these studies. However, no prior study has examined the career beliefs sets of middle school, junior high, or high school adolescents in the United States.

Besides examining the dimensionality of career beliefs, in several correlational studies, researchers have investigated relationships between career beliefs and other career outcomes. For example, beliefs about what seems necessary for happiness and
less stereotypical beliefs about the links between college and career predicted 59% of the variance in career maturity (i.e., an individual’s readiness to make well-informed, age appropriate career decisions; King, 1989) among at-risk U.S. adolescents (Schnorr & Ware, 2001). Less stereotypical beliefs about college/career links were significantly related to higher academic achievement among Australian tenth-grade students (Naylor & Krumholz, 1994). Additionally, adaptive career beliefs have been shown to be related to career decidedness and career decision making (Sadeghi, Baghban, Bahrami, Ahmadi, & Creed, 2010); and, in a number of studies, less adaptive career beliefs have been shown to be malleable when students participate in various types of exploration activities (Kovalski & Horan, 1999; Luzzo & Day, 1999; Schnorr, 1998).

Nevertheless, as previously mentioned, career beliefs as conceptualized in HLT have been understudied among inner-city adolescents, although these young people constitute a distinct population who have career development needs that may be different from adolescents who live in more affluent suburban areas.

Purpose of the Study

Although some research has addressed ascertaining people’s career beliefs, inner-city adolescents’ career beliefs (as conceptualized in HLT) have not yet been adequately explored. Moreover, if career beliefs, as motivators of young people’s career behaviors, are formed through interactions with the environment and the subjective meanings young people give to these interactions, it is reasonable to assume that school counselors could provide career counseling experiences that would help these young people develop more adaptive career beliefs systems. This type of counseling could be especially important for inner-city youth who may have greater career development barriers and less access to career development resources than their peers with a higher socioeconomic status.

Therefore, to provide a guide for school counselors to be able to develop these types of interventions, we designed a study to ascertain inner-city adolescents’ career beliefs by factor analyzing the CBI scales. Our research questions were: (a) What are inner-city adolescents’ guiding career beliefs? (b) Are these career beliefs more likely or less likely to position inner-city adolescents to be successful in the current and future world of work?

METHOD

Participants

Our sample consisted of 97 seventh- and eighth-grade middle-school adolescents from two inner-city public schools in a large city of over two million people in a Midwestern state. One school served multi-ethnic students (African American, Asian American, European [white] American, and Hispanic/Latino) and one served primarily Native American students. We chose these schools in order to obtain a broader representation of participants.

Participants were recruited from social studies classes. Researchers contacted teachers and were allowed to use class time to work with students interested in participating in the research study. Students who were not interested in participating were to be given other career development activities to work on during the class. School districts reported that over 91% of the students from the schools from which the participants were drawn lived at or below the poverty level. Mean age was 13.17 (SD = 1.13 years). Of these participants, 45.4% were males (n = 44) and 54.6% were females (n = 53); 16.5% were African American (n = 16), 15.5% were Asian American (n = 15), 3.1% were European (white) American (n = 3), 8.2% were Hispanic Latino (n = 8), and 56.7% were Native American (n = 55). All participants who were recruited chose to participate. No research incentives were offered.

Procedures

Data were collected using a self-report instrument during class periods in the spring semester of 2008. Administration was conducted by the first and second authors and one research assistant who was trained on test administration and interpretation procedures. To reduce measurement error, the administrators read aloud the directions for the survey instruments used in the study. During instrument completion, the test administrators closely monitored student progress and were available to answer questions and address concerns as needed. Students completed the instrument in approximately 25 minutes. The administrators then checked students’ scoring sheets for completeness and accuracy. Group interpretations of survey results were offered as part of the results sharing process.

Instrumentation

The Career Beliefs Inventory (CBI; Krumholz, 1994b) consists of 96 items that are rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with 51 items reverse scored (5 = strongly disagree to 1 = strongly agree). Sample items for the CBI are, “I continually strive to improve my performance;” and “There are no jobs that can really satisfy me” (reverse scored).

