Identity Formation in Context

by

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Abstract

The overarching goal of the proposed study was to expand Berzonsky's model by examining associations among identity processing styles and contextual and behavioral factors, and by investigating whether these associations operate similarly across two different national cultures, across gender, and across two measures of identity styles. Three samples of college students representing ethnically and economically diverse backgrounds in both countries were selected. Two samples were from the U.S., the Auburn sample (*N*=341), and the Tuskegeee sample (*N=94*) and one of the samples, the Bogazici sample (*N*=209) was from Turkey.

The first question addressed the associations between identity style and identity formation behaviors. The path analyses showed that diffused/avoidant style is negatively associated with identity formation behaviors, whereas informational and normative styles positively predicted only exploration dimensions when they were measured by the ISI, but both exploration and commitment dimensions when measured by the IPSQ. The second question aimed to understand the impact of contextual influences on identity styles and identity formation behaviors. After controlling for the well-being factors, some contextual influences predicted only identity styles or identity formation behaviors, whereas some other contextual influences predicted both identity styles and identity formation behaviors. Mediation effects model, and its alternative additive models were than tested. The results did not show a general mediation effect of identity styles in the relations between contextual influences and identity formation behaviors; rather they pointed only to a few potentially mediated associations. The final question compared

three samples to investigate the similarities and differences across diverse cultural groups. The moderating role of nation was investigated only for the paths from identity styles to identity formation behaviors, which showed similarities across the Auburn, Tuskegee, and Bogazici samples, using either the ISI or the IPSQ.

The current study had multiple contributions to the understanding of identity formation processes in the career domain across diverse samples, including clarification of associations between identity styles and identity formation behaviors, showing the importance of considering well-being indicators when examining the associations between various aspects of identity formation process, examining the role of context on identity formation process at multiple levels, and using a multi-method approach to measure identity

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CHAPTER 1: INTRODUCTION

Current literature on identity formation during adolescence and young adulthood has been criticized for its limited emphasis on context and behavior (Baumeister & Muraven, 1996; Beyers, & Cok, 2008; Bosma & Kunnen, 2001; Cote, 1986; Yoder, 2000). This especially is true for the identity processing styles model, which was developed by Berzonsky (1989, 1990, 1992, 1993a) to obtain a better understanding of identity formation processes. Most of the identity processing styles research during the last decade has examined intra-individual factors, and was conducted in the United States or Western Europe. Furthermore, identity processing styles have been assessed with one measure, the Identity Styles Inventory (ISI: Berzonsky, 1992), and this measure has a number of limitations (Vlerios, 2007). Therefore, the overarching goal of the proposed study was to expand Berzonsky's model by examining associations among identity processing styles and contextual and behavioral factors, and by investigating whether these associations operate similarly across two different national cultures, across gender, and across two measures of identity styles.

This particular study targeted young adults and focused on the career identity domain when assessing the actual work of identity (i.e., exploration and commitment). During young adulthood, while individuals are still in college, much work in identity formation is expected to occur in the career domain (Schulenberg, Bryant, & O'Malley, 2004; Skorikov, 2007). College students generally spend a significant amount of effort exploring their career options (Kalakoski & Nurmi, 1998). Research also suggests that for college students, career activities, such as evaluating career choices and career decision making, predict global identity exploration and commitment (Brown & Lavish, 2006; Creed & Patton, 2003; Lucas, 1997; Matula, Huston, Grotevant, & Zamutt, 1992; Vondracek, 1995).

Background and Explanation of Identity Styles

Guided by Erikson's (1968) psychosocial theory, identity formation is defined as a process of exploring and selecting knowledge about oneself from the social environment. This is the process whereby individuals follow a set of behaviors in order to explore, choose, enter, adjust, and progress in their lives in various contexts (Grotevant, 1987). Building on Erikson's theory of identity formation, Marcia (1966) offered a means for operationalizing the construct of identity. He extracted the concepts of exploration and commitment from Erikson's theory as the underlying processes of identity formation. He defined *identity exploration* as seeking information and sorting through alternatives or important life-decisions, and *identity commitment* as choosing among alternatives, relying on them, and investing in them. Marcia (1980) constructed four different identity statuses, based on the combination of high or low levels of exploration and commitment in which an individual engages. In general, individuals who show low levels of exploration and commitment efforts are classified as identity diffused; individuals who are self-exploring without making decisions about their choices are placed in the identity moratorium status. On the other hand, individuals who are categorized as achieved or foreclosed are likely to have firm commitments, however, commitment is accompanied by exploration only for achievers. Overall, within Marcia's paradigm, exploration and commitment represent the behavioral aspects of identity (i.e. the identity work one is actually doing), and identity statuses reflect an individual's position in the process of identity formation. Berzonsky's conceptualization of identity styles was an expansion of Marcia's status paradigm, but focused on constructivist and information processing aspects of identity formation (Berzonsky, 1990, 1992). In his model, Berzonsky emphasized identity exploration as a self-construction of alternatives; individual differences occur in the different approaches taken while exploring

identity alternatives. Berzonsky explained these individual differences by identity styles (Soennens, Berzonsky, Vansteenkiste, Beyers, & Gossens, 2005).

An *identity style*, therefore, represents an individual's orientation in making identity decisions. Berzonsky (1989, 1992, 1993a, 2003, 2004) defines three styles based on the level and nature of identity exploration efforts. *Informational style* entails active exploration, elaboration, and evaluation of relevant information before making identity decisions, whereas *normative style* involves reliance on standards and expectations of significant others. *Diffuse/avoidant style* represents reluctance to deal with identity issues, and lack of exploration efforts. The Identity Styles Inventory (ISI: Berzonsky, 1989, 1992, 1997; Smits, 2009), and the Identity Processing Styles Q-sort (IPSQ: Pittman, Kerpelman, Lamke, & Sollie, 2009) are two currently used measures of identity styles. Across these two measures, there are moderately positive correlations for each style, supporting construct validity (r = .41, .58, and .48 for informational, normative, and diffuse/avoidant styles respectively). A major difference between these two measures is that the ISI suggests three styles and creates categorical variables in order to present one's dominant style (although continuous scores can also be used), whereas the IPSQ suggests informational and diffuse/avoidant styles are opposite aspects of a single dimension, and creates two continuous variables based on correlating a person's q-sort with established sorts for the informational, diffuse/avoidant, and normative styles, one for informational style (where the lower end of this continuum represents diffusion), and one for normative style (a diffuse dimension can be created separately from the informational dimension, but these two dimensions correlate between -.92 and -.94 (Eryigit & Kerpelman, 2009; Li, 2005; Pittman et al., 2009) suggesting the informational and diffuse styles create the opposite ends of one dimension.

Therefore, currently there are two different measurement approaches to identity styles, a three-style approach versus two-style approach.

Identity Styles and Identity Formation Behaviors

Conceptualization of identity styles brought a dynamic, constructivist perspective to the understanding of identity formation process; however, an identity style is not an aspect of identity that develops over time, but a personal characteristic that influences the process of identity formation. From this point of view, identity styles emphasize individual differences in adolescents'/young adults' approaches to the actual work of identity exploration and commitment (i.e., the process of identity formation). This view of identity styles also receives support from Grotevant's process model. According to Grotevant (1987), a process model of identity formation includes (a) the orientation brought to bear on identity work, such as information orientation or normative orientation; and (b) the actual work of identity exploration, which is the actual information gathering and testing behavior aimed at eliciting knowledge about oneself in order to make life decisions and moving toward identity consolidation which reflects greater commitment. In this regard, one of the limitations of the current literature addressing identity style is its link to actual behaviors of the identity formation process.

Support for the continuing need to examine the link between identity styles and actual identity formation behaviors comes from the literature addressing associations between identity status and identity styles. Although with a narrow focus, research that has examined the link between identity statuses and identity styles has reported consistent results (Adams, Berzonsky, & Keating, 2006; Berman, Schwartz, Kurtines, & Berman, 2001; Berzonsky & Neimeyer, 1994). Overall, these studies showed that (a) normative style is associated positively with foreclosed status where exploration is low and commitment is high, and also is positively related with

achieved status where both exploration and commitment are high; (b) informational style is positively associated with achieved status; and (c) diffuse/avoidant style is positively associated with diffuse/avoidant status where both exploration and commitment are low. These findings suggest that identity styles may be associated with the behavioral aspects of identity formation that are implied by the statuses.

Although links between identity statuses and identity styles have been suggested from these studies, little is known about how styles predict the actual behaviors of the identity formation process. Findings from past studies are based primarily on analyses where individuals were categorized according to their style preferences and statuses. However, in the present study, styles and behavior (exploration and commitment) will be examined as continuous variables where individuals might score higher or lower on each variable. Furthermore, past literature has addressed exploration and commitment at one level; however, recent research on identity formation suggests multiple levels of exploration and commitment (e.g., Luyckx, Goossans, Soenens, Beyers, & Vansteenkiste, 2005; Luyckx, Goossans, Soenens, & Beyers, 2006a; Luyckx, Goosens, & Sonnens, 2006b). In the present study, a multi-level approach to identity exploration and commitment will be taken.

In order to operationalize identity formation behaviors, the four dimensions of the identity formation model will be used in this study. This model, which was developed by Luyckx and his colleagues, is partially grounded in previous identity theories and empirical work (see Luyckx et al., 2005, 2006a, 2006b). This model includes the dimensions of (a) *exploration in-breadth* where individuals weigh various alternatives with respect to their goals; (b) *commitment-making* which refers to the degree to which individuals make tentative commitments about their choices, (c) *exploration-in depth* referring to detailed evaluation of an existing tentatively

committed choice in order to decide whether or not it is a good fit; and (d) *identification with commitments* which refers to the degree to which individuals feel certain about and have internalized their choices (i.e. feel that their choices well express who they are). When respondents are asked to consider a particular time frame, such as the last three months, these four dimensions capture the current behaviors of identity formation which are hypothesized to differ according to the approach individuals take while working on development of their identity (i.e. identity style preferences). Therefore, it may be possible to explain variation in these identity formation dimensions by style preferences. Young adults who are informational in their orientation to identity work might report higher levels of exploration in breadth, commitment-making, exploration in-depth, and identification with commitments, whereas individuals with higher levels of normative orientation might report higher levels of commitment making and identification with commitments, but lower levels of exploration in-breadth and exploration in-depth. In contrast, greater use of the diffuse/avoidant style might predict low levels on all four of these identity formation dimensions.

Contextual Influences, Identity Styles, and Identity Formation Behaviors

Another limitation of the current literature on identity styles is the lack of knowledge about how style preferences are made; in other words, it is not clear why individuals use one style more frequently and widely than they use the other ones. The existing literature addressing identity styles is extensive; however, most of the studies have investigated the associations between identity styles and intra-individual factors, such as depression (Nurmi, Berzonsky, Tammi, & Kinney, 1997; Wheeler, Adams, & Keating, 2001), anxiety (Berzonsky, 1989; 1992), openness to experience (Berzonsky & Sullivan, 1992), and self-esteem (Berzonsky, 1992; Nurmi et al., 1997; Phillips & Pittman, 2007). None of these studies have examined contextual factors

as the predictors of identity styles, although identity theories derived from an Eriksonian perspective suggest this is so. According to Erikson (1963), identity development includes choices individuals make in response to social-cultural realities. Review of the literature (Baumesiter & Muraven, 1996; Cote & Levine, 2002; Kroger, 1993; Phinney, 1993; Yoder, 2000) suggests that three types of contextual factors may influence individuals' construction of styles. These factors are *cultural influences* (i.e. gender egalitarianism, uncertainty avoidance, and future orientation), *social-structural influences* (i.e. parent education, occupation, and income), and *immediate environment influences* (i.e. opportunities available, discrimination, and social support).

Cultural Influences

Cultural orientation of the larger society (as it is perceived by the individual) is likely to influence the individual's motivation and approach to engage in identity work (Cote & Levine, 2002). This is expected because societies vary in the choices they provide their members for forming their individual identities (Baumeister, 1986). At the one extreme end, a society might assign identities, whereas at the other extreme end, a society might provide a wide array of options from which individuals are expected to make their own choices; societies vary in terms of where they are on this continuum. Some of the value indicators that differentiate between societies are *future orientation* (i.e. the degree to which society supports its members to engage in future-oriented behaviors); *gender egalitarianism* (i.e. the degree to which a society minimizes gender role differences), and *uncertainty avoidance* (i.e. the extent to which society tries to avoid uncertainty by relying on established social norms) (Hanges & Dickson, 2004; Hofsede & Hofstede 2005). It is assumed that a society with higher future orientation and gender egalitarianism, and with lower uncertainty avoidance, has cultural values supportive of identity

exploration and openness to diverse information about identity, whereas a society with the opposite characteristics holds less supportive cultural values for its individuals to explore their identity alternatives and would encourage an approach to identity formation that relies on social norms and role prescriptions.

Social-Structural Influences

Another contextual factor that is expected to influence style preferences is social-structural influences, such as *parent education*, *occupation*, and *income*. According to Phinney (1993), the social-class of a family plays an important role in identity formation experiences of individuals. Some empirical studies that examined the association between identity styles or identity statuses and social-structural factors also have found support for the social-structural position of one's family as shaping and constraining an individual's alternatives and approach to decision-making (Celen & Kusdil, 2006; Pulkkinen & Ronka, 1994), as well as the way one acquires knowledge, beliefs, and attitudes about the world (Aries & Seider, 2007; Stewart & Ostrove, 1993).

Immediate Environment Influences

The last contextual factor to be examined in the present study is immediate environment influences. According to Erikson (1963), individuals' orientations to identity exploration are largely based on their views of their opportunities. He says that

> The individual must be able to convince himself that the next step is up to him, and that no matter where he is staying or going, he always has the choice of leaving or turning in the opposite direction, if he chooses to do so. (p. 286)

Thus, perceived opportunities and barriers, as well as social support for one's choices have potential to influence beliefs about availability of identity alternatives and the motivation to

explore them. In order to engage in identity exploration, individuals should believe that (a) they have *personal opportunities* compared to the chances of an average person in the community (Orgocka & Jovanovic, 2006); (b) there are not many barriers in front of them, such as *discrimination* (Bluestein, 1997; Kluegel & Smith, 1986); and (c) they will have *social support* in regard to choices they make about their lives (Wall, Covell, & Macintyre, 1999).

In the current study, these three contextual factors (i.e., cultural influences, social-structural influences, and immediate environment influences were examined to test their impact on identity style preferences, after controlling for intra-individual factors (i.e., depression, anxiety, and self-esteem). We expected to find that these contextual factors predict informational and normative styles but not diffuse/avoidant style. Because past research (Berzonsky, 1989, 1992; Nurmi et al., 1997; Phillips & Pittman, 2007; Wheeler et al., 2001) shows that when intra-individual factors are examined, diffuse/avoidant style consistently differs from informational and normative styles, and is associated with low levels of well-being, such as depression, anxiety, and low self-esteem. Therefore, we expected that after controlling for depression, anxiety, and self-esteem, individuals who perceive less supportive cultural values for identity exploration in their society, who are from lower socio-economic statuses, and have fewer opportunities with more boundaries, are less likely to form an informational orientation, but more likely to form a normative orientation. This is expected because individuals, under these conditions are likely to believe that what is expected from them is restricted to norms of the society, and/or what they can achieve is limited to the availability of alternatives in their environment. On the other hand, individuals who perceive more supportive cultural values for exploration in their society, live in a family with higher socio-economic status, and perceive

multiple opportunities for themselves with few constraints are more likely to form an informational orientation.

These contextual factors have not been examined in past research, partly because Berzonsky (1993b) suggests that every individual from any kind of cultural context, at any level of social class, with any amount of opportunities has the ability to prefer any of the styles and this preference is likely to be based on intra-individual factors. However, Berzonsky adds that context might predict the actual efforts of exploration and commitment, rather than style preferences. This perspective might be true for diffuse style, due to its high association with psychological maladjustment, but there is no empirical support for informational and normative styles. If Berzonsky's perspective is true, then the contextual influences chosen for this study should not significantly predict the identity styles, but should predict the identity formation behaviors. In this case, we would expect to find a positive association between contextual influences and identity formation behaviors. In other words, the more supportive cultural values one perceives, the higher the social-structural setting one lives in, and the more personal opportunities one has, the more exploration-in breadth, commitment-making, exploration-in depth, and identification with commitments one will report.

On the other hand, if cultural influences predict identity styles, the question is whether styles mediate the association between cultural influences and identity formation behaviors. If we find support for mediation, this will suggest that contextual influences impact style preferences, which in turn impact current behaviors of identity formation. Future longitudinal work would then be needed more to establish these relations clearly.

Alternately, if we find support for Berzonsky's hypothesis, then the alternative question is whether the impact of cultural influences on identity formation behaviors adds to the variance

explained in these behaviors beyond that of identity styles. Empirical support for this hypothesis will mean that regardless of the perceived context, a young adult will develop a style preference, and this preference is based primarily on intra-individual factors. Thus, contextual influences, in addition to styles, predict current behaviors of identity formation. Therefore, in this particular study two different models were tested, a direct effects model (See Figure 1), and a mediation model (see Figure 2). Contextual influences included sets of *cultural influences, social-structural influences,* and *immediate environment influences.* Each set included three manifest variables, such that cultural influences was indicated by future orientation, uncertainty avoidance, and gender egalitarianism; social-structural influences was indicated by parental occupation, education, and income; and immediate environment influences was indicated by personal opportunities, social support and perceived discrimination.

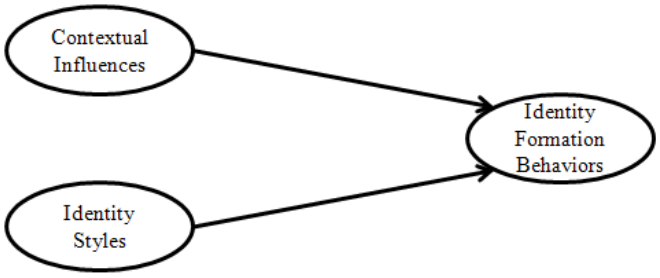

Figure 1. Conceptual Direct Effects Model

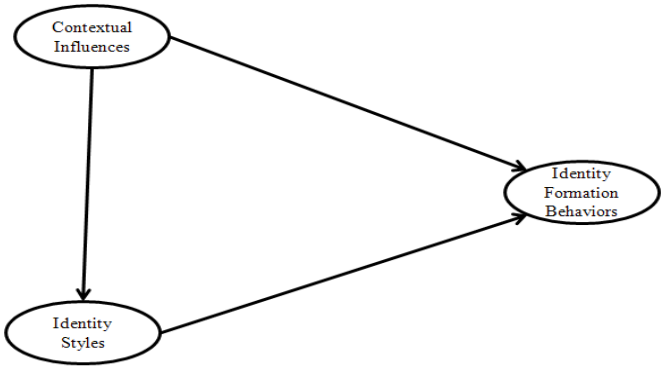

Figure 2. Conceptual Mediation Model

The models were tested in the three samples, two American samples and one Turkish sample. National boundaries determine important cultural differences (Hofstede & Hofstede, 2005), and therefore, psychological processes may or may not operate similarly across national contexts (Norenzayan & Heine, 2005). By examining the proposed models in two different cultures, it was expected to contribute to the generalizability of findings across nations, which has been another limitation of the identity literature. In general, the United States and Turkey differ in terms of mainstream religious orientation (e.g., Christianity versus Islam), common child rearing practices (e.g., authoritative versus authoritarian), economic structure (e.g., national income and economic strength), higher education system (e.g., centralized versus decentralized university admission system), and career opportunities. These nation-level systemic differences should be interpreted as differences between overall contextual experiences of youth in these two nations (See Figure 3).

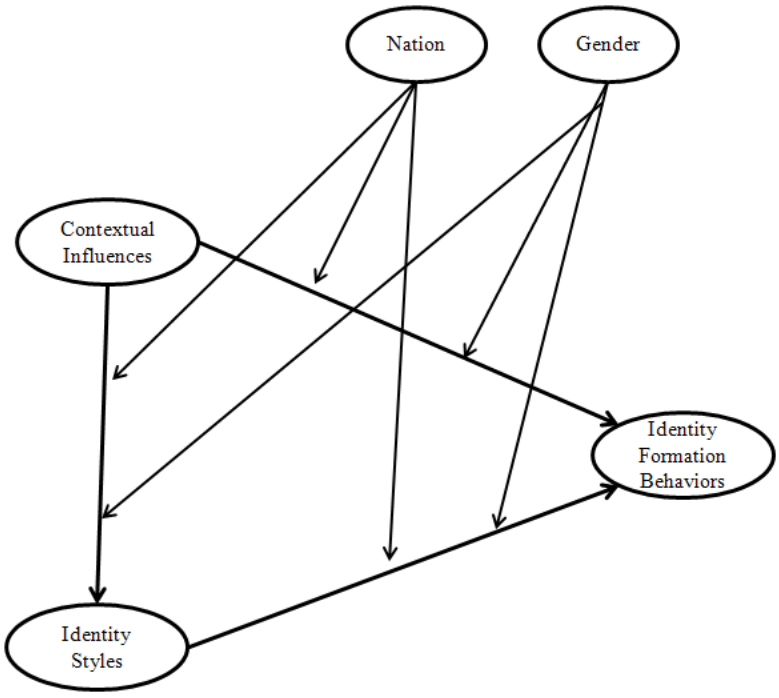

Figure 3. Conceptual Moderated Mediation Model

Another important moderation factor to be tested in this study was gender (see Figure 3). The identity styles literature consistently shows that males score higher on diffuse/avoidant style, and lower on informational style than females do across nations (e.g. American, Turkish, and Belgian samples), and across methods (e.g. rating scale, and q-sort) (Berzonsky, 1992; Celen & Kusdil, 2006; Eryigit & Kerpelman, 2008; Pittman et al., 2008; Soenens et al., 2005). Only one study has found that females were less likely to be involved in exploration activities than males were after controlling for style preferences (Berman et al., 2001). Therefore, gender is an important factor when examining the links between contextual factors and identity styles, and between these sets of factors and identity formation behaviors. Furthermore, gender might interact with national culture. Clear gender differences may be seen in the Turkish sample, whereas this difference may be less prominent in the American sample. This is predicted because national statistics and research findings show that there are stronger gender differences in Turkey than in the U.S. in terms of education and career opportunities, as well as attitudes toward future career (Aygun, Arslan, & Guney, 2008; Kumru. & Thompson, 2003; Rankin, & Aytac, 2006).

Overall, the specific objectives of this study were to examine whether (1) identity style preferences predict current identity formation behaviors in the career domain; (2) contextual factors predict style preferences and identity formation behaviors; (3a) identity styles mediate the relation between contextual factors and identity formation behaviors or (3b) both contextual influences and identity styles predict identity formation behaviors; and (d) the relations among contextual factors, identity styles, and identity formation behaviors show consistency across nations and gender. In order to extend further the generalizability of the associations examined in this study, models also were tested and compared when identity styles are measured by the ISI and by the IPSQ.

CHAPTER 2: LITERATURE REVIEW

Young adulthood/late adolescence has been characterized as a stage of human development when individuals explore knowledge about themselves in order to integrate and stabilize various images into a personal identity (Erikson, 1968). From the Eriksonian perspective, *identity* defines a coherent picture of oneself about goals, values, and beliefs one shows to the world; this is a picture that helps the individual to identify himself or herself as a unique human being, as well as to connect his or her past, present and future. A clear sense of identity developed during adolescence/young adulthood serves a conceptual framework to interpret various aspects of life (Berzonsky & Kuk, 2000). In other words, a well-established identity provides the structure for understanding who one is, offers meaning and direction in life, clarifies one's position in life, gives a sense of personal control, and guides making decisions about life issues (Adams & Marshall, 1996).

Identity is a psychological construct that is an outcome of a particular developmental process. In this regard, identity formation reflects an active construction process on the part of the person who is forming his or her identity from a more simplistic state to one of greater clarity and complexity (Erikson, 1968; Marcia, 1980, 1994). Identity formation is viewed as a psychosocial process where individuals engage in exploration and commitment activities and gain inner sameness and continuity in their views of themselves. In the identity literature, various models and empirical studies have examined the process of identity formation in order to describe the antecedents and mechanisms of this process. The proposed study aims to contribute to this literature through examining the associations between contextual, attitudinal, and behavioural aspects of identity formation.

Background

Building on Erikson's theory of identity, Marcia's (1966) identity status paradigm was the first to bring theoretical precision by operationally defining the dimensions underlying the identity formation process, and offering testable models (Schwartz, 2001). Marcia's identity status paradigm considers two dimensions, exploration and commitment. *Identity exploration* is defined as seeking information, experimenting with alternative directions and beliefs in life, and sorting through alternatives (Marcia, 1994). *Identity commitment* reflects the process of choosing one or more alternative paths in the different domains, and following through with them (Schwartz, 2001). Marcia describes four different identity status outcomes, based on the combination of high or low levels of exploration and commitment in which an adolescent engages. *Identity diffusion* represents a lack of both exploration and commitment efforts. *Identity foreclosure* involves making commitments without experiencing active exploration; whereas *identity moratorium* reflects being active in exploration but not clear in commitments. *Identity achievement* involves committing to one or more alternatives after an active exploration process (Schwartz, 2001; Kroger, 1993).

According to Marcia (1994), identity status is the intersecting point of the process dimensions of identity formation, and reflects the individual's current position in this process. The identity statuses were initially assessed through semi-structured interviews, which asked about individuals' decisions in specific life domains (e.g., career, politics, family roles), and explored the process they used to arrive at these decisions, as well as how committed they were. According to Marcia (1980, 1994), the domains chosen should be personally relevant to the individual, such as the ideological domain that includes areas such as occupation, politics, religion, and the interpersonal domain that includes areas such as friendship, dating, and sex

roles. Bosma (1992) examined which domains were more relevant for adolescents with a group of students ranging from 13 to 21 years of age. In an interview, participants reported which areas were important to them and why. The results showed that schooling and future career were the most popular domains. Erikson (1968) and Marcia (1980) also agree with Bosma that career (i.e., occupation or vocational choices) is an important content area for identity formation, especially for college students. Therefore, in the current study, which will include a diverse college sample, the dimensions of identity formation in the career domain will be assessed.

Identity Formation in the Career Domain

Identity work in the career domain involves activities in which individuals assess their skills and values in career related areas, as well as their environment (i.e., career exploration) in order to facilitate making commitments to a particular course of action (Blustein, Devenis, & Kidney, 1989; Grotevant & Thorbecke, 1982; Vondracek, 1995; Vondracek, Schulenber, Skorikov, & Gillespie, 1995). Although, career has been a minor focus in the identity formation literature, career (i.e., occupational) identity has been studied extensively in the literature of career development. Career theories and studies that have a developmental perspective share the concepts of exploration and commitment with the identity formation literature (Wallece-Braocious, Serafica, & Osipow, 1994). Using these concepts, both areas of research make similar points, sometimes using the same language, such as exploration and commitment, sometimes using a different language, such as planning, and crystallization. They all agree; however, that career exploration and commitment are key components of the identity formation process (Blustein et al., 1989; Vondracek et al., 1995; Wallece-Broscious et al., 1994), and that career is one of the main means for individuals to learn about and define themselves (Blustein et al., 1989). For instance, Super's self-concept career theory defines career exploration as one of the

important stages of life span career development that occurs during late adolescence or early adulthood, and indicates that exploration is followed by making tentative career choices (Skorikov, 2007; Super & Hall, 1978). Decision-making in career and career indecision are two other areas that have been studied widely and correspond with career commitment (Blustein et al., 1989; Harren, 1966; Holland, Gotfredson, & Power, 1980).

In terms of the specific associations between identity formation in general, and identity formation in the career domain, several studies have examined identity statuses, and career exploration and commitment activities. These studies have shown that membership in a given identity status predicts the amount of career exploration and commitment. For instance, the identity achieved group reported high exploration across studies, whereas the identity diffuse/avoidant group had the least amount of career exploration; however, moratorium and foreclosed groups' career exploration scores were in between, but not significantly different from each other (Blustein et al., 1989; Schimtt-Rodermund & Vondracek, 1999; Vondracek et al., 1995; Wallece-Broscious et al., 1994).

The studies that examined career commitment (i.e., the career decision/career indecision literature) have shown that achieved status individuals had the least amount of career indecision (where indecision reflects a lack of commitment) compared to the scores of other groups; the diffused status group had the highest amount of career indecision; foreclosed and moratorium statuses again did not differ from each other in terms of career commitment scores (Blustein et al., 1989; Holland et al., 1980; Guerra & Braungart-Rieker, 1999; Vondracek et al., 1995; Wallece-Broscious et al., 1994).

The findings regarding moratorium and foreclosed statuses are not totally expected results. One would expect that career indecision would be significantly higher in the moratorium

group than it is in the foreclosed group, and vice versa for career exploration. It might be because identity statuses, as they are measured by one dimension of exploration and one dimension of commitment, are too limited to capture the process of identity formation. For instance, both Super's career development theory (Super & Hall, 1978) and Harren's (1966) decision-making in career model involve four stages of career exploration and commitment during late adolescence/early adulthood. The first stage involves random exploration of career choices, which is followed by crystallization of career preferences, the second stage. Crystallization means narrowing down the range of possibilities, and making tentative choices. The third and fourth stages involve accumulation of information about and clarification and elaboration of preferred choice, as well as defining of commitments (such as engaging in long term career planning) with some level of certainty. These stages indicate that individuals continue to explore their alternatives even after they make some choices. In order to become confident with their preferences, they explore these choices in depth by clarifying and elaborating them. Supportively, Schimtt-Rodermund and Vondracek (1999) found that adolescents who had some idea about their preferences reported more exploration than those who had no idea about their career choices. Therefore, these studies suggest that there are two types of exploration activities, the first one is random and more general, whereas the second one is more focused and in-depth. There also are two types of commitment, one is more tentative, the other is more certain and long-term in orientation.

As they are conceptualized, adolescents with an achieved identity status are expected to have completed or are in the process of completing all four processes in a given domain, whereas adolescents with diffused identity status as expected to have not started any of these activities. However, individuals in the moratorium or foreclosed statuses might be at any point in some of

these four dimensions. For instance, individuals in the moratorium status might engage in random exploration of different alternatives, but they might not do in-depth exploration of certain choices. On the other hand, individuals in the foreclosed status are not expected to engage in random, in breadth exploration of alternatives, however this might not correspond with exploring their chosen alternatives in depth, or they may make decisions without seeking information. Therefore, it is possible that the 2-dimensional model of identity statuses, exploration and commitment, is not enough to capture the details of identity formation processes especially in the career domain. For instance, Yoder (2000) suggested that the identity formation process includes consideration of a range of alternatives (e.g., exploration various alternatives in breadth), commitments regarding goals and beliefs (e.g., making decisions about future goals), activities and behaviors directed toward implementation of commitments (e.g., exploring these commitments in depth), and a sense of confidence in one's future (e.g., confidence with choices). The concepts of exploration and commitment as they are used in the identity status literature only partially capture the aspects of the identity formation process suggested by Yoder. Other support for a more complex process comes from a recent identity formation model developed by Luyckx and his colleagues (2005, 2006a, 2006b) where they unpacked exploration and commitment dimensions into four separate dimensions of identity formation. These four dimensions include breadth of exploration and tentative commitment making, as well as depth of exploration and internalization of commitments.

The Four Dimensions of Identity Formation

The current identity literature agrees that identity develops through a process that involves exploration and commitment at multiple levels (Grotevant, 1987). Some identity scholars have focused on exploration and commitment at the identity formation level, where

alternatives are explored in breadth and tentative decisions about choices are made (Marcia, 1966; Berzonsky, 1989; Grotevant, 1987). Other scholars have emphasized exploration and commitment at the evaluation level which includes seeking in-depth information about choices and evaluating one's own feelings about these choices (Kerpelman & Pittman, 2001; Meeus, Idema, & Massen, 2002; Waterman, 2004). It is clear in the literature that these different perspectives are not mutually exclusive (Schwartz, 2001).

Recently, Luyckx and his colleagues developed the *four dimensions of identity development model,* which is grounded partially in previous models (Luyckx et al., 2005, 2006a, 2006b, 2008). This data-driven, comprehensive model of the identity formation dimensions integrates exploration and commitment at both levels. In this regard, the *exploration in-breadth* dimension refers to gathering information about different identity alternatives to guide the initial choices; whereas *exploration in-depth* means seeking in-depth information about current choices to guide maintenance and evaluation of these choices. The main distinction between these two kinds of exploration is the role they play in the process of identity formation. The primary role of exploration in-breadth is to facilitate decision-making and choosing some alternatives (Marcia, 1980); whereas the primary role of exploration in-depth is learning about and maintaining one's current identity choices (Meeus, 1996). In terms of commitment, this model suggests that presence of commitments and identification with these commitments are two different processes, because presence of commitments might not always imply identification with these choices. Therefore, the *commitment-making* dimension indicates making tentative choices, whereas the *identification with commitments* dimension reflects the degree to which one identifies with and feels certain about his or her current choices.

Luyckx and his colleagues (2005) derived these four dimensions through cluster analysis, and examined their external validity. Their study sample included 565 Caucasian middle-class college students (85% female). They measured exploration in-breadth and commitment-making dimensions using the Ego Identity Process Questionnaire (EIPQ: Balisteri, Busch-Rossnagel, & Geisinger, 1995), whereas exploration in-depth and identification with commitments dimensions were assessed by the Utrecht-Gronigen Identity Development Scale (U-GIDS: Meeus & Dekovic, 1995). According to cluster analysis results, the achieved cluster displayed the second highest exploration in-breadth and commitment making, and the highest exploration in-depth and identification with commitment scores compared to other clusters. The foreclosed cluster reported the lowest exploration in-breadth scores but the highest commitment-making scores, and their exploration in-depth and identification with commitment scores were moderate to high. On the other hand, the moratorium cluster was the highest in exploration in-breadth but the lowest in commitment-making; their exploration in-depth and identification with commitments scores were moderate. Finally the diffused cluster was the lowest in all four dimensions. In terms of external validity, the authors found that the diffused and moratorium groups were the lowest in school/academic adjustment, self-esteem, conscientiousness, and the highest in depressive symptoms. The foreclosed group was the lowest in openness to experience and substance use.

With the same sample, Luyckx and his colleagues examined the four dimensions model through confirmatory factor analysis (2006a), and compared the four dimensions model with the two dimensions model. The findings revealed a four dimensions model was a better fit than a two dimensions model. Both commitment dimensions and exploration dimensions were significantly and positively related to each other, except for one. There was a negative correlation between exploration in-breadth and commitment-making, whereas the correlation

between exploration in-breadth and identification with commitments was not significant. Exploration in-depth was positively correlated with both commitment dimensions, and both commitment dimensions were positively correlated with each other.

The four dimensions model suggests a conceptual sequence of dimensions (Luyckx et al., 2006b). According to this model, exploration in-breadth and commitment making are negatively correlated because exploring alternatives in-breadth is an important process before commitments are made. As soon as choices are made, exploration in-breadth is expected to decrease and the focus of individuals will move to exploring their choices in-depth. Because exploration in-depth allows a true evaluation of choices, more exploration of choices in-depth leads to more confidence with these choices. The model also suggests that exploration in-breadth and commitment-making comprise a separate cycle, which indicates forming identity commitments. Exploration in-depth and identification with commitments form the second cycle which reflects evaluation of identity commitments. However, longitudinal studies have had limited support for these conceptual linkages (i.e., the developmental sequence of the dimensions, and the two cycles approach).

Luyckx and his colleagues (2006b) examined the longitudinal associations with a Caucasian, middle class, mainly female college sample at four time points across two years. Associations among initial levels showed stability within each dimension over two years. The associations among slopes showed a positive association between breadth of exploration and commitment-making, and a positive association between depth of exploration and identification with commitments dimension. Surprisingly, there was a negative correlation between the intercept of exploration in-depth and the slope of identification with commitments over time, which means the more depth of exploration individuals report at Time 1 the less increase in the

identification with commitment they report. This finding opposes to the current theoretical expectations. Also counter to the theory, the correlation between the intercept of commitment-making and the exploration in-depth dimension was significant and negative. This means that individuals who report more efforts of making tentative commitments at Time 1 are less likely to show increase in their efforts for exploring these tentative commitments in-depth.

One of the limitations of the existing studies is that the associations between the four dimensions of identity formation, and their associations with other variables (such as identity statuses) were examined without considering a specific identity domain. The instruments Luyckx and his colleagues used to measure the four dimensions ask questions in various domains, such as career, intimate relationships, politics and religion. However, individuals might not show similar patterns in all these domains of life at the same time. Thus, it is important to examine the actual work of identity in a specific domain. In this regard, the current study focuses on the career domain, due to its salience during college years, and will measure the four dimensions of identity formation separately.

Recently, Luyckx and his colleagues (2008) developed a new measure to assess the four dimensions of identity formation, *the Dimensions of Identity Development Scale (DIDS)*. The DIDS assesses each dimension with five items in the context of future plans. The authors argue that this model is especially functional during late adolescence and young adulthood, and planning the future is important for individuals in this period. Therefore, the DIDS captures identity formation related behaviors of individuals in the context of future plans.

Identity Styles

According to Berzonsky, identity is a self-constructed concept, and the focus should be on the strategies that individuals use to construct and maintain their identities (Berzonsky, 2005).

Based on this assumption, Berzonsky (1989) developed the social-cognitive model of identity exploration using the premises of George Kelly's cognitive theory and Seymour Epstein's cognitive-experiential self-theory (Berzonsky, 2004). From this perspective, Berzonsky defines individuals as scientists who are developing their own theory of self. Berzonsky believes one's self-theory is self-structured and implicit; and as a scientist, an individual holds certain assumptions, postulates, and constructs relevant to his or her view of the world and reacts to that reality. Thus, the construction of identity depends on the automatic processes derived from the cognitive structures (i.e., assumptions, principles, concepts) individuals hold for themselves, independent of external physical and social realities. Berzonsky proposes that these cognitive structures influence individuals' procedural knowledge and operative schemes for solving problems and making decisions about identity related issues (Berzonsky, 2004, 2005).

Berzonsky (1989) modelled a process conceptualization of identity exploration, "Identity Styles," which emphasizes individual differences in adolescents' approaches to identity formation. A style is a social-cognitive process or strategy (i.e., procedural knowledge and operative schemes) used to deal with identity conflict, as well as with daily life experiences (Soennens et al., 2005). According to this model, adolescents form a sense of identity through cognitive construction of self as experienced in interaction with the physical and social environment (Berzonsky, 1993b). Adolescents actively decide on their choices about who they think they are, selecting from various alternatives. Alternatives are personally constrained based on an individual's perception of the world. Individual differences occur in the ways adolescents search for, evaluate, and make those choices (Brandstadter, 1998). In other words, individuals differ in identity exploration processes based on the social-cognitive processing strategies they dominantly use (Berzonsky, 1992, 1993a; Berzonsky, Macek, & Nurmi, 2003).

Berzonsky (1989, 1992, 1993a;, 2003, 2004) defined three styles that describe particular sets of strategies for dealing with identity-related issues, making decisions, and solving problems. *Informational style* entails active exploration, elaboration, and evaluation of relevant information before making decisions. This style incorporates high self-exploration, need for cognition, cognitive complexity, openness to new information and experience, and problem-focused coping. Information-oriented adolescents are skeptical about their self-constructions; when they face incongruence about themselves, they are open to reconstructing their identities. They are autonomous, and are more likely to have a well-differentiated and integrated sense of personal identity. They also are self-confident about their judgments, proactive, and high on personal expressiveness.

In contrast, *normative style* involves reliance on prescriptions, standards, and expectations of significant others or socially respected groups to make decisions. The main characteristics of this style are high need for structure, an intolerance of ambiguity, a need for cognitive closure, a tendency to be closed to threatening information, and they hold rigidly organized commitments. Normative-oriented adolescents are assumed to have stable self-conceptions. They also are high on cultural conservation, and seek social support or use emotional strategies to cope with problems (Berzonsky, 1992, 1993b).

Finally, *diffuse/avoidant style* represents reluctance to deal with identity issues, and the avoidance of identity conflict. The diffuse/avoidant style is described by limited self-awareness, maladaptive decision making strategies, emotion-focused avoidant coping, high responsiveness to situational demands, and other-directedness. Diffuse-oriented adolescents are presumed to make context specific, situational accommodations without having consistent and integrated identity standards.

Identity styles are assumed to be stable, especially after adolescence. Individuals might change how much exploration they do at a certain point in time, which alternative they select, and how confident they are with their choices at that time; however they are expected to show consistency in the way they act, explore alternatives, and make decisions. According to Berzonsky, all adolescents are capable of using all three styles, however they tend to choose one and start to use it dominantly by late adolescence. Based on Berzonsky's model, style preferences can be predicted by cognitive structures individuals hold for themselves and their personality characteristics (Berzonsky, 1990).

Measurement of Identity Styles

Identity styles have been measured by three versions of the Identity Styles Inventory (ISI), developed by Berzonsky (1989, 1992, 1997). The ISI is a self-report questionnaire with four subscales that include: informational style, normative style, diffuse/avoidant style, and identity commitment. The ISI has been validated with identity status measures (Berzonsky & Kuk, 2000; Berzonsky & Neimeyer, 1994) and other measures of various social-cognitive and personality correlates (Nurmi et al., 1997; Berzonsky, 2003, 1993a, 1992; Berzonsky & Kuk, 2005; Berzonsky & Sullivan, 1992). However, the ISI has certain limitations. It focuses on some identity domains, but not others, and also includes general questions about problem solving strategies (Vleioras, 2007). In addition, the ISI items are not consistently phrased in terms of ongoing actions, such that some items refer to the past, whereas some other items refer to the actions of individuals in the present. Some of the items of normative style subscale refer to commitment, which is a separate aspect of identity formation, and also is measured by a separate scale of the ISI. Finally, it does not permit the assessment of the relative importance of different strategies and beliefs about the identity formation process. Recently, a fourth unpublished

version of the ISI was developed by Smits and her colleagues (2008), as a response to the limitations of previous version. The ISI-IV assesses the three identity styles, as they were described in Berzonsky's original theoretical model. The latest version of the ISI has items capturing the individuals' current attitudes, and all items ask about life in general, not specific domains. In addition, the normative subscale items referring to commitment were deleted. In this version of the ISI, there are twenty-four items, 7, 8, 9 items for informational style, normative style, and diffuse/avoidant style, respectively. The ISI-IV has been tested cross-culturally, in the U.S., the Netherlands, and Belgium.

In an effort to expand the tools available for assessing identity processing style and to increase the ability to capture the complexity of individuals' conceptualizations of their orientations to identity work, another measure, the Identity Processing Style Q-sort (IPSQ), was developed and tested with multiple samples of American and Turkish college students (Eryigit & Kerpelman, 2008; Pittman et al.,2008). Validity of the IPSQ was established through showing moderate correlations with the ISI-III and with measures of other related constructs, such as coping styles (Eryigit & Kerpelman, 2008; Pittman et al., 2008), social skills (Pittman et al., 2008), self-esteem (Eryigit & Kerpelman, 2008).

The studies that have used the ISI-III have shown that (a) there is a moderate negative association between informational and diffuse/avoidant styles (r ranges from -.26 to -.41); (b) normative style's association with informational style shows variation across studies, for instance, correlation between normative-orientation and information-orientation was positive and moderate (r = .28) in one set of studies (Pittman et al, 2008), but not significant in other studies (Berzonsky, 1992; Nurmi et al., 1997; Soenens et al., 2005); and (c) the association between normative style and diffuse/avoidant style also shows variation across studies, where some

studies reported negative small correlations (r= -.10) (Pittman et al., 2008), some others reported either positive moderate (r = .39) (Berzonsky, 1992) or non-significant correlations between normative and diffuse/avoidant styles (Nurmi et al., 1997; Soenens et al., 2005). On the other hand, the studies that used the IPSQ showed that informational and diffuse/avoidant styles had a highly negative association (r = -.92, -.93, -94 for the U.S., Turkey, and Belgium samples, respectively). The same studies also found that there is a negative moderate association between informational and normative styles; and no significant relation between normative and diffuse/avoidant style (Eryigit & Kerpelman, 2008; Pittman et al., 2008; Smits et al., 2008).

One of the major differences between the ISI and the IPSQ is the associations between informational and diffuse/avoidant styles. There is a moderate negative association between these two styles when they are measured by the ISI; whereas there is a high negative correlation between them when they are measured by the IPSQ. This difference might be explained by the different methods each instrument uses. The ISI uses a Likert-type response scale, where respondents rate each item individually in terms of how much they agree with it. On the other hand the IPSQ uses a q-sort methodology, where respondents are forced to choose the better fitting items compared to other items in the instrument, and place them in an array ranging from most to least like them.

The high negative correlations between informational and diffuse/avoidant styles also are meaningful theoretically. According to Erikson's (1968) stage theory, identity and role confusion are two extremes that individuals move between as they engage in identity work. At the one extreme, individuals form their sense of identity, which is consistent over time and across situations. At the other extreme, individuals are not successful and they end up in identity diffusion. The different paths and procedures individuals follow in the process of identity

formation accounts for this variation between a well-established identity and identity diffusion. The theoretical literature on identity clearly suggests that exploration is the most critical underlying process of identity formation (Berman et al., 2001; Berzonsky, 1989; Erikson, 1968; Grotevant, 1987; Grotevant & Cooper, 1985; Marcia, 1993). Therefore, whether an individual engages in exploration activities or not (i.e., informational style versus diffuse/avoidant style) is a different dimension and accounts for different outcomes, than the dimension that captures whether an individual engages in a certain type of exploration activities, such as seeking and evaluating relevant information (informational style), or obeying the standards and norms of the family or community (normative style). In this regard, the IPSQ studies suggest that informational and diffuse/avoidant styles are two ends of the same continuum ranging from high exploration to lack of exploration, and normative style is a separate continuum. Therefore, currently there are two different approaches to identity styles, a three-styles approach versus a two-styles approach. These two approaches have been compared only with each other in order to test the statistical significances of the ISI and the IPSQ in two studies (Pittman et al., 2008; Smits et al., 2008). Further examination is needed in order to test the validity of these approaches. By employing both approaches to the models of the current investigation separately, we will be able to suggest further similarities and differences between the three-styles and two-styles approaches.

The link between identity styles and identity statuses

Identity styles and identity statuses capture different aspects of identity formation. After adolescence, regardless of where they are in the process of identity formation, individuals generally show consistency in the ways they deal with identity related issues. Therefore, the concept of identity style captures the stable aspect of identity formation, and focuses on the

individuals' attitudes towards identity formation processes. On the other hand, identity statuses are outcomes of individuals' identity formation behaviors, and are affected by their attitudes towards this process. Therefore, identity statuses as they are derived by the amount of exploration and commitment at a given moment in a person's life capture the unstable and behavioral aspects of identity formation, and focus on where individuals are in the process of identity formation and what they are doing in a given domain during a particular time period.

Specifically, Berzonsky (1989) proposed that individuals who are classified in achievement and moratorium statuses tend to use an informational style, individuals who are classified in foreclosure status tend to use normative style, and individuals in the diffusion status category tend to use diffuse/avoidant style dominantly. The findings of studies that have examined the link between identity styles and identity statuses have supported Berzonsky's hypotheses.

Achieved status has been positively correlated with informational style consistently across studies (Berzonsky, 1989; Berzonsky & Kuk, 2000; Streitmatter, 1993). The individuals in the achieved status category also reported the highest levels of informational style in some samples (Berzonsky & Neimeyer, 1994), whereas in other samples, their informational style scores did not differ from the scores of individuals categorized in foreclosure and moratorium statuses (Schwartz, Mullis, Waterman, & Dunham, 2000).

Moratorium status's associations with identity styles have shown variation across studies. Berzonsky (1989) found that being a member of the moratorium status category was negatively associated with having a higher normative style and positively associated with having a higher diffuse/avoidant style, whereas being in the moratorium status group did not associate significantly with informational style. However, in another sample, Berzonsky and Kuk (2000)

found that moratorium status was positively associated with informational style and diffuse/avoidant styles, and negatively with normative style. Research has also indicated that the informational style scores of individuals in the moratorium status category were significantly lower than the scores of achieved individuals in some samples (Berzonsky & Neimeyer, 1994), but not significantly different in some other samples (Schwartz et al., 2000). Their informational style scores also did not differ significantly from the scores of individuals in the foreclosure status category (Berzonsky & Neimeyer, 1994; Schwartz et al., 2000).

Being in the foreclosed status category has always been significantly and positively correlated with having higher normative style scores, and in some studies negatively with having higher informational style scores (Berzonsky, 1989; Berzonsky & Kuk, 2000; Streitmatter, 1993). However, diffuse/avoidant style scores were positively associated with foreclosed status in one sample (Berzonsky & Kuk, 2000), and negatively in another sample (Berzonsky, 1989); foreclosed individuals reported the highest level of normative style (Berzonsky & Neimeyer, 1994).

In these studies, diffused status has always been significantly and positively associated with diffuse/avoidant style, and negatively associated with informational and normative styles (Berzonsky, 1989, Berzonsky & Kuk, 2000, Streitmatter, 1993). Supportively, individuals in the diffused status category reported the highest levels of diffuse/avoidant style (Berzonsky & Neimeyer, 1994; Schwartz et al., 2000).

When identity styles were measured by the IPSQ (Pittman et al., 2008), the results were found to be consistent with the findings of the previous studies. Pittman and his colleagues found that the correlations between informational style and achieved status, diffuse/avoidant style and diffused status, and normative style and foreclosed status were significant and positive, whereas

the correlations between informational style and foreclosed status, normative style and moratorium status, diffuse/avoidant style and achieved and moratorium statuses were significant and negative.

These results indicate the existence of the link between identity styles and identity statuses; however they also suggest that these associations are more complex than the ways they have been examined in past studies. For instance, informational style was hypothesized to have the strongest association with the achieved and moratorium status, but only some studies support this hypothesis, some others suggest that use of an informational style is different between achieved and moratorium statuses, and sometimes the scores for these statuses are not different from the informational style scores of the foreclosed group. However, the link between informational style and diffused status has consistently shown negative associations. The links between normative style and foreclosed status and between diffuse/avoidant style and diffused status also have shown consistency across studies. Diffuse/avoidant style has been associated positively with moratorium status in only one study.

One limitation of these studies is that exploration and commitment dimensions have been made categorical and combined to form statuses. We do not know whether the same associations will hold when they are measured separately as continuous variables. Moreover, these studies conceptualize exploration and commitment at one level. The most current literature suggests that exploration and commitment operate at two levels (i.e., four dimensions of identity development model). It might be possible to explain more clearly the complex nature of the current findings by assessing four dimensions of identity formation.

Correlates of identity styles

The literature addressing identity styles is extensive. Since 1989, approximately ninety studies have been conducted, and a majority of these studies used the ISI-III. Thus, in the following section, the results from the ISI-III version are summarized. These studies have investigated the associations between identity styles and need for cognition and openness to experience (Berzonsky & Sullivan, 1992), causality orientation (Soenens et al., 2005), attributional strategies (Berzonsky, Nurmi Kinney, & Tammi, 1999), psychological maturity (Berzonsky & Kuk, 2005), social-cognitive reasoning (Berzonsky, 1993), locus of control and anxiety (Berzonsky, 1989), self-esteem (Phillips & Pittman, 2007), autonomy (Luyckx et al., 2005), coping strategies (Berzonsky, 1992), and personality as it is defined by five factors (Collinger, 1995; Duriez & Soenens, 2006). Parenting dimensions (Berzonsky, 2004; Smits et al., 2008b); adjustment and wellbeing (Adams et al., 2006; Adams, Munro, Dohert-Poirer, Munro, Petterson, & Edwards, 2001; Berzonsky, 2003; Nurmi et al., 1997; Vleioras & Bosma, 2005), and academic performance (Berzonsky & Kuk, 2000, 2005) are other factors that have been examined in terms of their relation to identity styles.

The majority of these studies have shown significant differences between informational and diffuse/avoidant styles, and normative and diffuse/avoidant styles; however few studies have shown significant differences between informational and normative styles. For instance, adjustment problems were positively associated with diffuse/avoidant style, and negatively associated with informational and normative styles. (Adams et al., 2001). Seeking social support was positively associated with both informational and normative style, and negatively associated with diffuse/avoidant style (Berzonsky, 2008, 1992).

Social-cognitive factors, such as openness to experiences and need for cognition also have been examined in terms of their relation to identity styles. Openness to experience refers to

personal awareness about one's beliefs about novel ideas, values, actions, or to experience and fantasy. Berzonsky & Sullivan (1992) found in a female sample that only openness in all of these areas was positively associated with informational style, whereas only openness in values, actions and fantasy was associated negatively with normative style, and openness about ideas and feelings was negatively associated with diffuse/avoidant style. On the other hand, need for cognition, which measures the degree to which individuals enjoy active information processing, was positively related to informational style, but negatively related to diffuse/avoidant style. Its relation with normative style was non-significant. Similar findings were found when identity styles were associated with cognitive strategies, such as success expectation, task irrelevant behavior, and rational and intuitive reasoning (Berzonsky, 2008). Informational style was positively associated with success expectation, and the two types of reasoning, but negatively associated with task-irrelevant behaviors. In contrast, diffuse/avoidant style was negatively correlated with success expectations and rational reasoning, and positively associated with task-irrelevant behaviors. Normative style showed significant positive associations only with the rational and intuitive reasoning variables. Furthermore, Duriez and Soenens (2006) examined the identity styles in relation to five personality types. They found that openness was positively related to informational style, but was negatively related to diffuse/avoidant and normative styles, and agreeableness was negatively associated only with diffuse/avoidant style.

Findings for self-esteem (Nurmi et al., 1997) indicated both informational and normative styles were positively associated with self-esteem, however information-oriented individuals reported higher levels of self-esteem than normative-oriented individuals did. In another study, Luyckx and his colleagues (2007) found that self-esteem was positively associated only with normative style, but not with informational style. On the other hand, when identity styles were

measured by the IPSQ (Eryigit & Kerpelman, 2008), self-esteem (based on both personal and interpersonal characteristics) was positively associated with informational style, and self-esteem (based on only interpersonal characteristics) was positively associated with normative style.

Finally, the findings of two studies (Berzonsky, 2003; Nurmi et al., 1997) have shown that depression was positively associated with diffuse/avoidant style, and negatively associated with normative style. Depression's association with informational style varied, ranging from no association to a positive one. Anxiety was examined in terms of facilitative or debilitative test anxiety (Berzonsky, 1989). It was found that facilitative anxiety was negatively related to the normative style, and positively related to the informational style; the opposite associations were found for debilitative anxiety.