Following the procedures described in the test manual, item scores are then grouped into 25 predetermined scales (Krumholz, 1999). The test developers created these scales to measure unique...
Beliefs about achievement being important held by a majority of inner-city youth is at variance with the lower academic achievement levels attained by these young people.

beliefs found by prior research to have interfered with career decision making. To measure the beliefs tapped by this instrument, the test developers created the scales both by grouping items rationally and by using factor analysis. The rational basis was prior theory and research on vocational misperceptions (e.g., Thompson, 1976), career myths (e.g., Lewis and Gilhouse, 1981), and beliefs that had blocked people from achieving their goals (Krumblottz, 1994b). They then used factor analysis to further examine the construct validity of the scales on subsets of over 7500 participants ranging in age from 12 to 75, and, as a result, they reorganized some items to create revised scales. The CBI also includes an Administrative Index of 25 matched pairs of items to detect inconsistent responses. These scales have been shown to represent isolated career beliefs. The scales are Employment Status (2 items), Career Plans (2 items), Acceptance of Uncertainty (2 items), Adaptability (Openness) (4 items), Achievement (2 items), College Education (2 items), Intrinsic Satisfaction (5 items), Peer Equality (3 items), Structured Work Environment (2 items), Control (2 items), Responsibility (5 items), Approval of Others (2 items), Self–Other Comparisons (4 items), Occupation/College Variation (5 items), Career Path Flexibility (4 items), Posttraining Transition (5 items), Job Experimentation (8 items), Relocation (5 items), Improving Self (2 items), Persisting While Uncertain (5 items), Taking Risks (4 items), Learning Job Skills (2 items), Negotiating/Searching (4 items), Overcoming Obstacles (8 items), and Working Hard (7 items).

The CBI scales scores have shown one-month and three-month test-retest reliabilities ranging from .35 to .73 in a high school sample and from .26 to .68 in a college sample (Krumblottz, 1999). Regarding construct validity, CBI scales have been shown to measure unique constructs not tapped by other instruments with which they have been correlated. For example, when correlated with the Strong Interest Inventory (Hansen & Campbell, 1985) Basic Interest Scales and General Occupational Themes, only a few significant associations from many possible associations were found. Additionally, among working adults, the CBI has been shown to measure constructs dissimilar to those measured by the Myers-Briggs Type Indicator, which measures personality constructs (Myers & McCaulley, 1985). Regarding concurrent validity, CBI scale scores have been most often correlated with measures of life satisfaction. For junior- and senior-high students, achievement and negotiating/searching were both correlated with life satisfaction (Krumblottz, 1994b).

In the current study, the authors examined the data for normal distribution. Regarding sample skewness, the distribution of the mean scores of the 25 variables (created from scaling the items into predetermined scales) were within acceptable limits (> -1 and < +1), indicating that sample skewness was most likely accounted for by chance error (Bulmer, 1979). For these variables, skewness ranged from -.40 to .61. Using the same limits to test for non- chance kurtosis, the authors found two variables that were slightly kurtotic. For the 23 non-kurtotic variables, kurtosis ranged from -.63 to .94. The sample values of the two slightly kurtotic variables were both 1.03. Thus, the mean variable scores in the dataset were in large part normally distributed. For further explanation regarding the relationship of > -1 and < +1 to exceed sample skewness, excess sample kurtosis, and distribution shape, see Joanes & Gill (1998). Means, standard deviations, alpha reliability estimates, skewness, and kurtosis for all variables are available from the first author.

RESULTS

This section presents the results corresponding to each research question. For research question 1, the authors describe the method used to factor analyze the CBI scales scores to ascertain the dimensions of inner-city adolescents’ career beliefs, then describe the six factors that represent these beliefs. Scale scores were used in this analysis rather than individual items, because the CBI scales, not the CBI items, represent the various types of career beliefs tapped by the CBI. The beliefs factors that emerged were: success is related to effort beliefs, job satisfaction beliefs, work interest and liking beliefs, flexibility/adaptability beliefs, achievement and persistence beliefs, and toleration of uncertainty beliefs.

For research question 2, the authors investigated what percentage of students had beliefs that were more or less likely to help them be successful in today’s world of work. A majority of the students believed that they could find jobs that satisfied them, that working in jobs that match their interests was important, that achievement and persistence would bring success, and that uncertainty about work was acceptable. However, a majority of them also believed that success was not related to effort, and held beliefs that were inconsistent with flexibility/adaptability.

Research question 1. What are inner-city adolescents’ guiding career beliefs?