Overall these studies show that intra-individual factors distinguish between identity styles. In particular, openness to experiences, depression, self-esteem, and anxiety significantly predict variation across identity styles. One of the limitations of this literature is that identity style preferences have been seen as an intrapersonal attribute, deemphasizing the role of context. Thus the associations between contextual factors and identity styles are studied rarely, and generally focus on parent-adolescent relationships (Berzonsky, Branje, & Meeus, 2007; Matheis & Adams, 2004; Smits et al., 2008). This is partially because Berzonsky's model suggests that every adolescent/young adult has the ability to use all the styles, regardless of the contextual influences (Berzonsky, 1993b). According to Berzonsky, every individual from any kind of cultural context, at any level of social class, with any amount of opportunities has the ability to choose one style. This preference is likely to be based on intra-individual characteristics, such as an individual's level of openness to new experiences.

Berzonsky's perspective emphasizes self-construction of styles in identity work; however, the broader human development literature suggests taking social aspects also into account while examining the construction of knowledge, beliefs, and expectations about self and life (Vygotsky, 1962, Yoder, 2000). The schema individuals develop about the process of identity work might be a product of self-construction, as well as social-construction. As Berzonsky assumes, individuals are actively involved in forming their identity styles, however this process cannot be separated from the environment in which individuals form their styles. Therefore, it is also possible that perceived characteristics of a given context might have an impact on style preferences.

Identity Formation in Context

The importance of context in the identity formation process has been recognized since Erikson (1963) developed the theory of identity. Many identity scholars have stressed that identity formation is a process of person-context interaction, and the impact of context should be examined (Adams & Marshall, 1996; Bosma & Kunnen, 2001; Kroger, 2000, 2005). Specifically, Baumesiter and Muraven (1996) proposed that the ultimate aim of identity formation is an adaptation to social, cultural, and historical context, thus, individuals engage in identity work based on what they think will let them fit better to their context. According to the authors, level of structure, range of opportunities, education, diversity within the context, importance/acceptance of personal values, and importance of uniqueness (including desire for uniqueness and level of support for uniqueness) are crucial for how individuals engage in identity work and what they actually do. Supportively, Cote and Levine (1988) argued that the historical and social context determines the adaptability of identity exploration and commitment activities, thus the process of identity formation is strongly influenced by contextual factors.

From a different perspective, Yoder (2000) emphasized that context can function as barriers that limits optimal development. According to him, forming a well-established identity depends on the degree of choice, hope, and freedom the context provides. In this sense, contextual barriers limit different aspects of identity formation. He defines multiple barriers as individuals engage in the identity formation process, such as socio-economic opportunities, educational opportunities, racism, gender bias, and conservatism.

Adams and Marshall (1996) suggested that context can influence all aspects of identity. In order to understand person-in-context, they proposed that (a) identity is formed through the interaction of person and context; (b) contextual influences include macro-level factors, such as culture, economics, and social class, and micro-level factors, such as interpersonal influences and common or routine daily interactions; and (c) these contextual influences shape identity through shared values and norms that are socially constructed. However, the empirical literature addressing identity in context has focused mainly on parent-adolescent relationships (Berzonsky et al., 2007; Beyers, & Gossens, 2008; Crocetti, Rubini, & Meeus, 2008; Knafo & Schwartz, 2004; Meeus & de Wied, 2007; Sabatier, 2008; Smits, et al., 2008b); ethnic identity (Newman, 2005; Phinney, 2000, 2005; Sabatier, 2008; Syed, Azmitia, & Phinney, 2007; Umana-Taylor. 2004); and acculturation and immigration (Berry, Phinney, Sam, & Vedder, 2006; Rudmin, 2008; Schwartz, Montgomery, & Briones, 2006; Sirin, Bikmen, Mir, Fine, Zaal, & Katciaficas, 2008; Vedder, Sam, van de Vijver, & Phinney, 2006).

One recent exception is Sabatier (2008) who examined the impact of multi-layered social context, including peers, perceived discrimination, and parenting, on the ethnic and national identity exploration of second-generation immigrant high school students in France. The results showed that the peer context (i.e., ethnic composition of the friends, and socialization with

mainstream friends) did not significantly explain the variation in exploring ethnic and national identities, but perceived discrimination was negatively associated with exploring national identity, and positively associated with ethnic identity. In terms of parenting, communication with fathers and perceived disagreement with fathers on cultural issues significantly predicted national identity exploration. The impact of parental support on identity styles also was examined by Smits and her colleagues (2008b) in a Belgian sample. After controlling for gender, age, and parental control, both maternal and paternal support significantly and positively predicted informational and normative styles, but not diffuse/avoidant style.

In a cross-national study, Low, Akande, and Hill (2005) compared South African college students with the U.S. students, and explored similarities and differences in terms of status classifications. They found that 27% of the U.S. sample was categorized as achieved, 31% was in the moratorium status, 25% was in the foreclosed status, and 17% was categorized as diffused. However, the majority of students in the South African sample were categorized in achieved status, where both exploration and commitment were high at the time of data collection (83%), leaving 17% for the other statuses (.05%, .08%, and .03% for moratorium, foreclosed, and diffused statuses, respectively). The authors explained this variation due to differences in the higher education systems of South Africa and the U.S. Different from the American higher education system, in South Africa, students are required to choose their major while they are applying to the university, and are expected to stay in that major. In another study conducted in Turkey (Eryigit & Kerpelman, 2008), which has a similar higher education system, and socio-cultural context to South Africa, 81.7% of the participants were found to have an informational style. The differences between higher education systems of South Africa, Turkey and the U.S. should be understood as a reflection of differences in the broader experiences of college students.

In such traditional societies (South Africa and Turkey) in which the existing cultural values are in a process of change, young adult college students are forced to form a well-established identity (i.e., search their alternatives, establish life goals for themselves and follow through them) earlier than the majority of young adults in the U.S. Thus, by the time they are in the university, they report more exploration and commitment activities, as well as more use of an informational style than the U.S. students do.

Nurmi, Poole, and Kalakoksi (1996) examined the impact of living in an urban versus rural environment on identity exploration in two different countries (Australia and Finland) with two samples, one that included urban and rural adolescents ages 13-14, and a second that included urban and rural adolescents ages16-17. They hypothesized that if living in a rural or urban area makes a difference in identity exploration, there should be a less age-related increase in identity exploration in rural areas compared to urban areas. They found support for this hypothesis only in the Australian sample, but not in the Finnish sample. In the Australian sample, the urban 16-17 year old group reported significantly more identity exploration than the urban 13-14 year old group did; but it was the opposite in the rural groups, younger rural students reported more exploration than their older counterparts reported. However, in the Finnish sample, older groups reported more exploration than younger groups in both rural and urban areas. Eryigit and Kerpelman (2008) also examined the impact of having a rural or urban background on identity styles. Similar to the Finnish sample, they found no association between residential background and identity styles. These conflicting findings might have resulted because assessing residential background is not sufficient to capture the factors that are assumed to be different between rural and urban environments that impact identity formation. These environments are likely to differ in the opportunities provided and the socialization processes

supported by the context. Instead of presuming these differences, assessing individuals' perception of these factors directly may contribute more to the current knowledge.

Overall, various aspects of context have been discussed and studied in the identity formation literature; however, current literature on identity formation during adolescence and young adulthood also has been criticized for its limited emphasis on studying context (Baumeister & Muraven, 1996; Beyers & Cok, 2008; Bosma & Kunnen, 2001; Cote, 1986; Yoder, 2000). One of the reasons was due to the lack of a model that clearly operationalizes various aspects of context, and delineates how different aspects of context operate in the identity formation process. The proposed study is the first attempt to formulate and test a model that links context to identity styles and identity formation behaviors.

The model proposed in this study assumes that context has a complex influence on identity formation. Thus, this model explains the impact of contextual influences on different aspects of the identity formation process, identity styles and the actual work of identity. Existing theoretical and empirical literature suggests that contextual factors can be grouped as three different sets of influences, (a) cultural influences, (b) social-structural influences, and (c) immediate environment influences.

Cultural influences

Culture implies unstated assumptions, tools, norms, and values shared by its members (Triandis & Suh, 2002). Thus, culture, as a broader context of an individual, has an important role in identity formation (Phinney, 2000). Cultural orientation of the larger society (as it is perceived by the individual) is likely to influence the individual's motivation and approach to engage in identity work (Cote & Levine, 2002). This is expected because societies vary in the choices they provide their members for forming their individual identities (Baumeister, 1986). At

one extreme, a society might assign identities, whereas at the other extreme, a society might provide a wide array of options from which individuals are expected to make their own choices.

The current literature addressing the importance of culture specifically on identity formation has focused only on ethnicity or immigrant statuses (Sabatier, 2008) or on differences at the national level (Low et al., 2005; Nurmi et al., 1996). No identified study has examined what it is in the culture that specifically impacts the identity formation process. Phinney (2000) suggested that culture has multiple roles in development; thus, in addition to broader cultural context comparisons, culture needs to be studied in terms of specific predictors. Supportively, in their article about methodological issues in cultural/contextual studies, van de Vijver and Leung (2001) explained that theory-driven context studies, which engage in hypothesis testing, should include contextual variables as predictors.

Cultural predictors have been studied largely in organizational psychology and anthropology. Hofstede's (1980, 1991, 2001) *dimensions of cultural variability* is the most well known cross-cultural model of understanding variations in cultural factors across different cultural settings. His five factors were formulated based on the results of a study that investigated work related values in forty different countries. These factors were power distance, collectivism versus individualism, femininity versus masculinity, uncertainty avoidance, and Confucian dynamics.

Hofstede's five dimensions were constructed to assess countries, not individuals' perception of their society (Stankov, 2007). Building on Hofstede's model, House and his colleagues (2004) examined cultural norms, but this time at the individual level. This study was conducted by hundreds of researchers in sixty-two different countries including the U.S. and Turkey, and investigated the inter-relationships between societal culture, organizational culture,

and organizational leadership. Nine dimensions reflecting different social norms were found in this study.

Uncertainty avoidance refers the degree to which members of a society feel threatened by uncertainty and try to avoid it by relying on established rituals and bureaucratic procedures. Societies high on this dimension prefer formal rules, and get anxious with uncertainty, and therefore develop rules to control social behavior; whereas societies which are low in this dimension believe in encouraging dissenting views and behaviors, in trying new things, and in taking risks, and therefore need few rules and expectations to control individuals' behaviors (de Luque & Javidan, 2004).

Future-orientation means the extent to which individuals engage in and are supported to engage in future-oriented behaviors, such as planning and investing in the future. The consequences of low future orientation for a society might include enjoying the moment, being spontaneous, having less future anxiety and unwillingness to explore and plan future goals, and relying more on others; whereas high future oriented societies are likely to have strong willingness to imagine the future, formulate future goals, and develop strategies to achieve these goals, and to be self-controlled rather than other controlled (Ashkanasy, Gupta, Mayfield, & Trevor-Roberts, 2004).

Gender egalitarianism refers to the degree to which members of a society minimize gender differences, and promote gender equality. Societies which are different in gender egalitarianism dimensions are likely to be different in beliefs about what is possible and appropriate for women and men, knowledge and standards of living, and support for members to be more active, vocal, and open to change (Emrich, Denmark, & den Hartog, 2004).

The other dimensions of culture are *power distance,* which reflects the extent to which a society believes in power stratification and supports organizational power; *institutional collectivism,* which refers to the degree to which society encourages and rewards collective distribution of resources; *in-group collectivism,* which implies the degree to which individuals are supported to express their loyalty, pride, and cohesion for their groups; *humane orientation,* which means the degree to which society rewards being fair, friendly, and altruistic in institutions or organizations; and *performance orientation,* which reflects the degree to which members of a society are rewarded for their performance improvement and excellence. These dimensions are less likely to have a direct influence on the aspects of identity formation that is being investigated in the proposed study; these dimensions are more about either cultural identity, or job performance.

Therefore, only uncertainty avoidance, future orientation and gender egalitarianism dimensions will be used in this study. It is assumed that a society with higher future orientation, gender egalitarianism, and with lower uncertainty avoidance, has cultural values supportive of identity exploration and openness to diverse information about identity, whereas a society with the opposite characteristics holds less supportive cultural values for its individuals to explore their identity alternatives and would encourage an approach to identity formation that relies on social norms and role prescriptions.

Social-structural influences

Current studies about social class and identity clearly suggest that social-structural position of a family is influential on the identity exploration and commitment activities of young adults (Aries & Seider 2007; Nurmi et al., 1996; Phinney, 1993; Yoder, 2000). According to Phinney (1993), the social-class of a family plays an important role in identity formation

experiences of individuals. Social class is important because it has the power to shape, and constrain the expression of knowledge, attitudes, and behaviors; thus it differentiates individuals' experiences by constraining possibilities and decisions, as well as how individuals view those experiences (Ostrove, & Cote, 2003; Phillips, & Pittman, 2003; Stephan, Markus, & Townsend, 2007; Stewart, & Ostrove, 1993).

As was the case for cultural influences, the majority of previous identity studies about social-structural influences examined social class as a categorical group difference variable. For instance, Aries and Seider (2007) examined the perception of social class on identity in three U.S. college samples consisting of students from different social classes. Social class was represented by college affiliation, including a highly selective liberal arts college with a rich student population, a highly selective liberal arts college with students from lower income families, and a state liberal arts college with lower income students. Students were asked the extent to which they believe social class is important to their identity. Findings showed that the rich group rated social class as more important to identity than the two lower income groups did. The qualitative findings of this study also showed that rich students were more aware of the benefits of having an economically privileged status, and the opportunities they have to explore their interests and goals.

The impact of socio-economic status on domain-specific identity statuses also was examined by Solomontos-Kountouri and Hurry (2008) in a senior high school sample in Greek Cyprus, which is a small nation with a homogenous population. SES was assessed by school affiliation, where students in private schools were assumed to be in upper SES, and students in the technical school were assumed to be in lower SES groups. They found that in terms of exploration and commitment activities in the religion domain, upper SES class students were

more likely to be diffused compared to lower SES students; on the other hand, lower SES students were more likely to be in the foreclosed status group. In terms of the occupational domain, upper SES students were more likely to be in the moratorium status group, and lower SES students were more likely to be in the diffused group. One of the contributions of this study is showing importance of being domain specific while examining exploration and commitment activities of individuals.

One of the limitation of these studies is that they measured socio-economic status with school affiliation, which is not a direct assessment of social class. Although, there is no single way to operationalize the social-structural position of a family, the social class literature suggests that level of education, occupation type, and income are generally accepted indicators (Cirino, Chin, Sevcik, Wolf, Lovett, & Morris, 2002). Thus, in the proposed study, parent education, income, and occupational status will be used to indicate social-structural influences on identity.

No identified identity study has examined parent occupation status and income level; however, some studies have controlled for parent education, and found that education level of parents predicts educational aspirations and future orientation (Ojeda & Flores, 2008; Pulkkinen & Ronka, 1994; Stewart & Ostrove, 1993), and variation in identity styles, such that the more educated parents are the more informational adolescents are in their orientation to identity work (Celen & Kusdil, 2006).

Immediate environment influences

According to Erikson (1963), individuals have to know that they have opportunities in order to explore and evaluate their identity choices. Social-structural position of an individual implies level of opportunities; it is assumed that individuals from upper classes have more opportunities than individuals in lower classes. However, Powers (1996) suggested that assessing

social-structural position is an objective way of measuring level of opportunities. It also is important to assess subjective (perceptions of) opportunities.

Perceived available opportunities were examined in an Albanian sample (Orgocka & Jovanovic, 2006), which is another nation experiencing ongoing change, especially in the economic and educational systems. The authors investigated the role of perceived future work opportunities in Albania and abroad on identity exploration and commitment in the educational domain. They found that students who perceived more work opportunities in Albania reported more exploration and commitment in the educational domain than students who perceived more work opportunities abroad. This was the only identified study that has examined perception of available opportunities in the area of work; however, the weakness of this study is that the perception of work opportunities was assessed by only one question, which asked respondents to rate and compare opportunities in Albania and abroad.

Kluegel and Smith (1982, 1986; Smith & Kluegel, 1984) examined perceived opportunities in-depth. They mainly focused on interracial perceptions. For instance, Kluegel and Smith (1982) investigated Whites' beliefs about Blacks' opportunities, and found that Whites' perceptions of Blacks' opportunities were influenced by the perception of their own opportunities. For instance, they found that Whites, who perceive more opportunities for themselves, reported less discrimination and more opportunities for Blacks. Smith and Kluegel (1984) also examined perception of women's opportunities, and compared gender differences with race differences. They found that both men and women perceive fewer opportunities for women, and the level of opportunities perceived for women is less than perceived opportunities of Blacks. They also found moderately negative correlations between perceived opportunities and discrimination both for women and Blacks. The contribution of Kluegel and Smith's work to

the present study is conceptualizing perceived opportunities; they asked their participants to evaluate their choices in life compared to an average person in their society.

Perceived opportunities typically stand for what is available to individuals. What is not available to individuals is also crucial for the identity formation process. As Yoder (2000) suggested, discrimination is one of the main factors that inhibit individuals in the process of identity formation. Everyday discrimination implies the general unfair treatment towards oneself, such as being treated more poorly in comparison to others, having people behave in suspicious or superior ways, and being insulted or harassed (Kenny, Gualdron, Scanlon, Sparks, Blustein, & Jernigan, 2007; Panter, Daye, Allen, Wightman, & Deo, 2008). The negative association between perceived discrimination and educational outcomes was clearly identified in the career literature (Kenny et al., 2007). In a recent study, Panter and his colleagues (2008) found that perceived everyday discrimination impacts attitudes, motivation, and expectations about educational experiences in the college. Thus, it is a strong possibility that the amount of perceived everyday discrimination can influence the identity orientation of the individuals (i.e., attitudes towards the process), and the behaviors they engage in.

Another factor that may influence the identity formation process is social support. The importance of social support in the process of identity work has been described clearly, but only for parental support. The more parents support their adolescent/young adult children, the more the children report identity exploration (Sabatier, 2008; Sartar & Youniss, 2002; Smith et al., 2008). In addition, support from parents (Kerpelman, Eryigit, & Stephens, 2008) and peers (Wall et al., 1999) positively predicts educational aspirations of adolescents. Support is multidimensional; in addition to parents, young adults receive support from peers, and if they are in a relationship from romantic partners (Zimet, Dahlem, Zimet, & Farley, 1988). Thus, it is

important to examine all kinds of support. For instance, Hall and Brassard (2008) found that parental support predicted foreclosed identity status, whereas peer support predicted achieved identity status.

Overall, perceived opportunities and barriers, as well as social support for one's choices have potential to influence beliefs about availability of identity alternatives and the motivation to explore them. In order to engage in identity exploration, individuals should believe that (a) they have *personal opportunities* compared to the chances of an average person in the community; (b) there are not many barriers in front of them, such as *discrimination*; and (c) they will have *social support* in regard to choices they make about their lives.

The Importance of Context for the Identity Styles and Identity Formation Behaviors

One major limitation of the current identity literature is lack of a contextual model. Focusing on context as a categorical construct, using identity statuses as indicators of exploration and commitment behaviors, and not emphasizing a certain domain are other limitations of this literature. According to Kroger (1993), context has a crucial role on both identity options and the way one engages in the identity formation process. In other words, the contextual influences might predict not only the amount of identity alternatives individuals explore and evaluate, but also their view of this process.

From Berzonsky's perspective, the influence of context is more apparent for what individuals actually do in the process of identity formation. It is also possible that context, in addition to intra-individual factors, determines individual's orientation to this process. Furthermore, context's influence on actual behaviors of identity work might be mediated by the identity processing orientation of individuals. In the process model of identity formation,

Grotevant (1987) describes general expectations and beliefs, the orientation brought to identity work, and the actual work of identity exploration as major components of this process.

He explains that beliefs and expectations an individual has about his or her opportunities, and the probability of being successful are likely to influence the way he or she perceives the process. In this regard, individuals who perceive more conservative values supported in their culture, are from lower socio-economic statuses, and have fewer opportunities and social support with more boundaries, are less likely to develop an information orientation, but more likely to develop a normative orientation. This is expected because individuals, under these conditions, are likely to believe that what is expected from them are restricted to the norms of the society, and/or what they can achieve is limited to the availability of alternatives in their environment (which are limited by low resources and high boundaries, and less support). On the other hand, individuals, who perceive more individual-focused cultural values in their environment, live in high social structure settings, and perceive multiple opportunities for themselves with high social support and few constraints, are likely to develop an informational orientation.

Finding empirical support for these hypothesized associations will mean that the extent to which individuals engage in both in-breadth and in-depth exploration and both tentative and long-lasting commitment behaviors are likely to be influenced by identity styles which are formed as a response to context (and individual characteristics). In other words, we will be able to conclude that context, in part, shapes the attitudes taken in the identity formation process, which in turn determines what individuals actually do. If we do not find support for these associations, we will be able to conclude that forming identity styles (i.e., identity style preferences) is an intra-individual process that determines individuals' exploration and commitment behaviors, and that context additionally affects these behaviors.

Comparing Nations: The United States and Turkey

Different from the culture in the U.S., in Turkey, a secular Islamic country, the culture can be described as traditional, authoritarian, and collectivistic, with variation across urban versus rural areas (Cakir & Aydin, 2005). In general, there is an emphasis on interpersonal relationships (Kagitcibasi, 1996; Karakitapoglu-Aygun, 2004). The family system in Turkey is based on group ties, accountability, loyalty, interdependence, duties, and obligations (Okman-Fisek, 1982). Compared to American families, Turkish families are more controlling (Taylor & Oskay, 1995). Many parents feel a high level of responsibility about their children, even after their children' transition to adulthood (Kagitcibasi, 1992). Current research shows that Turkey has been undergoing a social change since 1980s (Karakitapoglu-Aygun, 2004). Current trends can be described as a co-existence of traditional, collectivistic values and individualistic values (Imamoglu, 1998, 2000). In relation to this change, child socialization in Turkey combines task-related independence (e.g. making one's own decisions) with relatedness (e.g. emotional dependence) (Imamoglu, 1998; Kagitcibasi, 1995; Mocan-Aydin, 2000). Furthermore, Kagitcibasi (1995; 1996) notes that the Turkish family system supports a combination of autonomy and relatedness, with variation based on socio-economical location of the family (i.e. parents' residential background, level of education, and income level). In other words, the population in Turkey is collectivistic, however some groups, especially the more educated, urban groups have become more oriented toward individualism than other groups have (Imamoglu, 1998, 2003). However, an orientation toward individualism in Turkey should not be understood as it is experienced in American culture. According to Hofstede's dimensions, a comparison between American culture and Turkish culture shows that United States is still almost three times more individualistic than Turkey (Hofstede, 2001).

Based on this social constructivist perspective, American and Turkish cultures would vary in terms of processes of identity formation individuals follow. This variation would not only be due to cultural orientation differences between these two cultures, economic and social structural factors at the national level also would contribute to the variation between Turkey and the U.S.. For instance, the compulsory education in the U.S. is 12 years, whereas it is 9 years in Turkey. Based on the United Nations statistics, *gross Domestic Income* rates, which are measures of national income and economic strength, Turkey and the U.S. show divergence ($4,954 for Turkey; $41,768 for the U.S.). In addition, only 43.6% of Turkey's working age population is employed, whereas 63.1% in the U.S. is employed. A bigger variation is seen in youth unemployment rates; it is almost two times bigger in Turkey where only 38.9% are employed. Another prominent distinction between Turkey and the U.S. is the educational systems of these two nations especially at the higher education level. In Turkey, admission to university-level education is based on a national entrance exam which is conducted once a year; university students choose the university and area of study after this exam, and once they are enrolled they generally continue in the same curriculum. This occurs because changing majors or re-taking the entrance exam is not supported by the regulations. The statistics along with nation-level systemic differences should be interpreted as differences between overall cultural experiences of youth in these two nations.

These nation-level differences between the U.S and Turkey might account for differences in the proposed associations of this study. National similarities and differences between the U.S. and Turkey or nations similar to Turkey have been established; however they are generally mean-level comparisons (e.g., percentages of the sample in each identity status group). Very few studies have addressed the associations related to differences in the process, and those that have,

have found conflicting results. Thus, comparing the findings of the U.S. sample with the findings of the Turkish sample will contribute to the generalizability of the models. The majority of identity formation studies have been conducted in Western societies; in order to formulate universal models of the identity formation process research across nations is needed.

Identity research in Turkey. To date, the limited research conducted on the identity formation of Turkish youth focuses on identity statuses and parental attitudes (Akman, 2007; Cakir & Aydin, 2005), and self-controlling behaviors (Kumru & Thompson, 2003). In general these report similar findings to those of studies with the U.S. samples. Identity styles of Turkish young adults have been examined only by two studies. Celen and Kusdil (2006) investigated the association between parenting and identity styles as they were measured by the ISI, and found similarities with the results of studies conducted using the ISI in the U.S. Eryigit and Kerpelman (2008) also examined the identity styles, but this time measuring them using the IPSQ. The findings of this study were generally consistent with previous IPSQ studies conducted in the U.S., and supported the idea of the two styles approach by showing a strong negative association between informational and diffuse/avoidant style. Similar to Law and his colleagues' study (2005), the majority of participants in the Turkish sample was high on the informational style; they were also adaptive and resourceful in their coping strategies, high on self-esteem, and had a clear self-concept. Young adults, who scored high on the normative style, were emotional in their coping, and gave importance to interpersonal characteristics. One of the interesting findings of Eryigit and Kerpelman's study was that both informational and normative styles were significantly and positively associated with collectivism as an individual's cultural orientation, whereas only normative style was significantly and negatively associated with individualistic cultural orientation.

Gender

The identity styles literature consistently shows that males score higher on the diffuse/avoidant style, and lower on the informational style than females do across nations (e.g. American, Turkish, and Belgian samples), and across methods (e.g. rating scale, and q-sort) (Berzonsky, 1992; Celen & Kusdil, 2006; Eryigit & Kerpelman, 2008; Pittman et al., 2008; Soenens et al., 2005). Research also has shown that females are more achieved in their identity status than males are, which refers to higher exploration (Cakir & Aydin, 2005; Cramer, 2000; Meeus, 1996); however Berman and his colleagues (2001) found that females were less likely to be involved in exploration activities than males were after controlling for style preferences. In addition, with a Turkish sample, Akman (2007) found that being female was positively associated with a foreclosed status, and negatively associated with the moratorium status. Therefore, gender will be an important factor when examining the links between contextual factors and identity styles, and between these sets of factors and identity formation behaviors. Furthermore, gender might interact with national culture. Gender differences may be seen in the Turkish sample, whereas this difference might be less prominent in the American sample. This is predicted, because national statistics and research findings (Aygun, Arslan, & Guney, 2008; Kumru & Thompson, 2003; Rankin & Aytac, 2006) show that there are stronger gender differences in Turkey than in the U.S. in terms of education and career opportunities, as well as attitudes toward future career. Rankin and Aytac (2006) examined gender inequality in education in Turkey using census data, that was nationally representative. They found that 35% of the parents reported sex segregation at their home towards their daughters, and 54% of the parents believed that women should not work for pay outside the home. The practices of sex segregation and beliefs about women's work opportunities also were strongly correlated with the chances of

girls completing high school (r= .61, and .50 for sex segregation and beliefs about women, respectively).

Summary

By conceptualizing identity styles, Berzonsky brought a dynamic constructive perspective to the understanding of the identity formation process; however, an identity style is not an aspect of identity that develops over time, but a personal characteristic that influences the process of identity formation. From this point of view, identity styles emphasize individual differences in adolescents/young adults' approaches to the actual work of identity exploration and commitment (i.e., the process of identity formation). Two limitations of the identity styles literature are styles' link to actual identity work, and the role of context in this link.

By examining these associations, the proposed study aimed to contribute to the current identity literature in several ways. First, identity styles were created by Berzonsky as an aspect of the identity formation process. This study tried to clarify how these styles, as the attitudinal aspect of identity formation, actually influence the in-breadth/in-depth exploration and tentative/firm commitment, which are the behavioral aspects of this process. Second, the identity literature strongly suggests the need to be domain-specific when examining what individuals are doing in their identity formation. The proposed study assessed current behaviors of identity formation in the career domain, which is one of the most salient areas of identity for most college students. Third, the role of context has been ignored in past identity research, especially in identity styles research. The current study tried to delineate the influence of contextual factors on identity styles and/or identity formation behaviors. Fourth, the contextual perspective taken in this study also was an attempt to respond to a bigger need in the overall identity literature for establishing contextual models of the identity formation process. Fifth and finally, mean

differences in the identity literature have shown both similarities and differences between Western and non-Western samples, and across genders. There is very limited empirical evidence about whether the aspects of identity formation operate in similar ways across different cultures, and for females and males. The findings of the proposed study were expected to help to clarify the universal and culture/gender-specific aspects of the identity formation process. Using a multi-method approach, replicating the ISI results with the IPSQ, will make the conclusions stronger.

Overall, the specific research questions of this study were (1) How do identity styles relate to the behaviors of identity formation in the career domain? (2) How do contextual factors relate to identity styles and identity formation behaviors? (3) Do identity styles mediate the relation between contextual factors and identity formation behaviors? and (4) Are the associations between context, identity styles, and identity formation behaviors consistent across nations, and genders?

CHAPTER 3: METHODS

Subjects

The current study targeted young adult college students from the United States and Turkey. Participants were recruited from two universities in the U.S. (Auburn University and Tuskegee University), and one university in Turkey (Bogazici University).

Auburn Sample

Auburn University is a land-grant higher education institute that consists of primarily European-American students. Auburn participants were recruited from the classes in Department of Human Development and Family Studies. Research participation request were sent to approximately 1000 students; 359 completed the online card sort and questionnaire. Of the 359, 18 participants' surveys were not useful, thus they were dropped from the dataset. Of the remaining 341 participants, 93.6% were female, and 90.5% were European-American. There were also 5.8% African-American, 0.8% Latino/Hispanic, 0.8% Asian, and 1.9% mixed ethnicity participants. The mean age was 21 (SD= 1.11), with a range from 19 to 24 (inclusive). Among Auburn participants, 12.5% were freshman, 42.8% were sophomore, 26.3% were junior, and 19.3% were senior (one student did not report on her grade). In terms of living status, 81.3% lived with roommate(s), 11.7% lived alone, 2.5% lived with a romantic partner, 1.9% lived with parents, and 2.5% lived in other living statuses, such as siblings or other relatives. Of the sample, 41.5% stated that they work for pay.

Tuskegee Sample

Tuskegee University is a state-level institution of higher education with an African-American majority student population. Tuskegee participants were recruited from the Department of Psychology, Sociology, and Philosophy. Among the 189 students who completed

both card sort and questionnaire, only 94 were retrieved from the server due to a temporary technical problem with the process of backing up the records following completion but preceeding downloading. Seventy one percent of the sample was female, whereas 29% were male. The age ranged from 19 to 24, with a mean age of 20.56 (SD=1.32). In terms of grade level, 32% of participants were freshman, 40% were sophomore, 14% were junior, 13% were senior, and one student did not identify his grade level. Ninety six percent of the Tuskegee sample were African-American, and remaining 4% reported mixed racial background including Black and Hispanic or Black and White. Of the sample, 71% lived with roommate(s), 16% lived alone, 8% lived with parents, 2% lived with a romantic partner, and 3% had other living statuses, such as relatives, siblings, or foster care. Thirty eight percent of the sample stated that they work for pay.

Bogazici Sample

Turkish participants were recruited from College of Education of Bogazici University in Istanbul, a public university where students are accepted to enroll based on the national university exam. Approximately 450 students completed the online card sort and questionnaires; however, only 209 of them were retrieved due to the same technical problem affecting the Tuskegee sample. Sixty eight percent were female, and the mean age was 21.7 (SD=1.16), with a range from 19 to 24. Of this sample, 52.9% were sophomores, 23.1% were junior, 16.4% were senior, and 7.6% were freshman. Sixty nine percent lived with roommate(s), whereas 26% were with their families. Only 1.4% stated that they live alone, and 0.4% lived with a romantic partner; 2.7% had other living statuses, such as living with siblings or relatives. Working while studying at college is not common in Turkey. Reflective of this, only 12% of Turkish participants stated they currently work for pay.

Sample Comparisons

Comparison of three samples in terms of demographic information, such as age, sex, ethnicity, and grade, resulted in some differences. There were significantly more males in the Bogazici and Tuskegee samples, than in the Auburn sample (F (2, 640) = 28.735, p<.001; however, the proportion of males in the Bogazici and Tuskegee samples did not significantly differ from each other. The mean age in the three samples significantly differed from each other. One-Way ANOVA results showed that the Bogazici students on average are significantly older than the Auburn and Tuskegee students; and on average the Auburn students are significantly older than their Tuskegee counterparts (F (2, 640) = 37.779, p<.001). The most frequent grade level for the Auburn, Tuskegee, and Bogazici samples was sophomore year; however, Tuskegee sample had more juniors than other two samples did. The Bogazici and Auburn samples did not differ significantly; however, both were significantly different than the Tuskegee sample in terms of the average grade level in the sample.

Ethnicity was another factor that was significantly different among the three samples of the current study. The majority of participants in the Auburn sample was European-American, the majority of participants in the Tuskegee sample was African-American, and all of the participants in the Bogazici sample was Turkish. In terms of living status, the most frequent status in all samples was living with roommate(s); however, the Turkish and American samples differed in terms of the second highest choice. The second most common living status in the Auburn and Tuskegee samples was living alone, whereas it was living with parents in the Bogazici sample. The proportion of the sample who was working for pay at the time of data collection was also significantly different between Turkish and two American samples. For the

purpose of the current study, sex and age were controlled while answering the research questions.

Measures

Demographic and Background Questions

Participants in the current study were asked to report their age at the time of data collection, birthday, gender, ethnicity, family structure, number of siblings, their major and grade level (see Appendix 1a for the demographic items).

Identity Styles

The Identity Styles Inventory IV (ISI IV: Smits, 2009; Smits, Berzonsky, Soenens, Luyckx, Goossens, Kunnen, & Bosma, 2008) was used to assess the three identity styles (see Appendix 1b1 for ISI IV items). The ISI IV includes four subscales, one for each identity style, and one subscale assessing identity commitment. Only the subscales assessing identity styles were used in the current investigation. In the ISI IV, there are 7 items for informational style, 8 for normative style, and 9 items for diffuse/avoidant style. In the original study (Smits et al., 2008), alpha reliability scores for informational style subscale ranged from .71 to .76, for the normative style subscale, from .69 to .78, and for diffuse-avoidant style subscale, from .77 to .82. The ISI IV has a 5-point Likert-type response scale; it asks participants to rate the extent to which each statement reflects them. An example statement for the informational style is "When making important life decisions, I take into account different points of view before making a choice," for the normative style, "I prefer to deal with situations where I can rely on social norms and standards," and for the diffuse/avoidant style, "When I have to make an important life decision, I try to wait as long as possible in order to see what will happen." The ISI IV was translated using the back-translation method (Brislin, 1970). According to the back translation

method, the instrument first was translated into Turkish by an independent bilingual person; second, another independent bilingual translator translated the scale from Turkish back to English. Then, two versions (the original and back-translated version) were compared by the current investigator. This process was repeated three times until the two versions became conceptually equivalent.

The Identity Processing Styles Q-sort (IPSQ: Pittman et al., 2009) is the second measure of identity styles (see Appendix 1b2 for the IPSQ items). The IPSQ also is based on Berzonsky's theoretical conceptualization of identity styles; however, this instrument offers an alternative to the survey format. The q-sort methodology requires that participants read descriptions of the different styles on cards and then place the cards into a forced distribution that ranges from most to least like the participant. In the IPSQ, the 60 descriptive sentences are written on separate cards, and each participant sorts them into a fixed 9-column distribution from "most like me" to "least like me." An example item for the informational style is "My future is something I think about a lot," for the normative style "What my parents (parent-figures) think I should do is one of the MOST important influences on my life choices," and for the diffuse/avoidant style "I am not concerned with finding out who I am right now." Each participant's sort is then correlated with each of three criterion sorts, one for each style, that were developed with the assistance of 12 established identity scholars (see Pittman et al., 2009). The correlation coefficients become the scores for individual for the three styles. A significant, positive correlation with a criterion sort represents an individual's preference for using that particular style. The IPSQ has a test-retest reliability of .71 (Pittman et al., 2009); and shows moderate correlation with the ISI III (Berzonsky, 1992); .41, .54, and .48, respectively for the paired informational, normative, and diffuse/avoidant styles. Only informational and normative styles scores were used in the current

study, because the informational and diffuse/avoidant IPSQ scores have correlations ranging from -.89 to -.93 (Eryigit & Kerpelman, 2009; Pittmant et al., 2009). The IPSQ was translated into Turkish using back translation method (see Eryigit & Kerpelman, 2009 for details of the translation process). The construct validity of Turkish version of the IPSQ was established by comparing the associations between the English version of the IPSQ and individual variables (e.g. coping, self-esteem) with the associations between the Turkish version and individual variables (Eryigit & Kerpelman, 2009). Findings for the correlations among identity styles also were consistent across versions.

Identity Formation Behaviors

An adjusted version of Dimensions of Identity Development Scale (DIDS) developed by Luyckx and his colleagues (2008) was used to assess the behaviors of identity formation (see Appendix 1c for the adjusted DIDS items). The DIDS was developed based on the existing measures of identity formation including the Ego Identity Process Questionnaire (Balistreri & Busch-Rossnagel, 1995), the Utrecht Groningen – Identity Development Scale (Meeus, 1996), and the Personally Expressive Activities Questionnaire (Waterman, 1993). The DIDS measures the four dimensions of identity formation, as well as a fifth dimension, ruminative exploration. The ruminative exploration dimension was not assessed in the current investigation. There are five items assessing each dimension, an example item for the dimension of exploration in-breadth is "I think a lot about my future," for the dimension of commitment-making "I know what I want to achieve in my life," for the dimension of exploration in-depth "I work out for myself if the aims I put forward in life really suit me," and for the dimension of identification with commitments "I sense that the direction I want to take in my life will really suit me." As it is seen in the example items, in the original scale, all items ask about respondents' future plans in

general. However, in the current study, respondents were asked to think about their future education/career goals while answering this scale. Respondents also were told to think about these behaviors during the last three months. Therefore, in the present study, respondents were asked to rate each statement thinking about what they have done in the last three months regarding their future education/career goals. In the original study (Luyckx et al., 2008), the alpha reliability scores were found to be .86, .86, .83, and .80 for commitment-making, exploration in-breadth, identification with commitments, and exploration in-depth dimensions, respectively. The DIDS also was translated into Turkish, using the back translation method, following the steps used for translation of the ISI and the IPSQ. The current investigator compared the translated version and the original version in order to make sure that both versions are conceptually equivalent.

Cultural Influences

Cultural influences were measured by three social norms dimensions of the Cultural Dimensions Model (GLOBE: Hanges & Dickson, 2004) (see Appendix 1d for the GLOBE items). There are nine social norm dimensions in the GLOBE; however only three of them, future orientation, uncertainty avoidance, and gender egalitarianism are related to identity formation and were used in the current investigation. Future orientation measures the degree to which individuals in the given society engage in future-oriented behaviors. An example item for this subscale is "Most people live for the present rather than the future (reversed scored)." Gender egalitarianism refers to the degree to which society minimizes gender role differences while promoting gender equality. An example item is "Boys are encouraged more than girls to attain higher education (recoded scores)." The uncertainty avoidance dimension measures the extent to which members of a society try to avoid uncertainty by relying on established norms or

bureaucratic practices. An example item is "Most people lead highly structured lives with few unexpected events." Respondents were asked to rate 14 statements (5, 5, and 4 items for future orientation, gender egalitarianism, and uncertainty avoidance, respectively) using a seven point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). These scales have been translated into Turkish by Kabasakal and Bodur (2004) as a part of the GLOBE project. The same version was used with the Turkish participants in the current investigation.

Social-Structural Influences

Social-structural influences were measured through parental education, parental occupation status, and yearly income of parents (see Appendix 1e for social-structural influences items). For parental education, respondents were asked to report each parent's highest level of education on a continuum ranging from no formal education to advanced degree (i.e., doctorate), separately for mothers and fathers.

Parents' occupational status was measured using International Standard Classification of Occupations created by International Labor Organization in order to classify occupations into clearly defined universal groups (http://www.ilo.org/public/english/bureau/stat/isco/index.htm). According to this classification, there are six categories, which differ in terms of job duties and responsibilities, and a category for armed forces occupations. The six categories are (1) chief executive, manufacturer, landholder; (2) small business owner, or craftsman; (3) doctor, engineer, lawyer, academician; (4) teacher, nurse, officer, technician; (5) worker, elementary occupations such as cleaner, helper; and (6) forestry worker, farmers, fishermen. Participants were asked to choose the option that fits best with each of their parent's occupations, and they were asked to indicate each parent's occupation specifically. The responses were reverse coded; and the status level of the parent with the highest occupational status was the score for this

variable. Higher scores indicated higher parental occupation status.

Parental income, the third and final indicator of social-structural indicators, was measured based on the household income, using a guideline for income brackets suggested by the U.S. Census Bureau. Accordingly, participants were asked to choose one of the income categories, estimating their parents' income. The categories for the U.S. sample ranged as follow: (1) less than $15,000; (2) between $15,000 and $30,000; (3) between $30,000 and $50,000; (4) between $50,000 and $100,000; and (5) more than $100,000. For the Turkish sample, the income categories ranged as follow: (1) less than 250 YTL, (2) 250 -500 YTL, (3) 500 – 750 YTL, (4) 750 – 1000 YTL, and (5) more than 1000 YTL (Sener, Terzioglu, & Karabulut, 2007). Higher scores for this variable indicated higher amounts of income.

Immediate Environment Influences

Personal opportunities were measured by an adapted version of the *availability of opportunities scale* (see Appendix 1f1 for availability of opportunities items) developed by Kluegel and Smith (1986) to assess opportunities in the U.S. and in Turkey. The original scale consisted five questions asking about beliefs about personal opportunities; however only three of them were asked in terms of comparison with an average person in America or in Turkey. In the current investigation, these three questions were used, because the other two questions make comparisons with the parents, and with their own past experiences, which were not relevant for the current investigation. Therefore, in the present study three questions assessing personal opportunities asked respondents to think about their own opportunities compared to an average person in their country. The items are "How good a chance do you have to get ahead today, if you work hard?" (ranging from (1) much worse than average to (5) much better than average), "Do you think you have a fair opportunity to make the most of yourself in life?" (ranging from

(1) strongly disagree to (5) strongly agree), and "Thinking about your future career, do you expect that over the next 5-10 years you will…. " (ranging from (1) lose some ground to (5) advance rapidly). Respondents were asked to rate each question on a five –point Likert-type scale. A mean score was computed; higher scores indicated higher opportunities perceived for oneself compared to an average person in one's country. These questions also were translated into Turkish, using back-translation method by two bilingual individuals and the current investigator.

Social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS: Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS (see 1f2 for the items) is a 12-item scale that measures perceptions of social support adequacy from three specific sources: family, friends, and a significant other. It has a 7-point response scale, ranging from (1) strongly disagree to (7) strongly agree. With this scale, it is possible to calculate three separate scores for each source of social support, as well as a total score of perceived support from others. An example item for the family subscale is "My family really tries to help me," for the friends subscale "I can talk about my problems with my friends," and for the significant other subscale "There is a special person who is around when I am in need." This scale was translated into Turkish and tested by Eker and Arkar (1995). In the current investigation, the existing Turkish version was used with the Turkish sample. Both original and Turkish versions of the MSPSS show strong reliability and validity with college students. In the original study (Zimmet et al., 1988), the reliability for the total scale was found to be .88, whereas it was .91, .87, and .85 for significant other, family, and friends subscales, respectively. The reliabilities in the Turkish version were .85, .91, .87, and .87 for the total scale, significant other subscale, family subscale, and friends subscale, respectively. For the current investigation, only the total scores was used,

and higher scores indicated higher social support.

Perceived discrimination was measured by the Everyday discrimination Scale (EDS: Williams, Yu, Jackson, & Anderson, 1997). The EDS (see Appendix 1f3 for the items) is a 9-item scale, and measures unfair treatment. An example item is "You are treated with less respect than other people." The response scale ranges from 1 (never experience unfair treatment) to 6 (experience unfair treatment almost everyday). The alpha reliabilities for this scale have ranged from .88 to .91 in previous studies (Gee, Spencer, Chen, & Tekeuchi, 2007; Panter, Daye, Allen, Wightman, & Deo, 2008; Williams et al., 1997). This scale was translated into Turkish by two bilingual translators and the current investigator, using the back-translation method. Higher scores indicated more perceived everyday discrimination.

Control Variables

Depression was measured using a short version of Center for Epidemiologic Studies Depression Scale (CES-D: Radloff, 1977). This scale (see Appendix 1g1 for the items) was designed to measure depression in the general population (Radolf & Teri, 1986). Originally this scale is consisted of 20 items, however in the present study only the somatic symptoms subscale (seven items) was used. An example item for this scale is "I did not feel like eating; my appetite was poor." This measure has a four point, Likert-type response scale, ranging from (0) rarely or none of the time to (3) most or all of the time. A mean score was calculated in order to get a score that reflected the depression level of participants. This scale was translated into Turkish as a part of a cross-cultural research project (Spijker, de Graaf, Beekman, Omal, & Nolin, 2004). The existing Turkish version was used in the current investigation. The internal consistency scores for the English version of the CES-D ranged from .87 to .92 (Roberts, Andrews, Lewinsohn & Hops, 1990), and forTurkish version ranged from .87 to .93 (Spijker et al., 2004).

Rosenberg's Self-Esteem Scale (Rosenberg, 1965) was used to assess global self-esteem. There are ten items in the original scale, however, a shortened version (see Appendix 1g2 for the items), which has five items that was used in the Healthy Couples Healthy Children: Targeting Youth Project, was used in the current investigation. This instrument has a five-point Liket-type response scale, ranging from (1) no, certainly not to (5) yes, certainly. An example item is "I feel I am a person of worth, at least on an equal basis with others." This scale was translated into Turkish by Cuhadaroglu (1990), and has been used in various research projects (Yetim, 1991, 1993, 2003). In an American college sample, reliability of the Rosenberg's self-esteem scale was found to be .87 (Nurmi et al, 1997). Similarly, the test-retest reliability scores for Turkish version ranged from .86 to .89.

Trait anxiety scores of State Trait Anxiety Scale (STAI-T: Spielberger, Gorsuch, & Lushene, 1970) was used in the present study. The trait form of the STAI is a 20-item (see Appendix 1g4 for the items) self-report measure aims to assess the level of anxiety an individual generally feels. The STAI has a four point response scale, ranging from (1) never to (4) always. An example item for the trait anxiety scale is "Some unimportant thoughts runs through my mind and bother me." The STAI has been used in many research projects in the literature and has an established statistical significance. Its Turkish adaptation study was conducted by Oner (1976). Its reliability and validity also were established in various Turkish samples (Oner, & LeCompte, 1983; Oner 1997). Both the English and Turkish versions of the STAI have established reliability (Karagozoglu, Masten, Baloglu, 2005).

Procedure

Universities from each research site were chosen based on convenience and compliance with demands of the current investigation. At least one faculty from each university was

contacted and agreed to assist with preparing and submitting an application to Institutional Review Board for the universities in the U.S. or getting a formal permission letter for universities in Turkey. These cooperating faculty also agreed to assist with announcing the study to the faculty in the departments and recruiting participants. Students who were enrolled in Spring 2009 semester classes were eligible to participate to the research project. Students at each university were contacted through class visits. Only classes where extra credit opportunities for participation are provided were visited in the U.S.; whereas extra credit was not offered for the participants in Turkey; the instructors were asked whether they let the current investigator to announce the project in their classes. Class visits were done by the current investigator using the fund awarded by the Auburn University Women's Philanthropy Board. Informational flyers, that include a project description and how to participate, were distributed in all the classes. A contact sheet also was circulated in the classes where interested students provided their names and email addresses. Students of Auburn and Tuskegee Universities who were under 19 years old were eligible to participate in this project after submitting the signed parental consent/student assent form. Individuals who are 18 and above are considered as adults in Turkey; however, there is no parental consent regulation for minors. Turkish participants who are under 18 were asked to show a copy of the recruitment flyer and the information letter to their parents.

One time data were collected via the Auburn University network and the web site fp.auburn.edu. The identity of the web site is verified by VeriSign Trust Network, a certificate authority that Auburn University Office of Information Technology trusts. Privacy between fp.auburn.edu and clients is protected through use of the cryptographic protocol Secure Socket Layer (SSL) and the data are encrypted using high-grade encryption (RC4 128bit). This encryption makes it very difficult for unauthorized people to view the information traveling

between computers. The database itself was located on appdata.auburn.edu. It is a Microsoft SQL Server system and was not accessible outside the Auburn intranet. The fp.auburn.edu server accesses appdata.auburn.edu directly to store the data. The website was set up to send the link to the student's email address. Specifically, the website sent the URL for the survey as an automatic message. The current investigator entered the email addresses into the website so that the survey and the q-sort could be sent to the participants. The first page of the website included a welcome message with an information letter that participants were asked to read and then decide whether they agree to participate in this study. If they click "Agree" they were taken to the second page which was the survey. After completing this section, participants clicked "Next" and continue with the q-sort. Collecting online data had several advantages. The current literature comparing paper-pencil surveys to web-based data collection rarely finds problems with data collected online (Birnbaum, 2004; Strickland et al., 2003). Moreover, missing data problems (such as, accidentally skipping questions, circling two responses on the same line) are less likely to occur in the web-based surveys, because the program generally informs the respondent when mistakes occur (Stanton, 1998). In addition, by collecting online data, the step of data entry is eliminated, which is one of the longest tasks of a research project.

All data were transformed into SPSS files, and were analyzed using SPSS and AMOS software programs. Prior to testing the fit of the hypothesized models, descriptives for each variable were examined in order to describe central tendencies and variances within each variable. Second, reliability scores of each measure were examined to ensure internal consistency of all the scales used in the current investigation. Cronbach's Coefficient Alpha scores were calculated to assess internal consistency separately for the English and Turkish versions of each scale. Third, mean differences were examined by One-Way Analysis of Variance to determine if

there were any significant mean differences among the three samples. To test the hypothesized models of the current study, multiple paths that link the study variables to each other were examined using Structural Equation Modeling (SEM: Byrne, 2001). In SEM, associations between variables are represented by a series of structural (regression) equations, and can be modeled pictorially in the AMOS 6 statistical software program. The goodness of fit of the models was evaluated by examining the chi-square statistics, the root mean square of approximation (RMSEA), and the comparative fit index (CFI). The chi-square statistics is expected to be non-significant in order to indicate an acceptable fit with data. In addition, finding the ration of chi-square to degrees of freedom less than five will indicate a good fit (Garson, 2006). RMSEA is used to estimate the lack of fit, and it should be less than .05 in order to state a good fit in the model compared to a saturated model (Byrne, 2001). CFI is based on the non-centrality measure, and computed by using the differences between chi-square and degrees of freedom for hypothesized model and null model. CFI is affected by the average size of correlations in the data. In order to state a good fit, CFI should be higher than .95. In order to control age, sex, as well as depression, self-esteem and trait anxiety, their effects were residualized through the use of regression analysis. Path analysis was used in order to test the models hypothesized in the first and second research questions of the current investigation. Depression, self-esteem, and trait anxiety were controlled in the analyses through use of hierarchical regression. The identity styles and dimensions of identity formation behaviors were regressed on the well-being factors; and residualized coefficients were used in the controlled models. The first research question of this study was whether identity styles predict current identity formation behaviors (see Figure 4). The second research question aimed to examine the role of contextual influences on identity styles, and identity formation behaviors (see Figure 5).

Mediation models were tested for the third research question which asked whether identity styles mediate the relation between contextual influences and identity formation behaviors. For the last research question, multi-group analyses were run to compare the results across the three samples.

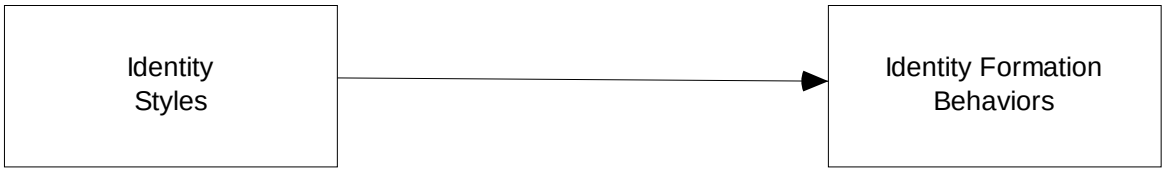

Figure 4. Conceptual model of research question 1.

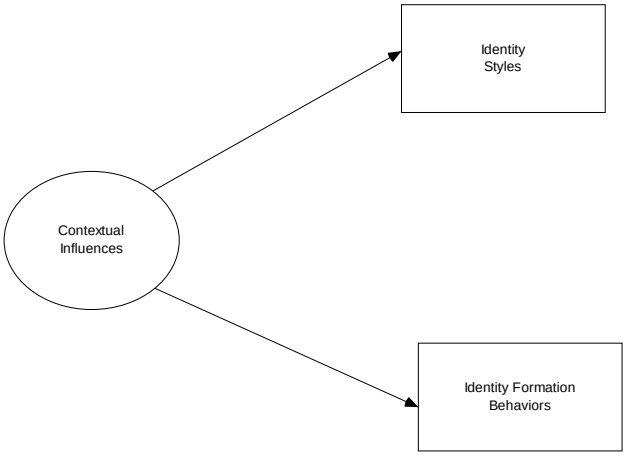

Figure 5. Conceptual model of research question 2.

CHAPTER 4: RESULTS

The purpose of the current study was to examine associations among contextual influences (i.e., cultural, social-structural, and immediate environment influences), identity styles, and identity formation behaviors controlling for well-being factors (i.e., depression, self-esteem, and trait anxiety) across three different college student samples. The current study also aimed to investigate the mediating role of identity styles in the relation between the contextual influences and identity formation behaviors, as well as the moderating effect of nation on these relations. Finally, the current study aimed to generalize the findings across different approaches taken in the assessment of identity styles, the ISI and the IPSQ. To address these questions, one-time online data were collected from Auburn, Tuskegee, and Bogazici Universities. Research questions were analyzed using the SPSS and AMOS statistical softwares. The moderating role of sex was not examined in the current study due to the low proportion of males in the three samples; however, sex, as well as age were controlled in all the analyses when testing the hypotheses. In the results section, first the general descriptives of each study variable, and the bivariate associations among these variables are provided. Next, the results for each research question are reported in separate sections. In the final section, the full set of findings are summarized and summary tables are provided.