In order to ascertain inner-city adolescents’ guiding career beliefs, the authors factor analyzed the CBI scale scores. First, they determined the adequacy of the sample to conduct the analysis. Researchers’ views vary widely concerning sample size adequacy when conducting factor analysis, with some researchers suggesting that sample sizes of 100
are poor, 200 are fair, 300 are good, 500 or more are very good, and 1000 or more are excellent (Comrey & Lee, 1973). Other researchers have suggested that the sample size should be based on the ratio of participants to variables, with estimates ranging from 3:1 to 20:1 (e.g., Cattell, 1978; Hair, Anderson, Tatham, & Black, 1995). However, Henson and Roberts (1994) have stated that such rules of thumb do not take into consideration the many complex dynamics of factor analysis. Another set of recommendations that may address these complexities includes examining not only the participant to variable ratio, but also various tests of the variable correlation matrix (factorability of R, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), and Bartlett’s Test of Sphericity), and factor replicability (congruence between factors derived in the sample and expected factors that would be derived in the population).

The first test of the correlation matrix conducted in the current study was the factorability of R, which is a test of the intercorrelations among the variables. According to Tabachnick and Fidell (2007), at least some correlations should be > .3. “If no correlation exceeds .30, use of FA is questionable because there is probably nothing to factor analyze” (p. 614). In the current study, 21% of the variables correlated at > .3, with 6% correlating at > .4, and 2% at > .5.

Next, the authors examined the partial correlations using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO). This test estimates the sampling adequacy of the correlation matrix by testing whether partial correlations among the variables are small. KMO is especially suitable if the ratio of participants to variables is less than 5:1. If the value of KMO is less than .5 (Dziuban, 1974) or .6 (Garson, 2011), the dataset may not be suitable for factor analysis. In the current study, KMO = .61.

To test whether the correlation matrix was an identity matrix (meaning that variables are independent measures), the authors used Bartlett’s Test of Sphericity. The criteria for the probability that the correlation matrix is an identity matrix should be $p < .05$. In this case, Bartlett’s $p < .001$. Thus, given that the participant to variable ratio was approximately 4:1, KMO was adequate (although not strong), and Bartlett’s Test of Sphericity was < .001, the data was judged suitable for factor analysis.

The authors then analyzed the mean scale scores using the principal components method of extraction in order to identify more clearly the most salient psychological constructs found in the data. The principal components method of extraction was chosen because the authors wished to ascertain the relevant components (or sets) composed of corresponding beliefs rather than examine the underlying relationships among the types of beliefs measured by the CBI. According to Tabachnick and Fidell (2007), principal components extraction is designed to provide an empirical summary of variables using the maximum amount of variance. It is an appropriate method of extraction when variables are normally distributed. Principal axis factoring was not chosen as the method of extraction because it is used to detect the underlying structure of latent factors by investigating the shared variance in a set of X measurements through a small set of latent variables called factors (Warner, 2007).

The authors then rotated the derived factors. To choose the method of rotation, they first rotated the solution using oblique rotation, and examined the factor correlation matrix. According to Tabachnick and Fidell (2007), if factor correlations exceed .32, then a 10% or more overlap exists in variance among factors, which is enough to warrant oblique rotation. In the current study, inter-correlations ranged from .13 to .15, indicating little shared variance among the factors. Therefore, the authors rotated the factors again using the Varimax rotation (an orthogonal rotation). Varimax rotation is appropriate for largely uncorrelated factors and is used to minimize the complexities of factors by maximizing variance of loadings on each factor (Tabachnick & Fidell).

In the present study, a six-factor solution, accounting for 60.39% of the variance, best described inner-city adolescents’ career beliefs. Two other factors were found, but each was determined by only two variables. Thurstone (1947), who developed techniques for discovering multi-factor solutions within a single data set, recommended that there be at least three variables per factor in order to define that factor. Therefore, the authors judged that the factors determined by only two variables were not clearly identified and were not named nor included in any further analyses. One other variable cross-loaded on two factors and one variable did not load clearly on any factor (with the variable loading at < .30). These variables also were not used to define any factor and were excluded from further analysis (Tabachnick & Fidell, 2007).

Communalities were high (> .62) for all extractions for the six factors. Factor loadings were also high, with all retained variables loading at > .42 and all but 4 variables loading at > .60. Retaining variables that load at > .40 is typical in counseling and psychological research, although some researchers retain variables that less strongly identify a factor (such as those that load at > .30) (Kahn, 2006). Cronbach’s alpha reliabilities with Spearman-Brown correction for variables underlying each of the factors were > .70.

The authors next examined factor replicability by considering factor overdetermination (i.e., at least
Although many of these young people may have beliefs that could contribute to educational and career failure, they also hold beliefs that are compatible with successfully meeting the demands of the current and future world of work.

three or four variables define each factor), strength of communalities, ratio of factors to variables, and variable loading magnitude. Regarding factor overdetermination and strength of communalities, researchers (MacCallum, Widaman, Zhang, & Hong, 1999) found in a Monte Carlo study that when overdetermined factors and consistently high communalities (with communalities > .6) are present, good recovery of population factors occurs in samples well below 100. With most communalities in the range of > .5, achieving good recovery of population factors is still not difficult, but one must have well-determined factors (not a large number of factors with only a few indicators each) and possibly a somewhat larger sample, in the range of 100 to 200.

Regarding the ratio of factors to variables, researchers in another Monte Carlo study examined the coefficient of congruence between samples and the population by calculating various ratios of the number of factors extracted to the number of variables in various sample size conditions among high, wide, and low communality matrices (Hogarty, Hines, Kromrey, Ferron, & Mumford, 2005). In this study, researchers found that five factors extracted from 20 variables with sample sizes of 60 yielded a mean coefficient of congruence of .88, five factors extracted from 20 variables with a sample size of 100 yielded a mean coefficient of congruence of .92, five factors extracted from 30 variables with a sample size of 90 yielded a mean coefficient of congruence of .97, and seven factors extracted from 30 variables with a sample size of 90 yielded a mean coefficient of congruence of .91 (with .98 to 1.00 = excellent, .92 to .98 = good, .82 to .92 = borderline, .68 to .82 = poor, and less than .68 = terrible; MacCallum et al., 1999).

Regarding variable loading magnitude, researchers (Osborne & Costello, 2004) tested variable loading magnitudes of .40, .60, and .80 in a third Monte Carlo study. They found that variable loading magnitude was the strongest unique predictor of congruence between sample and population estimates.

As stated previously, 97 participants were sampled in the current study. From the data generated, 25 variables were constructed and six factors extracted from these variables were retained. Each of these factors was identified by three variables that loaded on it. Communalities for all retained variables were greater than .60. The authors calculated the Tucker-Lewis Coefficient of Congruence for the sample (.99). Thus, they found evidence that factors derived in the sample were congruent with expected factors in the population, and thus were likely stable and replicable.

Next, the authors interpreted each retained factor. Factor interpretations were derived by examining the meanings of the variables comprising the factors and the content of the items underlying each variable (Krumboltz, 1994c). Following the interpretative strategy established in the CBI, scores that were > 3 were considered higher scores, scores that were < 3 were considered lower scores, and scores of 3 were considered neither high nor low. For the reporting of these results, the authors arranged factors from those that accounted for the most variance explained, indicating that these factors represented more strongly held beliefs, to those that accounted for the least variance explained, indicating that these factors represented the more weakly held beliefs. The six factors, variance explained in the model by each factor, variable loadings, and a summary of the beliefs sets represented by each factor are shown in Table 1.

A Repeated Measures Multivariate Analysis of Variance (MANOVA) was conducted to examine further the independence of the final factors. This type of analysis can be used to estimate differences among correlated variables within the same sample. As such, it can be seen as a more conservative extension of paired-sample t tests, in that it lessens the chance for Type I error because there are fewer independent analyses. If the omnibus F test is significant, then researchers can pursue mean score differences through post-hoc tests (Tabachnik & Fidell, 2007). In the current study, the Repeated Measures model was significant (Wilks’ lambda F (5,92) = 35.99, p < .001).

Post-hoc analyses using the liberal Tukey’s Honestly Significant Differences test showed significant differences among each of the mean factor scores (t [absolute value] = 2.29 to 12.21, p < .001 to .025, Cohen’s d effect sizes = .18 to 1.92). This indicates that the factors were relatively independent of one another and were measures of distinct career beliefs constructs. Thus, through the factor and repeated measures analyses, the authors found evidence of six guiding career beliefs factors among inner-city adolescents.

Research question 2. Are these career beliefs more likely or less likely to position inner-city adolescents to be successful in the current and future world of work?

To answer this question, the authors examined the frequencies of participants’ career beliefs scores using the higher- versus lower-scoring rubric described above. Higher scores were interpreted as those beliefs that would position young people to be successful in the world of work, while lower scores were interpreted as those beliefs that could hinder young people’s success in the world of work.