Preliminary Analyses

Identity Styles

Informational style

On average, participants in each sample had a positive association with informational style when it was measured by the IPSQ. Mean informational scores (i.e., correlations between the participants' sorts and the criterion sort for informational style) were computed (see Table 1).

Only 5% of the Auburn Sample had a negative correlation with the criterion sort of informational style; and only 2% and 3% of the significant correlations were negative in Tuskegee and Bogazici samples, respectively. Although one-way ANOVA statistics indicated significant mean differences among the three samples (F (2, 546) = 4.619, $p < .01$), a post hoc analysis did not yield any differences between pairs of groups. Sex differences were computed only for the Tuskegee and Bogazici samples, but not for the Auburn participants because the majority was female. One sex difference was found in the Bogazici sample, where females scored higher on informational style when measured by the IPSQ than males did (F (2, 154) = 7.34, $p < .01$). There were no significant differences between females and males in the Tuskegee sample.

Information orientation was also measured by the ISI-IV (hereafter it will be called the ISI). The scale was found to be reliable in the three samples (see Table 2). Distributions of informational style scores showed a small degree of negative skew (skew value = -.44 (*se*=*.13*) in the Auburn sample; skew value = -.46 (*se*= .25) in the Tuskegee sample; and skew value= -.30 *(*se= .17) in the Turkish Sample). The average information orientation was relatively high in the three groups (see Table 1). One-way ANOVA results showed that, on average, the Bogazici sample scored higher on the ISI-informational style than both American samples did (F (2, 641)= 13.637, $p <.001$). Auburn and Tuskegee samples did not differ from each other. The ISI-informational style did not differ between females and males in the Tuskegee and Bogazici samples.

Normative style

The majority of normative style scores when measured by the IPSQ were approximately zero, indicating that the correlation with the normative criterion sort was neither positive nor negative (see Table 1). Only 10 participants in Bogazici sample had correlation greater than .25

with the normative criterion sort (25 of them had a correlation less than -.25). Similarly only 3 out of 83 Tuskegee participants sorts correlated with and the normative .25 or more and 6 of them had correlation coefficients less than -.25. Normative style correlations for Auburn participants were greater than .25 for 62 participants, and less than -.25 for 16 participants. Group mean comparisons using One-way ANOVA showed that, on average, the Auburn sample had significantly higher normative scores when measured by the IPSQ than the Tuskegee and Bogazici samples had (F (2, 546) = 32.147, $p < .001$). There were no sex differences in the Tuskegee and Bogazici samples.

Table 1. Descriptives of Study Variables in each Sample, Including Sample Size (*N*), Mean (*Mean*) with Standard Deviation (*SD*), Minimum (*Min*) and Maximum (*Max*) Scores.

	Auburn Sample				Tuskegee Sample				Bogazici Sample			
	N	*Mean (SD)*	*Min*	*Max*	*N*	*Mean (SD)*	*Min*	*Max*	*N*	*Mean (SD)*	*Min*	*Max*
IPSQ-INFO	310	.36 (.20)	-.28	.75	83	.42 (.17)	-.04	.73	156	.41 (.18)	-.08	.65
ISI-INFO	341	4.05 (.46)	2.29	5.00	94	3.96 (.53)	2.29	5.00	209	4.21 (.42)	2.71	5.00
IPSQ-NORM	310	.09 (.20)	-.49	.54	83	-.01 (14)	-.33	.25	156	-.05 (.18)	-.50	.41
ISI-NORM	341	3.22 (.40)	2.13	4.25	94	3.24 (.51)	1.88	4.38	209	2.78 (.55)	1.38	4.38
ISI-DIFF	341	2.45 (.44)	1.00	4.56	94	2.39 (.67)	1.19	3.89	209	2.47 (.52)	1.33	4.44
DIDS-CM	341	3.88 (.71)	1.80	5.00	94	4.14 (.61)	2.00	5.00	209	3.25 (.77)	1.20	5.00
DIDS-IC	341	4.04 (.59)	2.00	5.00	94	4.24 (.59)	2.40	5.00	209	3.45 (.69)	1.40	5.00
DIDS-ED	341	4.22 (.65)	1.00	5.00	94	4.34 (.59)	2.33	5.00	209	3.86 (.66)	1.00	5.00
DIDS-EB	341	3.69 (.71)	1.33	5.00	94	3.67 (.87)	1.67	5.00	209	3.75 (.68)	1.67	5.00
FUT ORINT	341	4.74 (.85)	2.20	7.00	94	4.65 (1.22)	1.40	7.00	209	4.29 (1.21)	1.00	7.00
UN AVOID	341	4.30 (.97)	1.00	7.00	94	4.05 (1.09)	1.00	6.33	209	4.21 (1.19)	1.00	7.00
GEN EGAL	340	2.66 (.92)	1.00	4.00	93	2.25 (1.04)	1.00	4.00	209	2.15 (.85)	1.00	4.00
FEDU	333	7.64 (1.60)	1.00	10.00	80	6.72 (1.64)	2.00	9.00	207	5.81 (2.04)	1.00	6.00
FOCCUP	318	4.05 (1.35)	1.00	6.00	62	3.33 (1.17)	1.00	6.00	164	3.09 (1.06)	1.00	6.00
FINCOME	307	3.87 (.95)	1.00	5.00	55	3.16 (1.09)	1.00	5.00	196	1.64 (.94)	1.00	5.00
MEDU	334	7.65 (1.27)	2.00	10.00	91	7.63 (1.40)	5.00	10.00	206	5.26 (2.73)	1.00	10.00

MOCCUP	281	3.42 (1.20)	1.00	6.00	80	3.07 (.91)	2.00	6.00	150	2.77 (.98)	1.00	6.00
MINCOME	307	2.97 (1.08)	1.00	5.00	55	3.16 (1.02)	1.00	5.00	196	1.34 (.66)	1.00	4.00
PRS OPP	335	4.34 (.62)	2.00	5.00	91	4.45 (.65)	2.00	5.00	209	3.54 (.66)	1.00	5.00
SOC SUP	337	4.46 (.53)	2.50	5.00	94	4.10 (.66)	2.00	5.00	208	3.92 (.69)	1.92	5.00
EVDY DISC	337	5.12 (.60)	2.29	6.00	94	4.80 (.74)	2.78	6.00	208	5.08 (.56)	3.13	6.00
DEPRES	336	1.76 (.52)	1.00	3.86	93	1.90 (.51)	1.00	3.57	209	1.99 (.70)	1.00	4.00
TRAIT ANX	336	1.98 (.38)	1.20	3.35	93	2.00 (.37)	1.25	2.80	209	2.26 (.44)	1.05	3.65
S ESTEEM	336	4.24 (.66)	1.00	5.00	93	4.43 (.64)	1.00	5.00	209	3.94 (.76)	1.40	5.00

Note: IPSQ-INFO= IPSQ-informational style; ISI-INFO=ISI-informational style; IPSQ-NORM= IPSQ-normative style; ISI-NORM=ISI-normative style; ISI-DIFF=ISI-diffuse/avoidant style; DIDS-CM= commitment making; DIDS-IC= identification with commitments; DIDS-EB=exploration in-breadth; and DIDS-ED= exploration in-depth; FUT ORIENT= Future Orientation; UN AVOID=Uncertainty Avoidance; GEN EGAL=Gender Egalitarianism; FEDU= Father Education; FOCCUP= Father Occupation; FINCOME=Father Income; MEDU=Mother Education; MOCCUP=Mother Occupation; MINCOME=Mother Income; PRS OPP= Personal Opportunities; SOC SUP= Social Support; EVDY DISC= Everyday Discrimination; DEPRES= Depression; TRAIT ANX= Trait Anxiety; S ESTEEM= Self-Esteem.

Table 2. Cronbach Alpha Reliabilities or Bivariate Correlation Scores (If There Are Only Two Items) of the Study Variables in Each Sample

	Auburn Sample	Tuskegee Sample	Bogazici Sample
ISI-INFO	.74	.73	.80
ISI-NORM	.71	.69	.73
ISI-DIFF	.79	.84	.81
DIDS-CM	.85	.80	.87
DIDS-IC	.80	.79	.82
DIDS-ED	.81	.68	.66
DIDS-EB	.67	.69	.73
FUT ORINT	.59	.67	.65
UN AVOID	.58	.55	.58
GEN EGAL [a]	.44***	.39***	.26**
PRS OPP [a]	.36***	.29**	.17**
SOC SUP	.92	.88	.90
EVDY DISC	.88	.87	.80
DEPRES	.76	.71	.84
S ESTEEM	.92	.86	.89
TRAIT ANX	.85	.83	.89

Note: see Table 1 Notes for abbreviations. [a] Correlation coefficients were calculated. * $p < .05$, ** $p < .01$ *** $p < .001$

The normative style scale was found to be reliable when measured by the ISI (see Table 2). Mean scores for the normative style were also higher in both American samples compared to the mean score in the Bogazici sample was (see Table 1). Distributions in all samples were found to be normal. When measured by the ISI, the mean normative style score for the Bogazici sample was found to be significantly lower than the average scores for the American samples ($F(2, 641)= 61.443$, $p< .001$). Overall, Auburn students had the highest normative style scores, and Bogazici participants had the lowest average normative style scores. There were no sex differences.

Diffuse/avoidant style

Diffuse/avoidant style was computed using only the ISI (see Table 2 for reliabilities). Mean scores showed that, on average, participants of the current study were less likely to be

diffuse/avoidant oriented (see Table 1). Supportively, one-way ANOVA results showed no significant mean differences among the three groups; further analyses did not show any sex differences. However, diffuse/avoidant style was more skewed in the Bogazici sample than it was in the American samples (skew value= .19 (*se*= .13) in the Auburn sample; skew value= .11 (*se*= .25) in the Tuskegee sample; and skew value= .74 (*se*= .17) in the Bogazici sample).

Overall, the descriptive statistics suggest that the majority of the participants were high on informational style and low on diffuse/avoidant style; and there were few group differences at the mean level. The associations among the identity styles were also similar across groups, except for few cases (see Table 3). The two measures of informational style had moderate positive correlations in all samples. As expected, the IPSQ- informational style had a strong negative correlation with the IPSQ-diffuse/avoidant style in all samples, which supported the two dimensional approach of identity processing orientation. The two measures of normative style also had moderate positive correlations in the Auburn and Bogazici samples, but not in the Tuskegee sample. Cross style associations were also similar across samples, especially between the Auburn and Bogazici samples. The IPSQ-informational style had significant negative correlations with the IPSQ-normative style and the ISI-normative style in the Auburn and Bogazici samples; but their associations were non-significant in the Tuskegee sample. On the other hand, the ISI-informational style had significant association only with the ISI-normative style; and this correlation was positive in the American samples, but negative in the Bogazici sample. The bivariate associations between informational and normative styles were consistently negative in the Bogazici sample; whereas the direction of the association depended on the method in the Auburn sample. The ISI-diffuse/avoidant style consistently had negative correlations with the ISI-informational style, the IPSQ-informational style, and the IPSQ-

normative style (except in the Tuskegee sample); it also had positive correlations with the ISI-normative style in all samples.

Identity Formation Behaviors

Commitment scales

The factor loadings for the two commitment scales, commitment making, and identification with commitments items, were significant and similar to findings in the original study conducted by Luyckx et. al. (2008); as well as similar across the samples of the current study. The composites had reliabilities ranging from .79 to .87 across samples (see Table 2).

Commitment making refers to the degree to which participants made tentative choices about their career. Descriptive statistics showed that all the participants were high on commitment making (see Table 1). One-Way ANOVA results showed significant mean differences (F (2, 641) = 69.420, p< .001). After examining the post hoc analysis, it was found that average commitment making in the Tuskegee sample was the highest, whereas the commitment making scores of the Bogazici sample was the lowest among the three groups.

Similar results were found for the identification with commitments scale, which refers to the degree to which individuals feel certain about and have internalized their choices. As it is seen in Table 1, mean scores ranged from 3.45 to 4.24 across samples, with a relatively small standard deviation. There were mean level differences across samples based on One-Way ANOVA findings (F (2, 641) = 77.079, p< .001). The Tuskegee sample was the highest and the Bogazici sample was the lowest on identification with commitments.

Overall, the three samples showed high levels of commitment making and identification with commitments. The descriptive patterns of the two commitment scales were also similar to each other. There were no sex differences in the Tuskegee and Bogazici samples. The two

commitment scales were highly correlated, where correlation scores ranged from .77 to 82 across samples. The correlation of the two commitment scales with the identity styles also had similar patterns. As seen in Table 3, the two commitment scales had positive correlations with both measures of informational style in all samples, except in the Tuskegee sample when the ISI was used. In general, there were few significant associations with the normative style measures. There was a significant association between the IPSQ-normative style and commitment making in the Auburn and Bogazici samples; and between IPSQ-normative style and identification with commitments in the Bogazici sample.

Table 3. Correlations Among Identity Variables in the Auburn Sample (*N*= 341, 310 When IPSQ was Measured), Tuskegee Sample (*N*=94, 83 with IPSQ), and Bogazici Sample *(N*= 209, 156 with IPSQ).

	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. IPSQ-INFO	.38***	-.28***	-.24***	-.93***	-.52***	.24***	.31***	.27***	.09
	.37**	-.14	-.12	-.93***	-.57***	.35**	.26**	.32**	-.09
	.57***	-.21**	-.27**	-.92***	-.54***	.32***	.42***	.37***	.30***
2. ISI-INFO		-.06	.15**	-.34***	-.34***	.12*	.25***	.19***	.26***
		.04	.45***	-.38***	-.05	.14	.26*	.22*	.23*
		.03	-.16**	-.51***	-.39***	.14*	.24***	.25***	.33***
3. IPSQ-NORM			.42***	-.03	-.16**	.12*	.05	.10	.03
			.21	-.16	.09	.01	.11	.06	-.08
			.45***	-.18*	-.20**	.17*	.16*	.04	-.11
4. ISI-NORM				.10	.16**	.00	-.03	-.06	.16**
				.01	.46***	-.18	-.01	-.14	.09
				.04	.25***	-.07	-.07	-.20**	-.04
5. IPSQ-DIFF					.59***	-.29***	-.35***	-.32***	-.10
					.54***	-.38***	-.33**	-.34**	.15
					.55***	-.35***	-.44***	-.31***	-.28***
6. ISI-DIFF						-.35***	-.39***	-.36***	-.01
						-.44***	-.31**	-.35**	.19
						-.40***	-.46***	-.28***	-.17*
7. DIDS-CM							.81***	.66***	-.12*
							.77***	.70***	-.19
							.82***	.47***	.02
8. DIDS-IC								.66***	.00
								.63***	-.07
								.54***	.17*
9. DIDS-ED									.10
									.09
									.34***
10. DIDS-EB									

Note: First line of scores represents the correlation coefficients of Auburn sample; second line includes scores of Tuskegee sample; and third line represents Bogazici sample's correlation scores. See Table 1 Notes for abbreviations. ** p < .05, ** p < .01, and *** p < .001.*

Exploration scales

Exploration in-breadth and exploration in-depth variables were the proposed dimensions of exploration, and were measured by the DIDS exploration in-breath and exploration in-depth scales. However, the reliabilities of each subscale in each sample were not high enough to consider the subscales internally consistent. Examinations of correlations among exploration items (see Appendix 1c for the item descriptions) showed that all exploration in-breadth items were correlated with each other in the Bogazici sample, but not in the American samples (see Table 4). In terms of exploration in-depth items, none of the correlations were consistently significant across three samples. Either correlations were significant in the American samples but not in the Bogazici sample or vice versa, or in the Auburn and Bogazici samples, but not in the Tuskegee sample.

Next, exploratory factor analysis using all the exploration items was conducted. Exploratory factor analysis in each sample yielded two factors. As expected, the item loadings were different from the original exploration dimensions, as well as different across samples. After searching for factors common across samples, yet conceptually meaningful, it was decided to exclude three exploration in-depth items (ED3, ED4, and ED5) which did not have significant associations with each other or with other items across samples. Finally, two common factors emerged in the three samples. The first factor included the items EB1 (thinking about the direction one wants to take in her or his career), EB2 (thinking about how one sees her or his career), and ED1 (talking with other people about the career plans one has made). This dimension reflected actively thinking about and discussing with others one's career goals, which is similar to the exploration in-depth dimension. The second factor included

Table 4. Correlations Among Exploration Items of the Current Study in Auburn Sample (*N*= 341, Tuskegee Sample (*N*=94), and Bogazici Sample (*N*= 209).

	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. EB1	**.60*** **	-.01	.17**	.02	**.50*** **	.36***	.12*	.04	.12*
	.53* **	-.04	.15	.08	**.38*** **	.19	-.10	.07	.05
	.54* **	.29***	.33***	.31***	**.32*** **	-.03	.16*	-.04	.31***
2. EB2		-.02	.21**	.01	**.65*** **	.46***	.06	.00	.09
		-.03	.08	-.00	**.43*** **	.36***	-.10	.13	-.16
		.17**	.26***	.20**	**.36*** **	-.11	.13*	-.20**	.19**
3. EB3			**.31*** **	**.52*** **	.04	.08	.31***	.32***	.24***
			.49* **	**.55*** **	.10	.06	.24*	.44***	.15
			.37* **	**.60*** **	.03	.22**	.02	.12	.32***
4. EB4				**.34*** **	.23***	.13***	.25***	.32***	.28***
				.26* **	.07	.19	.03	.35***	.19
				.42* **	.12	.23**	.28***	.20**	.54***
5. EB5					.02	.09	.23***	.44***	.28***
					.12	-.04	.27**	.37***	.33***
					.18**	.23**	.13	.13	.36***
6. ED1						.31***	.22***	.08	.14**
						.27**	.15	.09	-.04
						-.06	.39***	-.07	.12
7. ED2							.01	.10	.10
							-.08	.14	.15
							.16*	.46***	.24***
8. ED3								.16**	.14**
								.11	-.14
								.17	.22**
9. ED4									.30***
									.17
									.12
10. ED5									

Note: The first line of scores represents the correlation coefficients of the Auburn sample; the second line includes scores of the Tuskegee sample; and the third line represents theBogazici sample's correlation score. ** p < .05, ** p< .01, and *** p < .001.*

EB3 (figuring out which career type would suit), EB4 (thinking about career aims), and EB5 (finding out the career type which is good). This factor emphasized trying to figure out one's own career direction, which is conceptually similar to the exploration in-breadth dimension. Reliabilities for these two factors ranged from .66 to .81 across samples (see Table 2 for reliabilities).

Measurement models for the newly derived exploration factors were examined in all groups. As shown in Figures 6, 7, and 8, factor loading of the exploration items were similar across the groups. Multi group analysis also revealed that there were no significant differences between the unconstrained models and the models where paths were constrained to be equal across groups (see Table 5 for model fit indices). Furthermore, the correlations between the exploration factors and commitment factors supported the discriminate validity of the two exploration factors (see Table 3). Both commitment scales did not have a significant correlation with the newly derived exploration in-breadth factor, whereas both commitment factors had positive correlations with the newly derived exploration in-depth factor. These associations were similar to the findings for the original DIDS dimensions (Luyckx et. al., 2008). Luyckx and his colleagues found that both the commitment making and identification with commitment dimensions had significant positive associations with the exploration in-depth dimension; whereas their association with the exploration in-breadth dimension was either negative or non-significant.

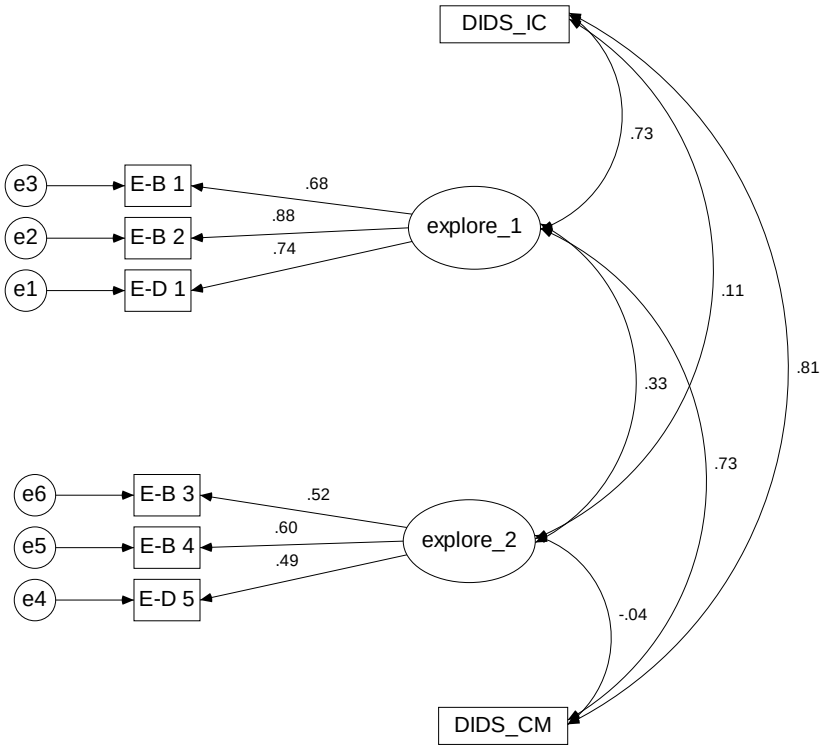

Figure 6. Measurement Model of Identity Formation Behaviors in Auburn Sample (N= 341).

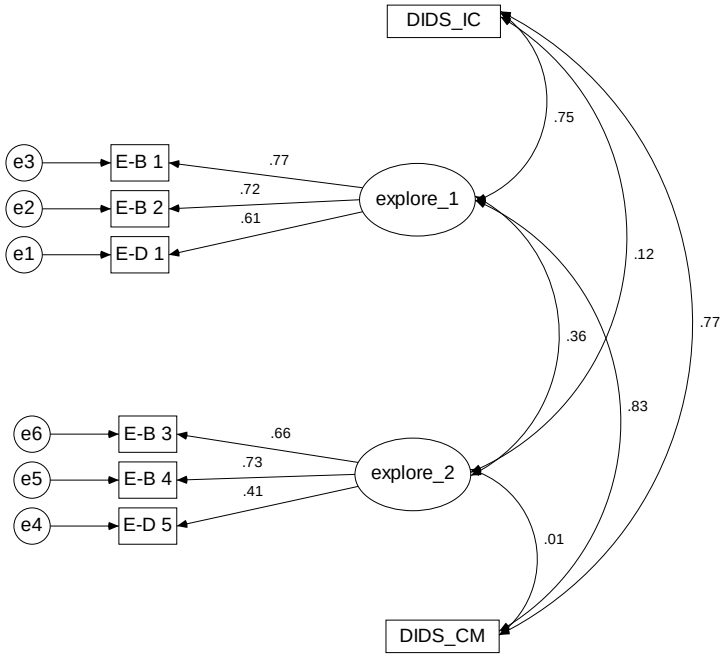

Figure 7. Measurement Model of Identity Formation Behaviors in Tuskegee Sample (N= 94).

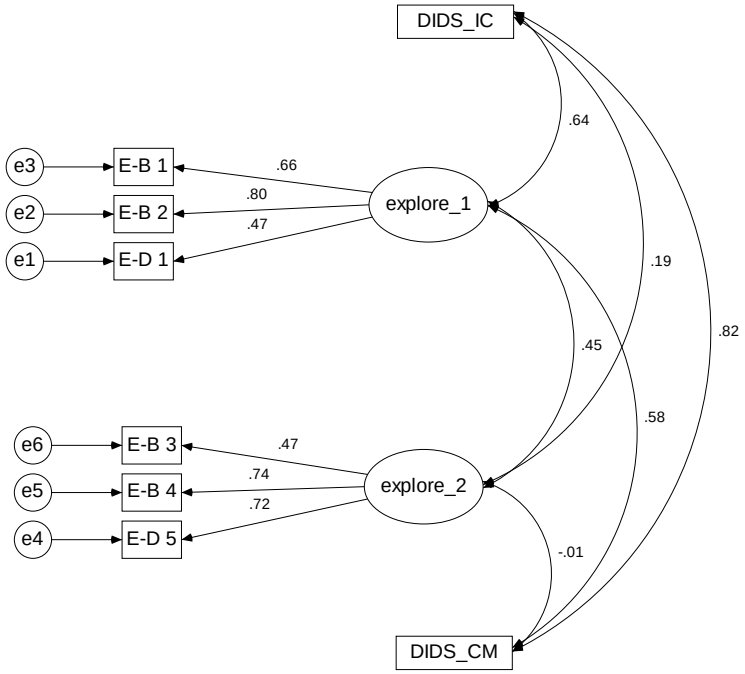

Figure 8. Measurement Model of Identity Formation Behaviors in Bogazici Sample (N= 209).

Table 5. Model Fit Indices of Identity Formation Behavior Scales in Multi Group Analysis – Measurement Models.

	Unconstrained Model	Constrained Model
CFI	.986	.982
RMSEA	.028 (p=.013)	.029 (p=.017)
AIC	190.115	189.805
BIC	197.130	195.835
Chi-Square	76.115 (df=51, p=.013)	91.805 (df=65, p=.004)

Finally, mean scores were computed for each exploration factor; there were significant group differences (F (2, 641)= 27.518, p< .001). Post hoc examination showed that, on average, both American samples scored higher than the Bogazici sample did on the exploration in-depth factor. There were no significant differences between the Auburn and Tuskegee samples. No significant group differences were found for exploration in-breadth factor (F (2, 641)= .556,

p=.574). There were no sex differences in the Tuskegee and Bogazici samples. Paired sample mean differences also were calculated using t-tests. Results showed that, on average, participants in both American samples scored higher on the exploration in-depth factor than on the exploration in-breadth factor (*t*= 16.745, *df*=340, *p* <.001 for the Auburn sample; and *t*= 6.490, *df*=94, *p* <.001 for the Tuskegee sample); whereas there was no significant difference in the Bogazici sample (*t*= 1.998, *df*=208, *ns*).

Cultural Factors

Future orientation

Future orientation was measured by five items. Higher scores indicated more future orientation. The reliability of future orientation ranged from .59 to .67 across the three samples (see Table 2). Examination of factor analysis did not yield a more internally consistent composite of future orientation in the samples. Descriptive statistics of the future orientation variable have shown that average future orientation in all three samples was high with a small negative skew, except the distribution in the Tuskegee sample (skew value was -.23, *se*=.13 in the Auburn sample; skew value= -.60, *se*= -.25 in the Tuskegee sample; and skew value = -.l8, *se*= .17 in the Bogazici sample; see Table 1 for means and standard deviations). Significant mean differences were found using One-Way ANOVA (*F* (2, 641)= 13.496, *p* < .001). Post hoc analysis revealed that the only significant difference was between the Auburn and Bogazici samples, where Auburn participants, on average, scored higher than Bogazici participants did. No sex differences were found.

Uncertainty avoidance

The second factor of cultural influences was uncertainty avoidance which was measured by four items, where higher scores indicated more uncertainty avoidance. However, one item

was removed from the scale because it did not have any significant correlations with other items in any of the samples. Confirmatory factor analysis also was conducted in order to examine whether factor loadings of three remaining items were similar across samples. Model comparisons revealed that there were no significant differences in goodness of fit between unconstrained and constrained models. The internal consistencies of the three uncertainty avoidance items ranged from .55 to .58 for the Auburn, Tuskegee, and Bogazici samples (see Table 2). On average uncertainty avoidance scores were normally distributed in the three samples (see Table 1). One-Way ANOVA statistics were non-significant indicating there were no mean differences across the three samples of the current study; there also were no sex differences in the Tuskegee and Bogazici samples.