Results indicated that 70% and 79% of the participants had lower scores on Success is Related to Effort Beliefs, and on Flexibility/Adaptability
Beliefs, respectively. Concerning Job Satisfaction Beliefs, Work Interest and Liking Beliefs, Achievement and Persistence Beliefs, and Toleration of Uncertainty Beliefs, the majority of young people in the sample (86%, 56%, 87%, and 78%, respectively) had scores that were in the higher range (with 12%, 39%, 8%, and 10% having lower scores on these factors). Frequencies, as well as mean scores (ranging from 2.58, SD = .53, to 3.54, SD = .74) for each factor across the sample, are shown in Table 2.
**Table 1 — Factor Table**

<table>
<thead>
<tr>
<th>Factor#</th>
<th>Beliefs Factor Names</th>
<th>Variance Explained in Model</th>
<th>Variable Name</th>
<th>Variable Loading</th>
<th>Beliefs Represented by High Scores</th>
<th>Beliefs Represented by Low Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Flexibility/Adaptability</td>
<td>16.61%</td>
<td>Peer Equality</td>
<td>.87</td>
<td>Beliefs in flexibility and adaptability in training and employment. High scorers tend to believe there are many paths to obtaining their career goals. They are less threatened than low scorers by the need to adapt to new circumstances. Then they tend to be open to new opportunities, and tend not to be threatened by others' decisions. They tend to be collaborative and team players.</td>
<td>Beliefs in inflexibility in training and employment. Low scorers tend to believe that there are few paths to obtaining their career goals, and that one must compete with others in order to have greater access to benefits and resources. They tend to be threatened by others' decisions. They tend to be more rigid than high scorers are, and more unyielding, and resistant to change.</td>
</tr>
<tr>
<td>5</td>
<td>Achievement and Persistence</td>
<td>11.36%</td>
<td>Learning Job Skills</td>
<td>.81</td>
<td>Beliefs in the value of achievement and that one can overcome obstacles to achievement. High scorers tend to choose the best education or training available. They believe that no one can stop them from doing the kind of work they want to do, that they can learn whatever skills they want to learn, that they can find good job opportunities when they need them and that people are successful in their careers if they persist.</td>
<td>Beliefs that achievement has little value and that obstacles are blocking their progress that cannot be overcome. Low scorers may settle for education or training that is not the best available. They believe that barriers will stop them from doing the kind of work they want to do, that they may not be able to learn job-required skills to get the job they want, that job opportunities may not be available when they need them, and that persistence does not necessarily bring success.</td>
</tr>
<tr>
<td>6</td>
<td>Tolerance of Uncertainty</td>
<td>9.70%</td>
<td>Acceptance of Uncertainty</td>
<td>.90</td>
<td>Beliefs that uncertainty is okay, and that one should work hard, despite uncertainty. High scorers tend to believe that one does not always have to know the kind of work one wants. They tend to take action to solve career problems, continually strive to improve their performance and to develop skills, even when their goals are unclear.</td>
<td>Beliefs that uncertainty is not okay. Low scorers tend to need clear goals to work hard and to continue to improve their performance. They may ignore career problems, or allow these problems to halt their career progress.</td>
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</table>

**DISCUSSION**

This study examined guiding career beliefs that are held by inner-city adolescents, who, as a group, have distinct socialization experiences and unique career development needs. When comparing the resulting beliefs from this current study with the beliefs found across other samples, some differences and some similarities emerge. Among inner-city young people, beliefs consistent with success being related to effort, beliefs concerning the importance or unimportance of being satisfied in one's job,
flexibility/adaptability beliefs, and beliefs in one’s ability to tolerate uncertainty emerged as salient, but did not emerge as salient among other groups studied in previous research. Within the limited research across the various samples that exists in the literature, the salience of these beliefs has appeared as unique to inner-city adolescents.

However, similar beliefs were found between Italian high school adolescents and inner-city adolescents regarding the importance of liking one’s work (Hess et al., 2009); and similarities were found among inner-city adolescents and working adults in the U.S. about the importance of achievement (Walsh et al., 1997). Nevertheless, beliefs about achievement being important held by a majority of inner-city youth is at variance with the lower academic achievement levels attained by these young people. This may indicate that factors other than beliefs, such as family, peer, and teacher/counselor support, and their readiness, confidence, and support to transition into high school, may need to be considered in order to assist them to become educationally prepared to enter the job market (Anderson, Sabatelli, & Kosutic, 2007; Turner, 2007).

Results of this study also indicated that the most strongly held sets of beliefs among inner-city adolescents were the beliefs regarding success being related to effort. Yet, only 24% of the participants in this study reported that they held beliefs consistent with success being related to their efforts, while 70% reported beliefs that were inconsistent with success being related to their efforts. As the most strongly held beliefs among inner-city young people, these beliefs have the most influence over behavior. Thus, addressing beliefs about relationships between effort and success with their inner-city students is crucial for professional school counselors. The proportion of students who held these beliefs in the current study is consistent with the results of previous studies that found that diverse inner-city youth do not attribute their educational or career success or failure to their own actions (e.g., Jackson et al., 2006).

Likewise, only 18% of the inner-city young people in this sample held beliefs consistent with flexibility/adaptability, with 79% tending to be more rigid and resistant to change. While these beliefs were less strongly held than beliefs concerning the relationships between success and effort, a need still exists for school counselors to address beliefs inconsistent with flexibility/adaptability among their inner-city students, as these beliefs are incompatible with current employment demands that workers be able to adapt quickly to new and unforeseen circumstances (Lapan, 2004). These less adaptive beliefs, coupled with less information concerning career options (Jackson et al., 2006; Turner & Lapan, 2003), may position inner-city young people to have less ability to sustain a career path in which they can obtain employment that is satisfying and rewarding.

However, a majority of inner-city young people hold other career beliefs that are more adaptive. Concerning job satisfaction beliefs, work interest and liking beliefs, achievement and persistence beliefs, and toleration of uncertainty beliefs, the majority of young people in the sample (86%, 56%, 87%, and 78%, respectively) had scores in the higher range. This indicates that the majority of these young people held beliefs consistent with work should be satisfying, people should be interested in and like their work, achievement is important, and one can accept uncertainty without excessive fear. Thus, although many of these young people may have beliefs that could contribute to educational and career failure, they also hold beliefs that are compatible with successfully meeting the demands of the current and future world of work. Acting upon these

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
<th>Higher</th>
<th>Lower</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 Success is Related to Effort Beliefs</td>
<td>2.73</td>
<td>0.56</td>
<td>0.83</td>
<td>23.7%</td>
<td>70.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>F2 Job Satisfaction Beliefs</td>
<td>3.46</td>
<td>0.43</td>
<td>0.82</td>
<td>85.5%</td>
<td>12.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td>F3 Work Interest and Liking Beliefs</td>
<td>3.12</td>
<td>0.52</td>
<td>0.74</td>
<td>55.6%</td>
<td>39.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>F4 Flexibility/Adaptability Beliefs</td>
<td>2.58</td>
<td>0.53</td>
<td>0.85</td>
<td>18.4%</td>
<td>78.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>F5 Achievement &amp; Persistence Beliefs</td>
<td>3.54</td>
<td>0.47</td>
<td>0.72</td>
<td>86.6%</td>
<td>8.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>F6 Tolerance of Uncertainty</td>
<td>3.34</td>
<td>0.47</td>
<td>0.72</td>
<td>78.4%</td>
<td>10.3%</td>
<td>11.3%</td>
</tr>
</tbody>
</table>

Note: N = 97. Possible range of scores, 1 = strongly disagree to 5 = strongly agree, with reverse scored items, 1 = strongly agree to 5 = strongly disagree. Higher = % of Participants with Higher Scores; Lower = % of Participants with Lower Scores; Neither = % of Participants with Neither Low nor High Scores. Higher Scores are > 3, Lower Scores are < 3, Neither Low nor High = 3.
more adaptive beliefs could promote inner-city young people's career success in both employment prospects and employment direction.

**IMPLICATIONS FOR SCHOOL COUNSELORS**

Krumholz and Jackson (1993) stated that current beliefs may not be nearly as useful as beliefs learned after a new look at the evidence. Additionally, as reported in the introduction, some researchers have shown that less adaptive career beliefs can be transformed (Kovalski & Horan, 1999; Luzzo & Day, 1999; Schnorr, 1998). Therefore, the authors suggest that school counselors can assist inner-city young people to develop more adaptive career beliefs by helping them examine the outcomes of new, more adaptive career behaviors. In considering how inner-city young people could develop more adaptive beliefs, the authors examined extant literature for both pre-post and correlational studies regarding success and effort and flexibility/适应性 beliefs.