Gender egalitarianism

In order to construct a composite of gender egalitarianism which was consistent across samples, an item related to athletic programs for boys or girls (GE2) and an item related to who is likely to have the positions of high offices (GE5) were chosen because they had significant correlations with each other in the three samples (see Table 6). Item scores were recoded so that higher scores indicated more gender egalitarianism. The mean of the recoded two items was calculated. Average scores ranged from 2.15 to 2.66 in the samples (see Table 1). One-Way ANOVA results showed that there were significant group differences among samples (F (2.639) = 22.06, $p < .001$); however, post hoc analyses did not reveal any significant group differences. There were also no sex differences in the Tuskegee and Bogazici samples.

Table 6. Intercorrelations among Gender

Egalitarianism Items.

	2.	3.	4.	5.
1. GE1	-.12 -.03 .06	.16 .63*** .44***	-.05 .10 .10	-.14 -.18** -.04
2. GE2		.01 -.04 .15	.26*** .17*** .12	.44*** .39*** .26**
3. GE3			-.18** .12 .16	-.12 -.18*** -.05
4. GE4				.19** .08 .06
5. GE5				

Note: Correlation scores for the Auburn, Tuskegee, and Bogazici samples are presented on the first, second and third lines, respectively. ** $p < .05$, ** $p < .01$, and *** $p < .001$*.

Overall, descriptive statistics of the three cultural factors were similar across samples, except that the Auburn sample was significantly higher in future orientation than the Bogazici sample was. Bivariate associations among the three factors were also examined (see Table 7, 8, and 9). Future orientation and uncertainty avoidance variables were positively correlated in the three samples; and gender egalitarianism variable had a positive correlation with the future orientation variable only in the Tuskegee sample.

Table 7. Correlations Among Contextual Variables in the Auburn Sample (*N*=341)

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. FUT ORINT	**.29*** **	.10	-.10	-.05	-.03	.05	-.12*	.12^{+}	.05	.08	.02	-.02	.06	-.01
2. UN AVOID		.02	-.01	-.08	.08	.05	-.01	.08	.03	.01	.01	.04	.02	.02
3. GEN EGAL			.01	.03	-.11	.09	.04	.01	.06	.09	-.02	-.04	.07	.07
4. FEDU				**.45*** **	**.16*** **	.01	**.40*** **	.15	.17**	.06	**-.17** **	**-15*** **	.05	-.09
5. MEDU					.08	.04	**.25*** **	**.47** **	**.24*** **	.05	**-.16** **	**-.14*** **	.09	**-.13***
6. FOCCUP						**.24** **	**.38*** **	.06	**.13***	.03	-.07	**-.14*** **	**.15** **	-.11
7. MOCCUP							.04	**.33** **	.09	.09	.01	.07	**.**13	-.02
8. FINCOME								.10	**.23*** **	.00	**-.14** **	**-.12** **	.11	**-.16** **
9. MINCOME									**.17** **	.11	.14*	-.12	.10	-.05
10. PRS OPP										**.27*** **	**-.27*** **	-.08	**.35*** **	**-.15** **
11. SOC SUP											**-.42*** **	**-.31*** **	**.32*** **	**-.33*** **
12. EVDY DISC												**.32*** **	**-.38*** **	**.44*** **
13. DEPRES													**-.40*** **	**.68*** **
14. S ESTEEM														**-.57*** **
15. TRAIT ANX														

Note: See Table 1 Notes for abbreviations. ** $p < .05$, ** $p < .01$, and *** $p < .001$.*

Table 8. Correlations Among Contextual Variables in the Tuskegee Sample (*N*=94)

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. FUT ORINT	**.45*** **	**.30** **	.12	.04	-.05	.06	.15	.19	.06	-.09	.16	.12	-.01	.07
2. UN AVOID		.03	.10	.12	.01	.10	.12	.22	-.01	.04	.07	-.10	.14	-.04
3. GEN EGAL			.18	.16	.01	-.10	.03	.08	-.00	-.14	.17	-.06	.04	.00
4. FEDU				.13	**.41** **	.13	**.41** **	**.36** **	-.17	-.10	.03	-.06	-.06	.07
5. MEDU					.08	**.38*** **	.09	**.41** **	.02	.02	.07	-.14	-.09	-.04
6. FOCCUP						.09	.03	.14	-.10	-.20	-.04	.00	.06	-.03
7. MOCCUP							.13	.15	.06	-.17	.15	.10	.07	.02
8. FINCOME								**.56*** **	.03	-.20	.12	.05	.10	.02
9. MINCOME									**.25***	.03	.10	.02	.08	.08
10. PRS OPP										**-.35*** **	.15	.17	.09	-.02
11. SOC SUP											**.22***	-.19	.23**	**-.32** **
12. EVDY DISC												**.26** **	**-.31** **	**.44*** **
13. DEPRES													**-.22** **	**.47*** **
14. S ESTEEM														**-.43*** **
15. TRAIT ANX														

Note: See Table 1 Notes for abbreviations. ** p < .05, ** p< .01, and *** p < .001.*

Table 9. Correlations Among Contextual Variables in the Bogazici Sample (*N*=209).

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. FUT ORINT	**.15****	.04	.07	.07	.08	**.31****	.12	.06	-.04	.06	-.05	-.01	.11	.00
2. UN AVOID		.10	.07	.08	-.03	.09	.10	.11	.00	-.01	-.04	-.05	.01	.03
3. GEN EGAL			-.05	-.14	-.08	.04	-.01	-.05	.06	-.01	-.02	-.02	.05	-.07
4. FEDU				**.54*****	**.35*****	**.41*****	**.54*****	**.30*****	-.02	**.24*****	-.01	-.08	.10	-.13
5. MEDU					**.17***	**.44*****	**.22****	**.50*****	-.01	**.22****	**-.14***	-.11	.12	-.13
6. FOCCUP						.21	**.40****	.02	.06	.12	-.07	-.10	.08	-.05
7. MOCCUP							.22	.20	.05	.18	-.17	-.09	**.27***	-.14
8. FINCOME								**.30*****	.20	.10	-.14	-.11	.03	-.12
9. MINCOME									.09	.06	-.03	.02	.18	-.12
10. PRS OPP										.10	**-.16***	-.17	.09	-.03
11. SOC SUP											**-.30*****	-.19	**.23***	**-.32****
12. EVDY DISC												**.26****	**-.30****	**.44*****
13. DEPRES													**-.40*****	**.66*****
14. S ESTEEM														**-.52*****
15. TRAIT ANX														

Note: see Table 1 Notes for abbreviations. ** p < .05, ** p< .01, and *** p < .001.*

The associations between cultural factors and identity variables can be found in Tables 10, 11, and 12 (correlations in each sample are specified separately). Future orientation had significant associations with the ISI-informational style, commitment making, and exploration in-depth in the Auburn sample (see Table 10). Uncertainty avoidance was significantly correlated with the ISI-normative style in the Auburn and Tuskegee samples (see Tables 10 and 11). Gender egalitarianism did not have significant associations with identity variables in any samples. Thus, gender egalitarianism was removed from the further analysis.

Table 10. Correlation of Identity Variables with Context and Well-being Variables in the Auburn Sample (*N*=341).

	IPSQ - INFO	IPSQ - NORM	ISI – INFO	ISI - NORM	ISI - DIFF	DIDS – CM	DIDS - IC	DIDS – ED	DIDS – EB
FTR ORINT	.13*	.04	.14**	.09	-.10	.11*	.12*	.09	.07
UN AVOID	-.01	.06	.02	.13*	.04	.04	.02	.02	.03
GEN EGAL	.02	-.03	-.03	-.01	.08	-.05	-.06	-.09	-.07
FEDU	-.12*	.09	.02	.03	-.03	-.04	-.07	.01	-.01
MEDU	-.02	.01	.02	.01	-.05	.07	.04	-.13	-.06
FOCCUP	-.02	.05	-.06	.09	-.05	.02	-.01	-.04	-.01
MOCCUP	.03	-.03	.03	.00	-.05	.07	.06	.04	-.08
FINCOME	-.04	.17**	-.09	.10	-.08	.08	.06	.03	.03
MINCOME	.12	-.03	.02	-.08	-.12	.05	.04	.13^{+}	.01
PRS OPP	.15**	.11	.23***	.09	-.23***	.21***	.28***	.19***	.10
SOC SUP	.08	.26***	.22***	.13*	-.23***	.22***	.25***	.21***	.03
EVDY DISC	-.19***	-.25***	-.13**	-.00	.29***	-.19***	-.22***	-.22***	-.18***
DEPRES	-.14*	-.18***	.04	.08	.12*	-.17**	-.12*	-.10	.11
S ESTEEM	.25***	.09	.25***	-.03	-.26***	.24***	.27***	.17***	.08
TRAIT ANX	-.29***	-.17**	.02	.15**	.29***	.27***	-.29***	-.19***	.06

Note: See Table 1 Notes for abbreviations.. *$p < .05$, **$p < .01$, and ***$p < .001$.

Table 11. Correlation of Identity Variables with Context and Well-being Variables in the Tuskegee Sample (*N*=94).

	IPSQ - INFO	IPSQ - NORM	ISI – INFO	ISI - NORM	ISI - DIFF	DIDS – CM	DIDS - IC	DIDS – ED	DIDS – EB
FTR ORINT	-.18	.09	.06	.10	.15	-.12	-.06	-.08	-.07
UN AVOID	.18	.13	.19	.22*	.19	-.11	-.01	-.13	-.05
GEN EGAL	.05	.18	-.11	.06	-.12	-.09	-.17	-.10	-.06
FEDU	-.01	.21	-.05	.11	.16	-.22	-.20	-.14	.05
MEDU	-.10	-.19	-.09	.06	.00	-.07	-.04	.05	.01
FOCCUP	.08	-.00	.01	-.08	-.06	-.17	-.10	-.09	.02
MOCCUP	.12	.18	.01	-.03	-.25	.14	-.16	-.12	.07
FINCOME	.10	.00	.18	.02	.09	-.24	.11	.08	-.02
MINCOME	-.07	-.13	.02	.09	.13	-.11	-.04	-.02	-.00
PRS OPP	.02	.13	.03	.10	-.04	-.06	.09	-.03	.10
SOC SUP	.15	.20	.14	.05	-.17	.12	.13	.07	-.17
EVDY DISC	-.29**	-.09	.12	.32**	.35***	-.22*	-.08	.03	.27*
DEPRES	-.17	-.05	.12	.17	.24*	-.24**	-.24*	-.01	.40***
S ESTEEM	.34**	-.12	.11	-.07	-.23*	-.16	.16	.11	-.02
TRAIT ANX	-.48***	-.16	-.12	.28**	.57***	-.35***	-.35***	-.18	.33***

Note: See Table 1 Notes for abbreviations.. * $p < .05$, ** $p < .01$, and *** $p < .001$.

Table 12. Correlation of Identity Variables with Context and Well-being Variables in the Bogazici Sample (*N*=209).

	IPSQ - INFO	IPSQ - NORM	ISI – INFO	ISI - NORM	ISI - DIFF	DIDS - CM	DIDS - IC	DIDS – ED	DIDS – EB
FTR ORINT	-.04	.10	.04	.04	.05	.06	.13	-.07	-.04
UN AVOID	-.01	.00	-.02	-.02	-.03	.04	.08	-.05	-.11
GEN EGAL	.06	-.01	-.13	.01	.11	.12	.07	.05	.03
FEDU	-.04	.11	.13	-.11	.04	.07	.06	.12	.13
MEDU	.19*	-.03	.23***	-.14	-.11	.06	.14*	.16*	.14*
FOCCUP	.08	.07	.16*	-.05	-.12	.09	.09	.09	.23**
MOCCUP	.27	-.07	.34**	-.19	-.10	.11	.26*	.12	.15
FINCOME	-.09	.19*	.07	.10	-.02	.17	.07	.10	.09
MINCOME	.02	.02	-.17	-.12	.04	.01	.18	.09	.07
PRS OPP.	.10	.15	.17*	.03	-.12	.33***	.34***	.27***	.12
SOC SUP	.21**	.24***	.28***	.01	-.25***	.23***	.28***	.22***	.04
EVDY DISC	-.34***	-.09	-.26***	.15*	.30***	-.30***	-.28***	-.18**	.00
DEPRES	-.22**	-.14	-.17*	.17*	.23***	-.28***	-.25***	-.23***	.06
S ESTEEM	.24***	.05	.21**	-.22**	-.24***	.28***	.36***	.19**	.13
TRAIT ANX	-.24**	-.07	-.12	.26***	.22***	-.36***	-.31***	-.30***	.08

Note: See Table 1 Notes for abbreviations.. ** p < .05, ** p< .01, and *** p < .001.*

Social Structural Influences

Parent education

Mother and father education level was measured on a continuum that ranged from no formal education to doctor/lawyer/other doctorate or equivalent (see Table 1). The distribution of father education varied among the samples (see Table 13). The majority of the fathers in the Auburn sample were at least college graduate; whereas in the Bogazici sample, 38% of the fathers had less than a high school education. The proportion of fathers college graduate in each sample was similar. However, more fathers in the Auburn sample had master's or doctorate degrees or equivalent than the percentages in the Tuskegee and Bogazici samples. Mean comparisons showed that on average Auburn fathers had significantly higher education levels than the Tuskegee and Bogazici fathers did; and the Bogazici fathers had significantly lower education levels than their American counterparts did (F (2, 617)= 114.339, p< .001).

Table 13. Percentages (%) for the Father Education and Mother Education in the Auburn (N=341), Tuskegee (N=94), and Bogazici (N=209) Samples.

	Auburn Sample		Tuskegee Sample		Bogazici Sample	
	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers
No formal education	0.0	0.0	0.0	0.0	1.0	6.8
Primary School Graduate	0.0	0.3	2.5	0.0	26.1	46.6
Middle/Junior School Graduate	0.6	0.3	0.0	0.0	8.7	7.8
Some High School	1.8	0.0	10.0	4.4	2.4	1.5
High School Graduate	9.6	9.0	28.8	17.6	18.8	18.9
Trade/Vocational School	3.9	3.6	6.3	6.6	6.3	2.9
Some College	17.1	17.1	16.3	17.6	3.9	1.9
College Graduate	33.0	46.4	26.3	34.1	29.0	12.1
Master's Degree	23.4	21.6	8.8	17.6	1.9	0.5
Doctorate or Equivalent	10.2	1.8	1.3	2.2	1.9	1.0

The distribution of mother education scores changed from sample to sample (see Table 1). For instance, less than 1% of the Auburn mothers had less than a high school education, but the majority of the Bogazici mothers did not have a high school education (see Table 13). The proportion of mothers who had some college education or a college degree was higher for the Auburn and Tuskegee samples; whereas it was approximately 14% for the Bogazici sample. As expected, One-Way ANOVA findings showed that there were significant mean differences between the Bogazici and American samples, whereas no significant difference was found between the two American samples.

Parent occupation

Mothers and fathers' occupations were measured separately where higher scores indicated occupations with higher statuses (see Table 1). One-Way ANOVA results showed significant group differences for father occupation (F (2, 541)= 30.938, p< .001); however, post hoc analysis did not reveal any differences between pairs of groups. Distribution of father occupations in the Auburn sample was normal where 32% of fathers had medium status level occupations such as teacher/nurse/officer, or occupations with lower statuses. Fifty percent of Auburn fathers were either in the category of doctor/lawyer/engineer/officer or in the category of small business owner; and 18% were in the category of chief executive/manufacturer or equivalent. On the other hand, 61% of the Tuskegee fathers and 70% of the Bogazici fathers had occupations equivalent to teacher/nurse/officer or lower; 20% of the Tuskegee fathers and 19% of the Bogazici fathers were either doctor/lawyer/engineer or small business owner. Only 5% of the Tuskegee fathers and 5% of the Bogazici fathers had occupation with the highest status.

Fewer participants reported on mother occupation (see Table 1). Mean comparisons showed that, on average, Auburn mothers had significantly higher occupational status than

Tuskegee and Bogazici mothers did (F (2, 425)= 13.437, p< .001). There was no significant mean difference between Tuskegee and Bogazici mothers. One of the main differences between the samples was the number of the housewives. None of the mothers in the Tuskegee sample were housewives, whereas 7% of the Auburn mothers, and 38% of the Bogazici mothers were housewives. The most frequent occupation set selected in all samples was teacher/nurse/officer or equivalent (48%, 51%, and 17% for the Auburn, Tuskegee, and Bogazici samples). The percentages of mothers who had higher occupational status than teacher/nurse/officer were 23% for the Auburn sample, 12% for the Tuskegee sample, and 3% for the Bogazici sample.

Parent income

Father and mother income were variables with a larger portion of missing responses compared to other variables (see Table 1). One-Way ANOVA results showed significant group differences (F (2, 555)= 358.653, p< .001). Post hoc analysis revealed that on average the Auburn fathers had significantly higher income than their Tuskegee and Bogazici counterparts did; and the Bogazici fathers had significantly lower income than the American fathers did. The proportions of fathers with $50,000 or less annual income were 26%, 36%, and 78% for the Auburn, Tuskegee, and Bogazici samples, respectively.

Average mother income was less than father income in the Auburn and Bogazici samples but not in the Tuskegee sample (see Table 1). Average mother income was significantly different across the Bogazici and American samples (F (2, 424)= 137.291, p< .001). The proportions of mothers with $50,000 or less annual income were 48%, 55%, and 89% for the Auburn, Tuskegee, and Bogazici samples, respectively.

Overall, average father education, mother occupation, and father income were the highest in the Auburn sample; whereas parent education and income were the lowest in the Bogazici

sample. The Bogazici and Tuskegee samples were similar in terms of mother occupation. The Auburn and Tuskegee samples were similar in terms of mother education, and mother income. Father occupation was similar across the three groups. Mother and father characteristics also were compared. On average mother education and father education were not different from each other in the Auburn sample, whereas fathers had significantly higher levels of education than mothers did in the Tuskegee and Bogazici samples. Fathers had significantly higher occupational status than mothers did in the American samples, but not in the Bogazici sample. Fathers also had significantly higher levels of annual income than mothers did in the Auburn and Bogazici samples but not in the Tuskegee sample. Bivariate analyses showed that father education and mother education were significantly correlated with each other in the Auburn (see Table 7), Tuskegee (see Table 8), and Bogazici (see Table 9) samples. Father occupation and mother occupation were significantly associated only in the Auburn and Bogazici samples, but not in the Tuskegee sample. On the other hand, father and mother income were significantly associated only in the Tuskegee and the Bogazici samples, but not in the Auburn sample. Furthermore, all father characteristics were significantly correlated with each other in the three samples, except for the association between education and occupational status in Bogazici sample, and income and occupational status in Tuskegee sample. All mother characteristics were also significantly correlated with each other, except for mother education and occupational status in Auburn sample, and income and occupational status in the Tuskegee sample. There were no sex differences among the college students for any of the parental characteristics in the Tuskegee and Bogazici samples.

The bivariate associations between social structural influences and identity variables showed that there was a significant correlation between father education and the IPSQ-

informational style only in the Auburn sample (see Table 10) whereas mother education had significant correlations with the ISI-informational style and the ISI-normative style only in the Bogazici sample (see Table 12). Father and mother occupational statuses were also significantly correlated with the ISI-informational style only in the Bogazici sample. Father occupational status also had a significant correlation with exploration in-breadth in the same sample. The associations between father income and the IPSQ-normative style were significant in the Auburn and Bogazici samples; whereas mother income was significantly correlated with exploration in-depth only in the Auburn sample.

Immediate Environment Influences

Personal opportunities

Three items assessed personal opportunities. In terms of how good of a chance they have to get ahead in life (PO1), all samples thought a little better than average; there was no significant mean difference across the three samples. Another item asked whether they have fair opportunities (PO2). American participants agreed that they have fair opportunities whereas Bogazici participants neither disagreed nor agreed. The difference between the American and Bogazici samples was significant (F (2, 632)=202.544, $p< .001$). Participants also were asked where they think they are going to be within 5-10 years (PO3). The majority of responses to this question included making steady advances. Moreover, almost all the participants scored the same in the Bogazici sample.

Correlations among personal opportunities items were significant across the three samples, except the correlations between PO1 and PO2 in the Bogazici sample, and between PO2 and PO3 in the Tuskegee sample. However, internal consistency of the three items was as low as .23, especially in the Bogazici sample. Therefore, factor analyses were conducted taking

both exploratory and confirmatory approaches. Exploratory factor analysis revealed one factor including all items for the American samples, but two factors for the Bogazici sample where PO3 loaded separately. When confirmatory factor analysis was conducted, the model did not fit to the data in the Tuskegee sample and the coefficients were very low in the Bogazici sample. The best fitting model that was consistent across the three samples was achieved when PO3 was excluded. Thus, for the rest of the analysis, this item was removed; the average of PO1 and PO2 was used as the indicator of personal opportunities. Higher scores for this variable indicate greater expectations for getting ahead in life. Descriptives of the personal opportunities variable was negatively skewed especially in the two American samples (skew score= -.99, *se*=.13 in the Auburn sample; and skew value= -1.04, *se*= .25 in the Tuskegee sample), as well as in the Bogazici sample (skew value= -.40, *se*= .17)[1]. Computed personal opportunities scores were different across samples (F (2, 632)= 118.016, p< .001). Post hoc analysis showed that Bogazici participants perceived significantly less personal opportunities than their American counterparts did; whereas there was no significant difference between the American samples. There was no sex difference in the Bogazici and Tuskegee samples.

Social support

The mean of twelve items was calculated to create the social support variable (see Table 2 for reliabilities). In general, participants reported moderate to high social support from their family, friends, and significant others (see Table 1). Mean differences were found across the three samples (F (2, 637)= 52.466, p< .001). Post hoc analysis showed that, on average, Auburn participants perceived significantly higher social support than their Tuskegee and Bogazici

[1] The personal opportunities variable was transformed and tested in the models of the current study; however, no differences were observed between the models where personal opportunities was transformed and was not transformed. Thus, the current researchers decided to use the untransformed variable.

counterparts did. There was no significant difference between the Tuskegee and Bogazici samples. However, there was a significant difference between females and males in the Bogazici sample, where females perceived significantly more social support than males did (F (1,207)= 13.453, p< .001).

Everyday discrimination

Higher scores for the everyday discrimination variable indicate more perceived discrimination. Internal consistency of this variable ranged from .80 to .88 in the three samples (see Table 2). The current participants reported that, on average, they experience everyday discrimination either seldom or occasionally (see Table 1). However, One-Way ANOVA results showed group differences (F (2, 636)= 9.716, p< .001). Specifically, Auburn participants reported significantly less discrimination than the Tuskegee and Bogazici participants did; the Tuskegee and Bogazici participants did not differ from each other. However, a sex difference was found in the Tuskegee sample, where females experienced significantly less everyday discrimination than males did (F (1, 92)= 8.018, p<.01).

Overall, Auburn participants scored higher on social support and perceived personal opportunities, as well as lower on everyday discrimination; only they did not differ from the Tuskegee participants in terms of the perception of personal opportunities. The Tuskegee and Bogazici participants were similar in terms of social support and everyday discrimination. Correlations among immediate environment influences varied from sample to sample (see Tables 7, 8, and 9). All three indicators were significantly correlated with each other in the Auburn sample; whereas only everyday discrimination and social support were correlated with each other in the Bogazici sample; and personal opportunities and social support were significantly correlated in the Tuskegee sample. Thus, it was decided that instead of creating a latent factor

(i.e., immediate environment influences), personal opportunities, social support, and everyday discrimination were added to the models as individual observed variables.

Immediate environment influences also varied in their correlations with the identity variables. The personal opportunities variable was significantly correlated with the ISI- and IPSQ informational style in the Auburn sample (see Table 10), and only with the ISI-informational style in the Bogazici sample (see Table 12). The personal opportunities variable also had significant correlations with the identity formation behaviors except for the exploration in-breadth dimension in the Auburn and Bogazici samples. Social support was significantly associated with the ISI- and IPSQ-normative style in the Auburn sample, but only with the IPSQ-normative style in the Bogazici sample. It was also significantly correlated with the ISI-informational and the ISI-diffuse/avoidant styles in the Auburn sample, and with the ISI- and IPSQ-informational style in the Bogazici sample. Lastly, social support had significant associations with the identity formation behaviors, except for exploration in-breadth in the Auburn and Bogazici samples. The last factor of immediate environment was everyday discrimination. It had significant correlations with almost all the identity variables. It was significantly associated with the IPSQ-informational style in the three samples (see Table 10, 11, and 12); and with the ISI-informational style in the Auburn and Bogazici samples. Everyday discrimination had a significant negative association with the IPSQ-normative style in the Auburn sample (see Table 10), whereas it had a significant positive association with the ISI-normative style in the Tuskegee sample (see Table 11). Its correlation with the ISI-diffuse/avoidant style was significantly positive in the three samples. The associations between everyday discrimination and the identity formation behaviors were significant in the Auburn and Bogazici samples; whereas it was only significantly correlated with commitment-making in the

Tuskegee sample. Overall, immediate environment influences were significantly related to both identity styles and behaviors in the three samples.

Control Variables

Control variables for the current study were depression, self-esteem, and trait anxiety (see Table 2 for reliabilities). The social desirability and openness variables were removed from the analysis because they were not found to be reliable measures (internal consistency ranged from .20 to .41).

In terms of depression, there were significant mean differences between the Bogazici and Auburn samples (F (2, 637)= 9.757, p<.001); whereas the Tuskegee sample did not differ from other the two samples. Average trait anxiety scores were also low in all samples (see Table 1). Mean comparisons showed that the Bogazici sample had significantly higher trait anxiety than their American counterparts did (F (2, 637)= 31.918, p<.001). Average self-esteem was high in all samples; especially in the American samples. One-Way ANOVA results showed that the Bogazici sample had significantly less self-esteem than their American counterparts did (F (2, 634)= 20.218, p<.001); whereas there was no difference between the Auburn and Tuskegee samples. No sex differences were found in the Tuskegee and Bogazici samples. There were strong positive correlations between depression and trait anxiety across the three samples (see Tables 7, 8, and 9); and a strong negative correlation between self-esteem and trait anxiety. The association between depression and self-esteem was significant and negative in the Auburn and Bogazici samples, but it was non-significant in the Tuskegee sample.

The associations between the control variables and the identity variables also were examined. Depression had significantly negative association with the IPSQ-informational style, commitment-making, and identification with commitments dimensions, and significantly

positive association with the ISI-diffuse/avoidant style in the three samples (see Table 10, 11, and 12). On the other hand, self-esteem had a significant positive association with the IPSQ-informational style and a negative correlation with the ISI-diffuse/avoidant style in the three samples. Trait anxiety was negatively correlated with the IPSQ-informational style and identification with commitments in the three samples. This variable's association with the ISI-diffuse/avoidant style was positive in the three samples. Trait anxiety also was associated with commitment making; however, the correlation was positive in the Auburn sample but it was negative in the Tuskegee and Bogazici samples.

Results for the 1st Research Question:

Direct Paths from Identity Styles to Identity Formation Behaviors

The first research question of the current study investigated how identity styles relate to the behaviors of identity formation in the career domain. For the purpose of this research question, the hypothesized models were tested in the three samples separately. Sex and age were controlled in all analyses. The models were tested two times in each sample; the first test did not control for depression, self-esteem, and trait anxiety (hereafter called well-being factors), and the second test controlled for these well-being factors. The two tests were run first using the ISI, and then using the IPSQ measure of identity style. The results for both models are reported in the below section separately for the ISI and the IPSQ findings in each sample.