**Enhancing Flexibility/Adaptability Beliefs**

Primary skills that help adolescents develop flexibility/adaptability beliefs are career exploration, planning, and decision making (Blustein, 1997). Indeed, assisting inner-city young people to develop these skills, both through guidance curriculums and through individual student planning, in which counselors help students establish future plans and develop personal goals, can help them adopt an exploratory attitude by which they can examine the to be able to navigate “the unknowns of the 21st century” (ASCA, 2005; Blustein). School counselors should approach exploration, planning, and decision making by helping students construct knowledge rather than presenting them with the ideas, attitudes, and strategies they must use (Kirschner, Sweller, & Clark, 2006). Learning approaches that are constructivist, discovery-oriented, problem-based, experiential, and inquiry-based (Kirschner et al.) promote independence and self-direction as well as skill development. Helping young people learn to prepare for eventualities prior to career decision points can assist them to transition more easily from one occupation to another, or from task to task (Super & Knasel, 1981; Turner, 2007).

Varieties of career exploration and planning tools appropriate for young people are available, which can aid inner-city students to make positive career decisions. Some free or low-cost online exploration instruments that help students understand their personal career-related attributes are the Career Link Inventory (Counseling Department of the Monterey Peninsula College, 2011), the Career Interest Profiler (testingroom.com, n.d.), the Career Values (testingroom.com, n.d.), the Personality Index (testingroom.com, n.d.), Future Proof Your Career (Career Mentoring Institute, 2011), and the Occupational Information Network's (O*NET; U.S. Department of Labor Employment and Training Administration, 2011) Interest, Work Importance, and Abilities Profilers. By using these instruments, students can learn about their career-related personal attributes, such as aptitudes, interests, toleration of career preparation time, and values (e.g., service orientation, team orientation, influence, creativity, independence, excitement, financial rewards, security, prestige). Using these instruments can also help students understand their own career-related personality styles (e.g., ambition, initiative, flexibility, energy, leadership, concern for others, stress tolerance), domain intelligences, dominant abilities, and preferred learning styles.

Students can conduct self-directed world of work exploration using the O*NET's occupational information database. This database is the primary source of occupational information in the U.S. The distinguishing characteristics, including required knowledge, skills, abilities, activities, and tasks, are described for almost one thousand occupations. The O*NET database is continually updated through surveying workers from each occupation. Using O*NET, students can browse occupations of interest. They can also use the O*NET Crosswalks tool, by which they can link codes from other classification systems to codes in the O*NET database for more in-depth educational and occupational information exploration. These classification systems include the Registered Apprenticeship Partners Information Data System (U.S. Department of Labor, 2010), the Military Occupational Classification System (U.S. Department of the Army, 2007), and the Occupational Outlook Handbook (OOH; Bureau of Labor Statistics, 2010-2011). By linking information from these databases to the O*NET database, students can gather information such as earnings potential, expected job prospects for specific occupations, education required, training opportunities, and military job opportunities. This type of exploration can also help them understand that alternative routes are possible to pursuing desired careers.

Approaches to making career decisions can be taught to inner-city young people using the portfolio method. In portfolios, students can store career exhibits, such as the results of career assessments, information about occupations in which they are interested, and personal reflections on goal setting, task completion, and competency acquisition (Kicken, Brand-Gruwel, van Merrienboer, & Slot, 2009; Zion & Slezak, 2005). By using portfolios,
students can build a comprehensive picture of how their interests, abilities, educational plans, and other career-related personal attributes match current occupational demands. The results of a matching exercise, in which students can clearly see how their personal attributes match job expectations, should be included in each portfolio. An example of this type of exercise is also found in O*NET, where the interests, work importance, and abilities profilers link users’ results back to occupations that match their profiles.

Research has shown that portfolio usage can help students build skills in self-directed decision making using a feedforward/ facilitative/feedback instructional loop (Kicken et al., 2009). When using this method, counselors give students specific feedforward instructions about how to maximize their portfolio usage prior to engaging in the portfolio activity. Facilitative instructions (here is how you do this specific portfolio task) can also increase students’ initiative, responsibility and motivation (Zion & Slezak, 2005). Feedback helps students understand how well they did in each task and also helps them understand the overall quality of their portfolios (Kicken et al.). Feedback includes discussing the contents of students’ portfolios with them and helping them learn how to make specific decisions based on portfolio materials. Portfolios can either be constructed using paper folders or as online portfolios in which students can store electronic documents. Online electronic portfolio software programs are often managed by individual districts or state departments of education (e.g., http://www.efoliomnnesota.com/ [Minnesota]; http://www.wois.org/ [Washington]). By helping students properly use portfolios, counselors can help students learn how to engage in ongoing career exploration, planning and decision making so that they can transition more easily as world of work opportunities change.

Enhancing Success is Related to Effort Beliefs

Researchers have suggested that a primary way to enhance young people’s beliefs that their efforts are linked to success is to engage them in attribution training/counseling while helping them master career development tasks (Luzzo, Funk, & Strang, 1996). In an experiment conducted among college students, attributional retraining videos were presented to help these young people gain a greater sense that their own efforts were linked to success or failure. The retraining videos were short (eight minutes) vignettes in which college graduates described their own career journeys. The graduates on the videos related both their career successes and their career failures. They then shared with their audiences their own reflections about how their career challenges were linked to a lack of effort on their parts, and that their successes were related to their persistence. They stated that career-related effort is a controllable aspect of one’s behavior. Students who had held beliefs about how their own efforts were not related to success gained a more internal locus of control as evidenced by their responses on a pre-post survey. This same method can be used with inner-city students using high school graduates who have also come from inner-city environments. This can be particularly important for these young people, who have fewer working role models in their lives (Wilson, 1996).

Challenging students to link their efforts with their successes can also be incorporated across many different types of counseling sessions. As counselors work with students on a variety of personal, academic, and career-related issues (ASCA, 2005), they can highlight how their efforts have led to various accomplishments or have led to outcomes that are more negative. Students should be helped to understand that in the new world of work, early career choices are not final career choices, and that broad preparation and a commitment to lifelong learning could help them manage changing career paths. In these ways, students can become habituated to making links between their own efforts and the results of those efforts, thus assisting them to develop beliefs that are consistent with self-direction, initiative, and hard work in pursuit of personally satisfying goals.

LIMITATIONS

Descriptions of belief systems suggest group-based tendencies, and should not be interpreted as absolutes for individual students. This study used self-report measures, thus the results could have been subject to response bias and not necessarily reflective of respondents’ true beliefs. Using pre-designed surveys increased the likelihood that not all facets of young, inner-city adolescents’ career beliefs were tapped. Thus, future research using other methods of measuring career beliefs should be conducted. Future studies using experimental designs also should be conducted to examine what interventions are effective for influencing the career beliefs of inner-city adolescents. Inner-city adolescents from one Midwestern city were sampled, thus the results of this study may not be generalizable to inner-city young people from other regions of the country. Cross-validation research is needed with another sample.

Some contradictions appear to exist among the beliefs examined. For example, beliefs regarding success not being the result of one’s own efforts appear to have inconsistencies with beliefs that one can overcome obstacles with persistence. However, people holding disparate beliefs that are operationalized

Students should be helped to understand that in the new world of work, early career choices are not final career choices, and that broad preparation and a commitment to lifelong learning could help them manage changing career paths.

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in different contexts is not unusual. The strengths of various beliefs held, represented by the amount of variance explained by each factor in the model, can mean that those beliefs that are stronger (e.g., success is related to effort is stronger than job satisfaction beliefs) are operationalized more often and in more contexts. Nevertheless, the results of this study should be interpreted with caution.

**CONCLUSION**

The results of this study have revealed the complex nature of inner-city adolescents’ career beliefs. Although some beliefs are not adaptive, the picture is not grim for these young people as they have other beliefs that could help position them to be more successful in the world of work. However, this does not negate the fact that offering counseling interventions that address their less adaptive career beliefs can be valuable for inner-city students. In particular offering counseling that can help young people establish adaptive beliefs in the areas of success related to effort and flexibility/ adaptability may help them take advantage of emerging opportunities, become even more attractive to employers, and create satisfying and productive adult career lives.

The study adds to the research literature on the career development of inner-city students. Results of this study can give school counselors insights into assisting these students with career planning through helping students understand their career beliefs and create more adaptive beliefs. The results of this study can assist counselors to more fully implement the career planning priorities of the ASCA National Model (2005), and can help create a college- and career-readiness culture in inner-city schools.

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