The ISI Findings

It was hypothesized that the ISI-informational style would be significantly and positively associated with all four identity formation behaviors; the ISI-normative style would be significantly and positively related only to the commitment behaviors, whereas its association with the two exploration behaviors would be significant but negative; and the ISI-

diffuse/avoidant style would be significantly and negatively associated with the four dimensions. In order to test these hypotheses, the three identity styles simultaneously predicted the four dimensions using path analysis.

Results for the Auburn sample

The initial model, where only sex and age were controlled, provided a good fit to the data in the Auburn sample ($\chi 2$ (1, N=341)= .460, p=.495; *CFI*= 1.000; and *RMSEA*= .000); however, the hypotheses were only partially supported. As can be seen in Table 14, the ISI-informational style had significant and positive associations only with the exploration in-breadth and identification with commitment dimensions; the rest of the associations were non-significant. The ISI-normative style had a significant and positive association only with the exploration in-depth dimension but not with the commitment dimensions. This model showed that the ISI-diffuse/avoidant style was the strongest predictor of the identity formation dimensions. The ISI-diffuse/avoidant style had significant and negative associations with the two commitment dimensions and the dimension of exploration in-depth.

The path coefficients did not change when the well-being factors were controlled in the model (see Table 15), which also showed a good fit to the data ($\chi 2$ (1, N=341)= 1.244, p=.265; *CFI*= 1.000; and *RMSEA*= .000). We also tested a model where the ISI-diffuse/avoidant style was removed in order to see if the two dimensions model of identity styles (as it is in the IPSQ) also works with the ISI. The resulting model was not significantly different from the previous model where the three identity styles were tested simultaneously, in terms of the goodness of fit ($\Delta\chi 2$= .512, Δdf= 3); however, the ISI-informational style had significant and positive associations with the four dimensions of the identity formation as it was hypothesized (see Table

16). The associations between the ISI-normative style and the four dimensions of the identity formation remained similar across the models.

Table 14. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Directs Paths from the ISI-Info, ISI-Norm, and ISI-Diff to the Identity Formation Behaviors in the Auburn (*N*=341), Tuskegee (*N*=94), and Bogazici (*N*=209) Samples.

	Auburn Sample			Tuskegee Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
ISI_INFO→ DIDS_CM	-.02	.09	-.01	.21	.12	.18	-.00	.13	-.00
ISI_INFO→ DIDS_IC	.17	.07	.13*	.29	.12	.27*	.16	.11	.09
ISI_INFO→ DIDS_EB	.42	.09	.27***	.55	.19	.34**	.50	.12	.30***
ISI_INFO→ DIDS_ED	.12	.08	.09	.30	.13	.27*	.24	.11	.15*
ISI_NORM→DIDS_CM	.11	.09	.06	-.12	.15	-.10	.02	.09	.02
ISI_NORM→ DIDS_IC	-.01	.07	-.00	-.01	.15	-.01	.05	.08	.04
ISI_NORM→ DIDS_EB	-.04	.08	-.02	-.14	.15	.28	-.06	.08	-.03
ISI_NORM→ DIDS_ED	.21	.10	.12*	-.32	.22	-.19	.04	.08	.04
ISI_DIFF→ DIDS_CM	-.40	.06	-.37***	-.38	.10	-.41***	-.61	.10	-.41***
ISI_DIFF→ DIDS_IC	-.31	.05	-.35***	-.28	.10	-.31**	-.59	.09	-.44***
ISI_DIFF→ DIDS_EB	.08	.06	.06	.40	.15	.28*	.06	.09	-.05
ISI_DIFF→ DIDS_ED	-.32	.05	-.33***	-.24	.10	-.27*	-.23	.09	-.19**

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = .460, *p*= .498 in the Auburn sample; $\chi 2$ (1, *N*= 94) = .183, *p*= .669 in the Tuskegee sample; and $\chi 2$ (1, *N*= 209) = 2.389, *p*= .186 in the Bogazici sample. * $p < .05$; ** $p < .01$, *** $p < .001$.

Table 15. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Directs Paths from the ISI-Info, ISI-Norm, and ISI-Diff to the Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn (*N*=341), Tuskegee (*N*=94), and Bogazici (*N*=209) Samples.

	Auburn Sample			Tuskegee Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
ISI_INFO→ DIDS_CM	-.01	.09	-.01	.24	.14	.20	-.04	.12	-.02
ISI_INFO→ DIDS_IC	.17	.07	.13	.23	.14	.20	.11	.11	.07
ISI_INFO→ DIDS_EB	.37	.09	.23***	.53	.19	.33**	.49	.11	.30***
ISI_INFO→ DIDS_ED	.13	.08	.09	.33	14	.27*	.23	.11	.15*
ISI_NORM→DIDS_CM	.12	.09	.07	-.12	.15	-.10	.13	.09	.09
ISI_NORM→ DIDS_IC	.01	.07	.00	.01	.15	.01	.12	.08	.10
ISI_NORM→ DIDS_EB	.06	.09	.04	-.42	.21	-.26*	.03	.09	.02
ISI_NORM→ DIDS_ED	.19	.08	.11*	-.18	.15	-.14	-.09	.08	-.08
ISI_DIFF→ DIDS_CM	-.35	.06	-.31***	-.33	.11	-.32**	-.52	.10	-.36***
ISI_DIFF→ DIDS_IC	-.26	.05	-.29***	-.25	.11	-.25*	-.52	.09	-.40***
ISI_DIFF→ DIDS_EB	.06	.06	.05	.10	.15	.07	-.02	.09	-.05
ISI_DIFF→ DIDS_ED	-.29	.06	-.28***	-.27	.11	-.25*	-.18	.09	-.15*

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = 1.244, *p*= .265 in the Auburn sample; $\chi 2$ (1, *N*= 94) = 1.686, *p*= .194 in the Tuskegee sample; and $\chi 2$ (1, *N*= 209) = 2.512, *p*= .113 in the Bogazici sample. * $p < .05$; ** $p < .01$, *** $p < .001$.

Table 16. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Directs Paths from the ISI-Info and ISI-Norm (ISI-Diff is Removed) to the Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn (*N*=341), Tuskegee (i=94), and Bogazici (*N*=209) Samples.

	Auburn Sample			Tuskegee Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
ISI_INFO→ DIDS_CM	.17	.09	.11*	.32	.14	.27*	.16	.12	.19
ISI_INFO→ DIDS_IC	.31	.07	.24***	.20	.14	.25*	.31	.11	.19**
ISI_INFO→ DIDS_EB	.34	.09	.21***	.51	.19	.32**	.52	.11	.31***
ISI_INFO→ DIDS_ED	.28	.08	.14***	.39	.14	.32**	.30	.10	.19**
ISI_NORM→DIDS_CM	.03	.09	.02	-.29	.14	-.24*	.06	.10	.07
ISI_NORM→ DIDS_IC	-.06	.07	-.04	-.12	.14	-.11	.06	.08	.05
ISI_NORM→ DIDS_EB	-.13	.09	-.08	-.36	.19	-.23	.02	.08	.01
ISI_NORM→ DIDS_ED	.21	.09	.11*	-.32	.14	-.26*	.11	.08	.10

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = 1.756, *p*= .185 in the Auburn sample; $\chi 2$ (1, *N*= 94) = 1.686, *p*= .194 in the Tuskegee sample; and $\chi 2$ (1, *N*= 94) =3.100, *p*= .078 in the Bogazici sample. * $p < .05$; ** $p < .01$, *** $p < .001$.

Results for the Tuskegee sample

The results for the Tuskegee sample were partially consistent with the results for the Auburn sample. The initial model showed a good fit to the Tuskegee data ($\chi 2$ (1, *N*=94)= .183, *p*=.669; *CFI*= 1.000; and *RMSEA*= .000). The path results partially supported the hypotheses (see

Table 14). The ISI-informational style significantly and positively predicted the two exploration dimensions and the identification with commitments dimension. On the other hand, the ISI-diffuse/avoidant style negatively predicted the two commitment dimensions and the exploration in-depth dimension; whereas it positively predicted the exploration in-breadth dimension. The ISI-normative style did not have significant associations with the identity formation behaviors in the Tuskegee sample.

The path analysis showed variation in the model when the well-being factors were controlled ($\chi 2$ (1, N=94)= 1.686, p=.194; *CFI*= .997; and *RMSEA*= .086). Although chi-square and CFI scores showed a good fit to the data, RMSEA indicated a poor fit of the hypothesized model to the Tuskegee data after controlling for the well-being factors. When the well-being factors were controlled, the ISI-informational style predicted only the two exploration dimensions, but not the commitment dimensions; the ISI-normative style negatively predicted the exploration in-breadth dimension; and the ISI-diffuse/avoidant style continued to predict negatively the two commitment dimensions and the exploration in-depth dimension (see Table 15). The positive association between the ISI-diffuse/avoidant style and the exploration in-breadth dimension became non-significant when the well-being factors were controlled.

Results for the Bogazici sample

The model, where the three identity styles predicted the four dimensions of the identity formation, also had a good fit to the Bogazici data ($\chi 2$ (1, N=209)= 2.389, p=.186; *CFI*= .997; and *RMSEA*= .060). As was seen for the American samples, the ISI-informational style positively predicted the exploration in-breadth, as well as the exploration in-depth dimensions (see Table 14). On the other hand (and similar to the Auburn sample), the ISI-diffuse/avoidant style negatively predicted the dimensions of commitment making, identification with

commitments, and exploration in-depth. The ISI-normative style's associations with the four identity formation dimensions were non-significant. When the well-being factors were controlled, the model still showed a good fit to the data ($\chi 2$ (1, *N*=209)= 2.512, *p*=.113; *CFI*= .996; and *RMSEA*= .065). The associations between the three identity styles and the four dimensions of identity formation did not change when the well-being factors were controlled (see Table 15).

The IPSQ Findings

Only informational and normative styles were tested in the models when the identity styles were measured by the IPSQ. The same hypotheses as those for the ISI-informational and normative style were posed; these hypotheses were partially supported.

Results for the Auburn sample

The model provided a good fit to the data in the Auburn sample ($\chi 2$ (1, *N*=341)= .645, *p*=.422; *CFI*= 1.000; and *RMSEA*= .000). As hypothesized, the IPSQ-informational style had significant and positive relations with the four identity formation behaviors; and the IPSQ-normative style had significant and positive relation with the two commitment dimensions (see Table 17). As opposed to what was expected, the IPSQ-normative style had significant and positive association with the exploration in-depth dimension; and its relation with the exploration in-breadth dimension was nonsignificant. After controlling for the well-being factors, the model still showed a good fit to the data in the Auburn sample. ($\chi 2$ (1, *N*=341) = 1.606, *p*=.205; *CFI*= .999 ; and *RMSEA*= .042). As can be seen in Table 18, the associations between the identity styles and the four identity formation behaviors were found to be similar across the models except for the association between the IPSQ-normative style and the exploration in-breadth

dimension. This association became significant and positive in the model where the well-being factors were controlled.

Table 17. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Directs Paths from the IPSQ-Info and IPSQ-Norm to the Identity Formation Behaviors in the Auburn (*N*=341), Tuskegee (*N*=94), and Bogazici (*N*=209) Samples.

	Auburn Sample			Tuskegee Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
IPSQ_INFO→ DIDS_CM	1.15	.19	.32***	1.53	.36	.41***	2.13	.32	.42***
IPSQ_INFO→ DIDS_IC	1.11	.16	.37***	1.15	.36	.32**	2.43	.26	.54***
IPSQ_INFO→ DIDS_EB	.45	.20	.13*	-.44	.55	-.08	1.24	.30	.28***
IPSQ_INFO→ DIDS_ED	1.40	.18	.34***	1.31	.35	.36***	1.76	.27	.41***
IPSQ_NORM→DIDS_CM	.84	.20	.22***	.22	.46	.05	1.33	.30	.28***
IPSQ_NORM→ DIDS_IC	.46	.17	.15**	.75	.45	.17	1.27	.25	.29***
IPSQ_NORM→ DIDS_EB	.28	.22	.07	-.70	.70	-.10	-.32	.29	-.01
IPSQ_NORM→ DIDS_ED	.69	.18	.20***	.57	.45	.13	.50	.26	.13*

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = .645, *p*= .422 in the Auburn sample; $\chi 2$ (1, *N*= 94) = .183, *p*= .669 in the Tuskegee sample; and $\chi 2$ (1, *N*= 209) = 1.188, *p*= .276 in the Bogazici sample. * $p < .05$; ** $p < .01$, *** $p < .001$.

Results for the Tuskegee sample

The model, where the IPSQ-informational and the IPSQ-normative styles were related to the four identity formation behaviors, was found to have a good fit to the data in the Tuskegee

sample ($\chi 2$ (1, *N*=94)= .183, *p*=.669; *CFI*= 1.000; and *RMSEA* = .000). However, only three associations out of eight direct paths were significant in the model (see Table 17). The significant paths were positive from the IPSQ-informational style to the commitment dimensions and to the exploration in-depth dimension. The association between the IPSQ-informational style and the exploration in-breadth dimension was not significant. Thus, the results in the Tuskegee sample partially supported the hypothesis regarding the informational style; and did not support the hypothesis regarding the normative style (normative style was not associated with any of the identity formation behaviors). The model in the Tuskegee sample still showed a good fit to the data after controlling for the well-being factors ($\chi 2$ (1, *N*=94)= .615, *p*=.433; *CFI*= 1.000 ; and *RMSEA* = .000). The paths from the IPSQ-informational style to the commitment making and the exploration in-depth dimensions remained significant and positive; however, the path from the IPSQ-informational style to the identification with commitments dimension became nonsignificant after controlling for the well-being factors (see Table 18).

Table 18. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Directs Paths from the IPSQ-Info and IPSQ-Norm to the Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn (*N*=341), Tuskegee (*N*=94), and Bogazici (*N*=209) Samples.

	Auburn Sample			Tuskegee Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
IPSQ_INFO→ DIDS_CM	.93	.20	.25***	1.04	.44	.24*	1.61	.33	.32***
IPSQ_INFO→ DIDS_IC	.90	.27	.30***	.63	.43	.15	2.07	.28	.47***
IPSQ_INFO→ DIDS_EB	.62	.21	.17**	.15	.61	.03	1.45	.31	.32***
IPSQ_INFO→ DIDS_ED	1.11	.19	.33***	1.27	.44	.29**	1.44	.29	.33***
IPSQ_NORM→DIDS_CM	.71	.21	.19***	-.14	.48	-.03	1.12	.30	.25***
IPSQ_NORM→ DIDS_IC	.36	.17	.11*	.59	.47	.21	1.11	.25	.28***
IPSQ_NORM→ DIDS_EB	.49	.22	.13*	-.18	.66	-.03	-.20	.28	-.05
IPSQ_NORM→ DIDS_ED	.70	.29	.20***	.57	.48	.12	.36	.27	.09

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = .645, *p*= .431 in the Auburn sample; $\chi 2$ (1, *N*= 94) = 1.606, *p*= .220 in the Tuskegee sample; and $\chi 2$ (1, *N*= 209) = .902, *p*= .342 in the Bogazici sample. * $p < .05$; ** $p < .01$, *** $p < .001$.

Results for the Bogazici sample

The model provided a good fit to the data also in the Bogazici sample ($\chi 2$ (1, *N*=209)= 1.188, *p*=.276; *CFI*= 1.000; and *RMSEA* = .000). Examination of the paths from the identity

styles to the identity formation behaviors revealed similar results to that for the Auburn sample (see Table 17). The only nonsignificant association in this model was between the IPSQ-normative style and the exploration in-breadth dimension. The model also fit well to the data when the well-being factors were controlled ($\chi 2$ (1, N=209)= .902, p=.342; CFI= 1.000 ; and $RMSEA$ = .000). However, when the well-being factors were controlled, the association between the IPSQ-normative style and the exploration in-depth dimension became nonsignificant (see Table 18). Therefore, the hypotheses were partially supported when the well-being factors were controlled. The IPSQ-informational style predicted all four dimensions of the identity formation; whereas the IPSQ-normative style predicted the two commitment dimensions but not the exploration dimensions.

Results for the 2nd Research Question:

Direct Paths from Contextual Influences to Identity Styles and Identity Formation Behaviors

The second aim of the current study was to examine the role of contextual influences on the identity styles and identity formation behaviors after controlling for the well-being factors. Three sets of contextual influences were examined in the current study, cultural influences, social-structural influences, and immediate environment influences. The initial plan was to create latent factors for each set of influences. However, preliminary analyses did not support the measurement model containing cultural, social-structural, and immediate environment influences as latent factors; therefore, the indicators of these influences were added to the models as observed variables. The focus of this research question addressed the associations between identity variables and contextual influences when the impact of well-being factors was removed. Thus, only the models, where well-being factors were controlled, are reported in this section.

However, the hypothesized paths also were tested without controlling for the well-being factors; where major difference between an uncontrolled and its controlled version occurred, this is depicted in the corresponding table. Models were tested, first, using the ISI to measure identity styles; and then, tests were repeated using the IPSQ to measure identity styles.

Cultural Influences

Two variables representing cultural influences were examined, future orientation and uncertainty avoidance. The third indicator, gender egalitarianism, was removed from the model due to lack of association with identity variables in any of the samples. It was hypothesized that future orientation would be significantly and positively associated with informational style, and the four dimensions of identity formation, whereas its association with normative style would be nonsignificant. For uncertainty avoidance, negative relations with informational style and the four identity formation behaviors, and a positive association with normative style were hypothesized. On the other hand, diffuse/avoidant style is expected to be negatively associated with future orientation and positively associated with uncertainty avoidance; however, these associations were expected to become nonsignificant when the well-being factors were controlled.

Results for Auburn sample

The paths from future orientation and uncertainty avoidance to the ISI-informational style, the ISI-normative style, the ISI-diffuse/avoidant style, and the four identity formation behaviors were examined simultaneously. The model showed a good fit to the data ($\chi 2$ (5, N= 341) = 7.894, p= .162; *CFI*= .996; and *RMSEA* = .041). The findings partially supported the hypotheses. Supporting our hypotheses, future orientation had a significant and positive association with the ISI-informational style (see Table 19). As opposed to our expectations, future orientation also

had a significant but negative association with the ISI-diffuse/avoidant style, even after controlling for the well-being factors. Future orientation and normative style were not related. On the other hand, uncertainty avoidance's significant, positive association with the ISI-normative style was consistent with the current hypotheses (see Table 19). In terms of identity formation behaviors, our hypothesis was partially supported; the only significant link was from future orientation to identification with commitments dimension. The link from future orientation to commitment making was significant before the well-being factors were controlled; however, once they were controlled, this link became non-significant (see Table 19).

The links from future orientation and uncertainty avoidance also were examined when identity styles were measured by the IPSQ (see Table 20). The model showed a good fit to the Auburn data ($\chi 2$ (3, N= 341) = 3.877, p= .275; *CFI*= .999; and *RMSEA* = .029). There were fewer significant associations compared to the previous model. The IPSQ findings partially supported the hypotheses. Future orientation was significantly and positively associated with the IPSQ-informational style and the identification with commitments dimension of identity formation behaviors. The relation between future orientation and commitment making became nonsignificant after controlling for the well-being factors. Uncertainty avoidance did not have significant associations in this model.

Table 19. Unstandardized Coefficient (*B*), Standard Error (*SE*), Standardized Coefficient (β) for the Links from Future Orientation and Uncertainty Avoidance to the Identity Styles Measured and Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn Sample (*N*=341) and the Bogazici Sample (*N*=209).

	Auburn Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β
FTR ORINT → ISI-INFO	.07	.03	.14**	.01	.02	.02
FTR ORINT → ISI-NORM	.02	.02	.04	.03	.03	.07
FTR ORINT → ISI-DIFF	-.10	.04	-.13**	.03	.03	.08
FTR ORINT → DIDS_CM	.08	.05	.10[a]	.03	.04	.05
FTR ORINT → DIDS_IC	.07	.04	.11*	.05	.04	.09
FTR ORINT → DIDS_EB	.04	.05	.05	-.03	.04	-.06
FTR ORINT → DIDS_ED	.05	.04	.07	-.04	.04	-.08
UN AVOID → ISI-INFO	-.01	.03	-.03	-.02	.04	-.04
UN AVOID → ISI-NORM	.04	.02	.11*	-.06	.04	-.11
UN AVOID → ISI-DIFF	.05	.04	.08	.04	.04	.07
UN AVOID → DIDS_CM	-.01	.04	-.01	.02	.04	.03
UN AVOID → DIDS_IC	.00	.04	.00	-.01	.03	-.03
UN AVOID → DIDS_EB	.00	.03	.01	-.01	.03	-.03
UN AVOID → DIDS_ED	-.01	.04	-.01	-.01	.02	-.03

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (5, *N*= 341) = 7.894, *p*= .162 in the

Auburn sample; $\chi 2$ (5, *N*= 209) = 4.525, *p*= .104 in the Bogazici sample. [a] was significant in the uncontrolled model (*B*=.07, *SE*=.04, β=.11*).* $p < .05$; ** $p < .01$, *** $p < .001$.

Table 20. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Future Orientation and Uncertainty Avoidance to the Identity Styles Measured by the IPSQ and Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn Sample (*N*=341) and the Bogazici Sample (*N*=209).

	Auburn Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β
FTR ORINT → IPSQ-INFO	.03	.01	.15**	-.01	.01	-.06
FTR ORINT → IPSQ-NORM	.00	.01	.01	.02	.01	.09
FTR ORINT → DIDS_CM	.08	.05	.10[a]	.03	.04	.05
FTR ORINT → DIDS_IC	.07	.04	.11*	.05	.04	.09
FTR ORINT → DIDS_EB	.04	.05	.05	-.03	.04	-.06
FTR ORINT → DIDS_ED	.05	.04	.07	-.04	.04	-.08
UN AVOID → IPSQ-INFO	-.01	.01	-.06	.00	.01	.01
UN AVOID → IPSQ-NORM	.01	.01	.07	.00	.01	.03
UN AVOID → DIDS_CM	-.01	.04	-.01	.03	.04	.05
UN AVOID → DIDS_IC	.00	.04	.00	.05	.04	.09
UN AVOID → DIDS_EB	.00	.03	.01	-.03	.04	-.06
UN AVOID → DIDS_ED	-.01	.04	-.01	-.04	.04	-.08

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (3, *N*= 341) = 3.877, *p*= .275 in the Auburn sample; $\chi 2$ (3, *N*= 209) = 3.236, *p*= .327 in the Bogazici sample. [a] was significant

in the uncontrolled model (*B*=.09, *SE*=.04, *β*=.12*).* $p < .05$; ** $p < .01$, *** $p < .001$.

Results for the Tuskegee sample

The Tuskegee sample size was not big enough to test the full model. Therefore, the impact of cultural influences was tested separately for identity formation behaviors and identity styles. The model that examined the links from future orientation and uncertainty avoidance to the four identity formation behaviors showed a good fit to the data ($\chi 2$ (2, *N*= 94) = 3.465, *p*= .177; *CFI*= .991; and *RMSEA* = .039). None of the links were significant (see Table 21). As opposed to what was expected, the cultural influences did not predict the identity formation behaviors in the Tuskegee sample. However, two patterns are worth mentioning. The links from uncertainty avoidance to commitment making and exploration in-depth were negative with relatively smaller standard errors.

Table 21. Unstandardized Coefficient (*B*), Standard Error (*SE*), Standardized Coefficient (*β*) for the links from Future Orientation and Uncertainty Avoidance to the identity Formation Behaviors Controlling for the Well-Being Factors in the Tuskegee Sample (*N*=94).

	B	*SE*	*β*
FTR ORINT → DIDS_CM	.01	.05	.02
FTR ORINT → DIDS_IC	-.01	.05	-.03
FTR ORINT → DIDS_EB	.09	.07	.12
FTR ORINT → DIDS_ED	.00	.05	.00
UN AVOID → DIDS_CM	-.09	.06	-.13
UN AVOID → DIDS_IC	-.01	.05	-.03
UN AVOID → DIDS_EB	.00	.07	.00

UN AVOID → DIDS_ED	-.09	.05	-.14

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (2, *N*= 94) = 3.465, *p*= .177.* $p < .05$; ** $p < .01$, *** $p < .001$.

Table 22 shows the model where the links from cultural influences to the ISI-informational, the ISI-normative, and the ISI-diffuse/avoidant styles were tested. This model also showed a good fit to the data ($\chi 2$ (1, *N*= 94) = .010, *p*= .922; *CFI*= 1.000; and *RMSEA* = .000). In this model, our hypotheses were partially supported. Future orientation did not have any significant associations. As expected the links from uncertainty avoidance to the ISI-normative style was significant and positive; however, as opposed to what we expected the link from uncertainty avoidance to the ISI-diffuse/avoidant style remained significant and positive after controlling for the well-being factors.

Table 22. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the links from Future Orientation and Uncertainty Avoidance to the Identity Styles Measured by the ISI Controlling for the Well-Being Factors in the Tuskegee Sample (*N*=94).

	B	*SE*	β
FTR ORINT → ISI-INFO	-.02	.05	-.02
FTR ORINT → ISI-NORM	-.02	.04	-.03
FTR ORINT → ISI-DIFF	.03	.05	.06
UN AVOID → ISI-INFO	.07	.05	.17
UN AVOID → ISI-NORM	.12	.05	.27*
UN AVOID → ISI-DIFF	.11	.06	.23*

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 94) =

.010, p= .922. * p < .05; ** p < .01, *** p < .001.

The associations were found to be different when the identity styles were measured by the IPSQ (see Table 23). This model also had a good fit to the data ($\chi 2$ (1, N= 94) = 1.814, p= .178; *CFI*= .973; and *RMSEA* = .064). Only two links were found to be significant and they were to the IPSQ-informational style. One was a positive association with future orientation, and the other was a negative association with uncertainty avoidance. Therefore, the IPSQ findings only supported the informational style hypotheses.

Table 23. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Future Orientation and Uncertainty Avoidance to the Identity Styles Measured by the IPSQ Controlling for the Well-Being factors in the Tuskegee Sample (N=94).

	B	*SE*	β
FTR ORINT → IPSQ-INFO	.04	.01	.32**
FTR ORINT → IPSQ-NORM	.01	.01	.07
UN AVOID → IPSQ-INFO	-.03	.01	-.24*
UN AVOID → IPSQ-NORM	.02	.01	.19

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, N= 94) = 1.814, p= .178. * p < .05; ** p < .01, *** p < .001.

Results for the Bogazici sample

The links from future orientation and uncertainty avoidance to identity styles and identity formation behaviors were examined when identity styles were measured by the ISI, as well as

when they were measured by the IPSQ (see Tables 19 and 20). Both models showed good fit to the data ($\chi 2$ (5, *N*= 209) = 4.525, *p*= .104; *CFI*= .994; and *RMSEA* = .068 for the ISI model; and $\chi 2$ (3, *N*= 209) = 3.236, *p*= .327; *CFI*= .999; and *RMSEA* = .024 for the IPSQ model). However, none of the associations were found to be significant. These associations also were found to be nonsignificant before the well-being factors were controlled. As opposed to what we expected, cultural influences did not predict the identity formation behaviors and identity styles in the Bogazici sample.

Social-Structural Influences

Parent education, occupation, and income level were examined separately for mothers and fathers in order to understand the impact of social-structural influences on identity styles and identity formation behaviors. It was hypothesized that (a) father/mother education, occupation, and income level would have significant and positive associations with informational style and the four identity formation behaviors; (b) they would have a significant and negative relation with normative style; and (c) their association with diffuse/avoidant style would be non-significant after controlling for the well-being factors, even though they might have a negative relation before the well-being factors were controlled.

Results for the Auburn sample

Fathers' and mothers' education level, occupational status, and incomes were added to the model as predictors of identity styles and identity formation behaviors. When identity styles were measured by the ISI, the model showed a good fit to the Auburn data ($\chi 2$ (9, *N*= 341) = 9.473, *p*= .292; *CFI*= .999; and *RMSEA* = .020). However, very few associations were found to be significant, and they were all mother factors (see Table 24). There was a negative link from mother income to the ISI-normative style, and there was a positive link from mother occupation

to the dimension of identification with commitments. There were three more associations that were significant before the well-being factors were controlled. After well-being factors were controlled, the significant links from father education to the two commitment dimensions, and the link from mother education to commitment making dimension became nonsignificant. As expected, all parental characteristics had nonsignificant associations with the ISI-diffuse/avoidant style. However, these associations were nonsignificant even before the well-being factors were controlled.

The same associations were tested also when identity styles were measured by the IPSQ. This model also showed a good enough fit to the data ($\chi 2$ (8, N= 341) = 9.034, p= .339; *CFI*= .998; and *RMSEA* = .029). The majority of associations in this model also were non-significant (see Table 25). There were only two significant associations between parental characteristics and identity styles. Different from the ISI model, there were significant and positive links from father income to the IPSQ-normative style, and from mother income to the IPSQ-informational style. The only significant association regarding identity formation behaviors was from father education to commitment making dimension, which was also different from the ISI findings.

Table 24. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Social Structural Influences to the Identity Styles Measured by the ISI and Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn Sample (*N*=341) and the Bogazici Sample (*N*=209).

	Auburn Sample			Bogazici Sample		
	B	SE	β	B	SE	β
FEDU → ISI-INFO	.02	.02	.08	.01	.01	.03
FEDU → ISI-NORM	.01	.01	.02	-.02	.02	-.09
FEDU → ISI-DIFF	.01	.03	.02	.03	.02	.16
FEDU → DIDS_CM	-.06	.03	-.12[a]	-.02	.02	-.08
FEDU → DIDS_IC	-.04	.02	-.11[b]	-.02	.02	-.08
FEDU → DIDS_EB	.04	.03	.09	.02	.02	.09
FEDU → DIDS_ED	-.02	.03	-.05	.00	.02	.00
FOCCUP → ISI -INFO	-.03	.02	-.09	.04	.02	.14*
FOCCUP → ISI -NORM	.01	.02	.03	-.02	.03	-.06
FOCCUP → ISI -DIFF	-.00	.01	-.00	-.02	.03	-.04
FOCCUP → DIDS_CM	-.03	.03	-.06	-.07	.04	-.13
FOCCUP → DIDS_IC	-.04	.03	-.10	-.00	.04	-.00
FOCCUP → DIDS_EB	.00	.03	.01	.15	.04	.28***
FOCCUP → DIDS_ED	-.04	.03	-.06	-.03	.04	-.06
FINCOME → ISI -INFO	-.05	.03	-.12	-.07	.04	-.14
FINCOME → ISI -NORM	.04	.03	.09	.15	.05	.25**

FINCOME → ISI -DIFF	-.03	.04	-.03	-.03	.05	.05
FINCOME → DIDS_CM	.06	.05	.08	.15	.07	.18*
FINCOME → DIDS_IC	.03	.04	.05	.03	.06	.04
FINCOME → DIDS_EB	-.07	.05	-.10	-.06	.07	-.08
FINCOME → DIDS_ED	-.03	.04	-.04	.07	.07	.09
MEDU → ISI -INFO	.00	.02	.01	.01	.02	.04
MEDU → ISI -NORM	-.00	.02	-.01	.01	.02	.03
MEDU → ISI -DIFF	.00	.03	.01	-.04	.02	-.12 [d]
MEDU → DIDS_CM	.05	.04	.09[c]	.06	.03	.18*
MEDU → DIDS_IC	.03	.03	.06	.04	.03	.13
MEDU → DIDS_EB	-.06	.04	-.10	.01	.03	.04
MEDU → DIDS_ED	.05	.03	.10	.03	.03	.11
MOCCUP → ISI -INFO	.01	.02	.02	.22	.04	.33***
MOCCUP → ISI -NORM	.01	.02	.03	-.12	.06	-.14**
MOCCUP → ISI -DIFF	-.01	.04	-.01	.03	.06	.04[e]
MOCCUP → DIDS_CM	.05	.04	.07	.22	.08	.18***
MOCCUP → DIDS_IC	.05	.03	.09*	.35	.07	.34***
MOCCUP → DIDS_EB	.00	.04	.01	.03	.07	.03 [f]
MOCCUP → DIDS_ED	.01	.04	.01	.03	.07	.03 [g]
MINCOME → ISI -INFO	-.02	.03	-.04	.11	.09	.11
MINCOME → ISI -NORM	-.05	.03	-.12*	-.14	.12	-.10
MINCOME → ISI -DIFF	-.07	.04	-.11	.17	.12	.13
MINCOME → DIDS_CM	-.02	.05	-.05	-.42	.16	-.23***

MINCOME → DIDS_IC	-.03	.04	.07	-.17	.14	-.10
MINCOME → DIDS_EB	.05	.04	.07	-.02	.15	-.01
MINCOME → DIDS_ED	.08	.04	.11	-.03	.13	-.02

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (9, N= 341) = 9.473, p= .292 in the Auburn sample; $\chi 2$ (9, N= 209) = 30.527, p= .051 in the Bogazici sample. [a] It was significant in the uncontrolled model (B=-.05, SE=.02, β=-.14*); [b] It was significant in the uncontrolled model (B=-.04, SE=.02, β=-.14*); [c] It was significant in the uncontrolled model (B=-.07, SE=.04, β=.12*); [d] It was significant in the uncontrolled model (B= -.06, SE=.05, β=-.20*); [e] It was significant in the uncontrolled model (B=-.23, SE=.05, β=-.29***); [f] It was significant in the uncontrolled model (B=.25, SE=.07, β=.25**); [g] It was significant in the uncontrolled model (B=.20, SE=.07, β=.20**). * $p < .05$; ** $p < .01$, *** $p < .001$.

Table 25. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Social Structural Influences to the Identity Styles Measured by the IPSQ and Identity Formation Behaviors Controlling for the Well-Being Factors in the Auburn Sample (*N*=341) and the Bogazici Sample (*N*=209).

	Auburn Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β
FEDU → IPSQ-INFO	-.01	.01	-.11	-.01	.00	-.01
FEDU → IPSQ-NORM	.01	.01	.05	.01	.01	.05
FEDU → DIDS_CM	-.05	.03	-.12*	-.02	.02	-.04
FEDU → DIDS_IC	-.04	.02	-.11	-.01	.02	-.04
FEDU → DIDS_EB	.04	.03	.09	.03	.02	.08
FEDU → DIDS_ED	-.02	.03	-.05	-.00	.02	.03
FOCCUP → IPSQ-INFO	.00	.01	.02	.00	.01	.09
FOCCUP → IPSQ-NORM	-.01	.01	-.06	.01	.01	.07
FOCCUP → DIDS_CM	-.03	.03	-.06	-.02	.04	-.05
FOCCUP → DIDS_IC	-.04	.03	-.10	-.00	.04	-.03
FOCCUP → DIDS_EB	.01	.03	.01	.14	.04	.28***
FOCCUP → DIDS_ED	-.03	.03	-.06	-.03	.04	.01
FINCOME → IPSQ-INFO	-.01	.01	-.05	-.01	.01	-.10
FINCOME → IPSQ-NORM	.03	.01	.15*	.03	.02	.19**
FINCOME → DIDS_CM	.06	.05	.08	.16	.07	.11**
FINCOME → DIDS_IC	.03	.04	.06	.03	.07	.03
FINCOME → DIDS_EB	-.07	.04	-.10	-.07	.07	-.12

FINCOME → DIDS_ED	-.02	.04	-.03	.07	.07	.05
MEDU → IPSQ-INFO	-.00	.01	-.01	.00	.01	.19
MEDU → IPSQ-NORM	-.07	.01	-.07	-.01	.01	-.18
MEDU → DIDS_CM	.05	.04	.09	.06	.03	.15
MEDU → DIDS_IC	.03	.03	.06	.01	.03	.06
MEDU → DIDS_EB	-.06	.04	-.10	-.02	.03	-.03
MEDU → DIDS_ED	.05	.03	.10	.03	.03	.11
MOCCUP → IPSQ-INFO	-.00	.01	-.02	.12	.01	.40***
MOCCUP → IPSQ-NORM	-.00	.01	-.01	-.08	.02	-.18**
MOCCUP → DIDS_CM	.05	.04	.08	.05	.08	.09
MOCCUP → DIDS_IC	.05	.03	.09	.24	.07	.35***
MOCCUP → DIDS_EB	.00	.04	.00	.28	.07	.22***
MOCCUP → DIDS_ED	-.00	.04	-.01	.01	.03	.02
MINCOME → IPSQ-INFO	.04	.01	.18**	-.07	.03	-.19 [a]
MINCOME → IPSQ-NORM	-.01	.01	-.04	.06	.16	.09
MINCOME → DIDS_CM	-.03	.04	-.04	-.41	.14	-.27**
MINCOME → DIDS_IC	-.03	.04	-.05	-.12	.14	-.05
MINCOME → DIDS_EB	.05	.05	.07	.00	.02	.05
MINCOME → DIDS_ED	.07	.04	.10	-.05	.14	.02

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (8, N= 341) = 9.034, p= .339 in the Auburn sample; $\chi 2$ (8, N= 209) = 19.197, p= .064 in the Bogazici sample. [a] It was significant in the uncontrolled model (B=-.09, SE=.03, β=-.19*). * $p < .05$; ** $p <$ .01, *** $p < .001$.

Results for the Tuskegee sample

To test the impact of social-structural influences on identity styles and identity formation behaviors simultaneously was not possible in the Tuskegee sample due to small sample size. Instead, these associations were tested in six different models, separating mother and father characteristics, and also identity styles and identity formation behaviors.

The first model tested whether father characteristics (i.e., father education, occupation, and income) will predict the identity styles when measured by the ISI, after controlling for the well-being factors. The model showed a good fit to the data ($\chi 2$ (1, N= 94) = .503, p= .478; *CFI*= 1.000; and *RMSEA* = .000); however, none of the associations were significant. A good fitting model with no significant associations might suggest a power problem in the Tuskegee sample due to its small sample size. The second model tested the same associations but this time with mother characteristics. This model showed a good fit to the Tuskegee data ($\chi 2$ (1, N= 94) = 1.504, p= .220; *CFI*= .992; and *RMSEA* = .054). The associations in this model were, however, not significant. In general, neither father characteristics nor mother characteristics predicted the ISI-informational, the ISI-normative, and the ISI-diffuse/avoidant styles in the Tuskegee sample. The results were similar when the well-being factors were not controlled.

The third and fourth models repeated the first two models, but this time measuring identity styles with the IPSQ. Similar to the ISI results, models showed good fit to the data ($\chi 2$ (1, N= 94) = .015, p= .903; *CFI*= 1.000: and *RMSEA* = .000 for the father characteristics model; and $\chi 2$ (1, N= 94) = 2.000, p= .157; *CFI*= .945: and *RMSEA* = .097 for the mother characteristics model). There were no significant associations between mother characteristics and the identity styles. On the other hand, father characteristics predicted the IPSQ-informational and the IPSQ-normative style (see Table 26).

Table 26. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Father Characteristics to the IPSQ-Info and the IPSQ-Norm Controlling for the Well-Being Factors in the Tuskegee Sample (*N*=94).

	B	*SE*	β
FEDU → IPSQ-INFO	-.00	.01	-.05
FEDU → IPSQ-NORM	.03	.01	.35***
FOCCUP → IPSQ-INFO	.02	.01	.23*
FOCCUP → IPSQ-NORM	-.02	.01	-.13
FINCOME → IPSQ-INFO	.01	.02	.09
FINCOME → IPSQ-NORM	-.03	.02	-.20

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (2, *N*= 94) = .015, *p*= .903. * $p <$ .05; ** $p <$ .01, *** $p <$ .001.

Consistent with our hypothesis, there was a significant and positive link between father occupation and the IPSQ-informational style; however, as opposed what we expected, there was also a significant and positive association between father education and the IPSQ-normative style. The next model in the Tuskegee sample tested the links from father characteristics to the four identity formation behaviors. The model was fit to the data ($\chi 2$ (3, *N*= 94) = 2.746, *p*= .432; *CFI*= .998: and *RMSEA* = .041). Father characteristics predicted the dimensions of exploration in-breadth and commitment making (see Table 27). Specifically the links from father occupation to the dimension of exploration in-breadth, and from father income to the dimension of commitment making were significant.

Table 27. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Father Characteristics to the Identity Formation Behaviors Controlling for the Well-Being Factors in the Tuskegee Sample (*N*=94).

	B	*SE*	β
FEDU → DIDS_CM	-.03	.04	-.09
FEDU → DIDS_IC	-.07	.04	-.21
FEDU → DIDS_EB	-.00	.06	-.00
FEDU → DIDS_ED	-.03	.04	-.10
FOCCUP → DIDS_CM	-.01	.05	-.01
FOCCUP → DIDS_IC	.07	.05	.14
FOCCUP → DIDS_EB	.18	.08	.25*
FOCCUP → DIDS_ED	.09	.06	.16
FINCOME → DIDS_CM	.18	.07	.28**
FINCOME → DIDS_IC	.04	.07	.07
FINCOME → DIDS_EB	-.02	.10	-.03
FINCOME → DIDS_ED	-.09	.07	-.14

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (3, *N*= 94) = 2.746, *p*= .432. * $p < .05$; ** $p < .01$, *** $p < .001$.

Mother characteristics also predicted the dimensions of identity formation in the last model, which also showed a good fit to the data ($\chi 2$ (2, *N*= 94) = 2.513, *p*= .285; *CFI*= .997: and *RMSEA* = .052). As it is seen in Table 28, mother education significantly predicted the two commitment dimensions, but as opposed to what we expected, the associations were negative. On the other hand, mother occupational status significantly and positively predicted the two commitment dimensions.

Table 28. Unstandardized Coefficient (B), Standard Error (SE), Standardized Coefficient (β) for the Links from Mother Characteristics to the Identity Formation Behaviors Controlling for the Well-Being Factors in the Tuskegee Sample (N=94).

	B	*SE*	β
MEDU → DIDS_CM	-.09	.05	-.24*
MEDU → DIDS_IC	-.11	.04	-.30*
MEDU → DIDS_EB	.02	.06	.04
MEDU → DIDS_ED	-.08	.05	-.21
MOCCUP → DIDS_CM	.18	.07	.26*
MOCCUP → DIDS_IC	.14	.07	.21*
MOCCUP → DIDS_EB	-05	.10	-.06
MOCCUP → DIDS_ED	.10	.08	.14
MINCOME → DIDS_CM	-.03	.07	-.05
MINCOME → DIDS_IC	.06	.07	.10
MINCOME → DIDS_EB	-.03	.09	-.02
MINCOME → DIDS_ED	.05	.07	.08

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (2, N= 94) = 2.513, p= .285. * p < .05; ** p < .01, *** p < .001.

Results for the Bogazici sample

The model, where social structural influences simultaneously predicted the identity variables, was tested in the Bogazici sample. When identity styles were measured by the ISI, the

model showed an acceptable fit to the data ($\chi 2$ (9, N= 209) = 30.527, p= .051; *CFI*= .979: and *RMSEA* = .073). Both father and mother characteristics predicted identity variables (see Table 24). The results partially supported the current hypotheses (see Table 24). As opposed to what we expected, father income had significant and positive association with the ISI-normative style after controlling for the well-being factors. On the other hand, as we expected, mother occupational status had a significant and positive association with the ISI-informational style, and a significant but negative association with the ISI-normative style. Moreover, its association with the ISI-diffuse/avoidant style became nonsignificant after controlling for the well-being factors (the association was significant and negative before the well-being factors were controlled). Our hypothesis regarding identity formation behaviors was also partially supported. There were significant and positive associations from father occupational status to exploration in-breadth dimension, from father income, mother occupational status, and mother education to commitment making dimension, from mother occupational status to identification with commitments dimension. However, the significant and negative link from mother income to commitment making dimension was opposite of what we expected. The associations from mother occupational status to the two exploration dimensions became nonsignificant after controlling for the well-being factors, also were not consistent with the hypothesis.

The model showed an adequate fit to the data when identity styles were measured by the IPSQ ($\chi 2$ (8, N= 209) = 19.197, p= .064; *CFI*= .978: and *RMSEA* = .085). The significant associations in this model were consistent with the ISI findings (see Table 25). Specifically, father income positively predicted the IPSQ-normative style. Mother occupational status positively predicted the IPSQ-informational style, and negatively predicted the IPSQ-normative style. In terms of identity formation behaviors, there were positive links from father occupational

status and mother occupational status to exploration in-breadth dimension, from father income to commitment making, and from mother occupational status to identification with commitments dimension. The negative association between mother income and commitment making also was significant in this model. However, the significant associaton between mother income and the IPSQ-informational style was negative before the well-being factors were controlled, but became nonsignificant in this model. Overall, both mother and father characteristics predicted both identity styles and identity formation behaviors in the Bogazici sample.

Immediate Environment Influences

Social support, everyday discrimination, and perceived personal opportunities were the indicators of immediate environment influences, and their impact on style and behavior was tested simultaneously in the Auburn and Bogazici samples, but separately in the Tuskegee sample (due to small sample size). Specifically it was hypothesized that (a) social support will have significant and positive associations with informational style, normative style, and the four dimensions of identity formation, but a significant and negative association with diffuse/avoidant style which will be negative but will become nonsignificant after controlling for the well-being factors; (b) everyday discrimination will have significant and negative associations with informational style and the four dimensions; but its association with normative style will be positive, and with diffuse/avoidant style will be positive but will become nonsignificant after controlling for the well-being factors; and (c) perceived personal opportunities will have significant and positive associations with informational style and the four dimensions, and significant but negative association with normative style, and its association with diffuse/avoidant style will be negative but will become nonsignificant after controlling for the well-being factors.

Results for the Auburn sample

The model where identity styles were measured by the ISI showed a good fit to the data after the well-being factors were controlled ($\chi 2$ (1, *N*=208)= 13.699, *p*=.072; *CFI*= .990; and *RMSEA* = .071). Social support had significant and positive associations with the ISI-informational and the ISI-normative styles, as well as with exploration in-breadth dimension (see Table 29). The links from social support to commitment making (*B*= .19, *SE*=.08, β=.15*), identification with commitments (*B*= .17, *SE*=.06, β=.15**), and to exploration in-depth (*B*= .14, *SE*=.07, β=.12*) dimensions were also significant before the well-being factors were controlled. These associations became non-significant after well-being factors were controlled. Everyday discrimination did not have any significant associations in this model; however, there were two significant links before the well-being factors were controlled. Everyday discrimination significantly and positively predicted the ISI-diffuse/avoidant style (*B*= .22, *SE*=.07, β=.20***); and it significantly but negatively predicted exploration in-depth dimension (*B*=-.13, *SE*=.06, β=-.12**). Perceived personal opportunities was the last variable examined. It had significant and positive associations with the dimensions of identification with commitments and exploration in-depth. It also had significant and negative association with the ISI-diffuse/avoidant style. The association from perceived personal opportunities to the ISI-informational style was also significant and positive before the well-being factors were controlled (*B*= .14, *SE*=.04, β=.19***).

The model where the IPSQ was used to measure identity styles also had a good fit to the Auburn data ($\chi 2$ (1, *N*=341) = 4.290, *p*=.368; *CFI*= 1.000; and *RMSEA* = .015). Consistent with the ISI findings, social support significantly and positively predicted the dimension of exploration in-breadth, and the IPSQ-normative style (see Table 30). The links from social

support to the two commitment dimensions again became nonsignificant after controlling for the well-being factors (*B*= .20, *SE*=.08, *β*=.15** for commitment making, and *B*= .17, *SE*=.08, *β*=.15* for identification with commitments in the uncontrolled model). As opposed to what we expected (also different from the ISI findings) there was no significant association between social support and the IPSQ-informational style. The links from everyday discrimination to identity styles and identity formation behaviors varied from the results of the ISI model. Everyday discrimination significantly predicted the IPSQ-normative style; however, the association was negative. Before the well-being factors were controlled, everyday discrimination also had significant associations with the IPSQ-informational style (*B*=-.06, *SE*=.01, *β*=-.19**), commitment making dimension (*B*=-.16, *SE*=.07, *β*=-.14**), identification with commitments dimension (*B*=-.19, *SE*=,05, *β*=-.12*), and exploration in-depth dimension (*B*=-.16, *SE*=.06 *β*=-.15*). These associations became nonsignificant when the effects of the well-being factors were removed from identity variables. The associations between personal opportunities and identity variables also partially supported the hypotheses, and partially consistent with the findings of the ISI model. Personal opportunities had significant and positive associations with the IPSQ-informational style, as well as with the dimensions of commitment making, identification with commitments, and exploration in-depth. These associations were significant before and after the well-being factors were controlled.

Table 29. Unstandardized Coefficients (*B*), Standard Errors (*SE*), and Standardized Coefficients (β) of Direct Paths from the Immediate Environment Influences to the Identity Variables when Identity Styles were Measured by the ISI after Controlling for the Well-Being Factors in the Auburn (*N*=341), and Bogazici (*N*=209) Samples.

	Auburn Sample			Bogazici Sample		
	B	*SE*	β	*B*	*SE*	β
SOC SUP→ ISI_INFO	.13	.05	.16**	.07	.04	.12 [a]
SOC SUP → ISI_NORM	.11	.04	.15**	.13	.06	.17*
SOC SUP → ISI_DIFF	-.06	.07	-.05[a]	-,04	.05	-.06
SOC SUP →DIDS_CM	.12	.08	.10 [a]	.03	.07	.03
SOC SUP → DIDS_IC	.12	.06	.11	.02	.07	.03
SOC SUP → DIDS_EB	.27	.08	.20***	.02	.07	.02
SOC SUP → DIDS_ED	.09	.07	.07 [a]	.06	.06	.07
EVDY DISC→ ISI_INFO	.01	.04	.01	-.05	.05	-.07 [a]
EVDY DISC → ISI_NORM	.01	.04	.02	.05	.07	.05 [a]
EVDY DISC → ISI_DIFF	.10	.07	.10 [a]	.08	.07	.09 [a]
EVDY DISC →DIDS_CM	.02	.07	.01	-.09	.09	-.07 [a]
EVDY DISC → DIDS_IC	.03	.05	.03	-.07	.08	-.06
EVDY DISC → DIDS_EB	.06	.07	.05	.06	.09	.05
EVDY DISC → DIDS_ED	-.06	.06	-.06 [a]	.06	.08	.05
PRS OPP→ ISI_INFO	.07	.04	.10 [a]	.07	.04	.12
PRS OPP→ ISI_NORM	.02	.04	.04	.05	.05	.06

PRS OPP→ ISI_DIFF	-.13	.06	-.13*	-.04	.05	-.06
PRS OPP →DIDS_CM	.14	.06	.13*	.27	.07	.25***
PRS OPP → DIDS_IC	.16	.05	.18**	.24	.07	.25***
PRS OPP → DIDS_EB	.03	.06	.03	.13	.07	.13
PRS OPP → DIDS_ED	.11	.06	.11*	.23	.06	.24***

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (3, N=341) = 13.669, p= .28 in the Auburn sample; and $\chi 2$ (3, N= 209) = 10.315, p= .081 in the Bogazici sample. [a] it was significant in the uncontrolled model. * p < .05; ** p <.01, *** p < .001.

Table 30. Unstandardized Coefficients (B), Standard Errors (SE), and Standardized Coefficients (β) of Direct Paths from the Immediate Environment Influences to the Identity Variables when the IPSQ is Used Controlling for the Well-Being Factors in the Auburn Sample (*N*=341), and Bogazici Sample (*N*=209).

	Auburn Sample			Bogazici Sample		
	B	*SE*	*β*	*B*	*SE*	*β*
SOC SUP→ IPSQ_INFO	-.02	.02	-.06	-.01	.02	-.04
SOC SUP → IPSQ_NORM	.05	.02	.14*	.05	.02	.22**
SOC SUP →DIDS_CM	.12	.08	.09 [a]	.03	.07	.03
SOC SUP → DIDS_IC	.12	.06	.11 [a]	.02	.07	.03
SOC SUP → DIDS_EB	.26	.08	.20***	.02	.07	.02
SOC SUP → DIDS_ED	.09	.07	.07	.06	.06	.07 [a]
EVDY DISC→ IPSQ_INFO	-.02	.02	-.06 [a]	-.05	.02	-.20**
EVDY DISC → IPSQ_NORM	-.03	.02	-.11*	.02	.02	.06
EVDY DISC →DIDS_CM	.02	.07	.01 [a]	-.09	.09	-.07 [a]
EVDY DISC → DIDS_IC	.03	.05	.03 [a]	-.07	.08	-.06 [a]
EVDY DISC → DIDS_EB	.06	.07	.05	.06	.09	.05
EVDY DISC → DIDS_ED	-.06	.06	-.06 [a]	.06	.08	.05
PRS OPP→ IPSQ_INFO	.03	.02	.12*	-.00	.02	-.01
PRS OPP→ IPSQ_NORM	.01	.02	.04	.03	.02	.04
PRS OPP →DIDS_CM	.16	.06	.15**	.27	.07	.25***
PRS OPP → DIDS_IC	.16	.05	.18***	.24	.07	.25***
PRS OPP → DIDS_EB	.03	.06	.03	.13	.07	.13**
PRS OPP → DIDS_ED	.12	.06	.12*	.23	.06	.24***

NOTE: See Table 1 Notes for abbreviations. $\chi 2$ (1, *N*= 341) = 4.290, *p*= .015 in the Auburn sample; and $\chi 2$ (1, *N*= 209) = 6.614. *p*= .085 in the Bogazici sample. [a] it was significant in the uncontrolled model.* $p < .05$; ** $p < .01$, *** $p < .001$.

Results for the Tuskegee sample

The impact of the immediate environment influences on identity styles and identity formation behaviors were tested separately. The first model looked at the impact of social support, everyday discrimination, and personal opportunities on the four dimensions of identity formation. The model showed a good fit to the data (($\chi 2$ (3, *N*= 94) = 3.000, *p*= .392; *CFI*= 1.000; and *RMSEA* = .001); however, none of the associations were significant. The associations also were not significant before the well-being factors were controlled. In general, the immediate environment influences did not predict the four identity formation behaviors in the Tuskegee sample.

The model where the immediate environment influences predicted identity styles when measured by the ISI also showed a good fit to the data ($\chi 2$ (1, *N*= 94) = 2.197, *p*= .140; *CFI*= .980; and *RMSEA* = .083). The associations in this model were not found to be significant; however, before the well-being factors were controlled, significant and positive links were found from everyday discrimination to the ISI-normative style (*B*=.21, *SE*=.07 β=.31**), and to the ISI-diffuse/avoidant style (*B*=.25, *SE*=.09, β=.28**). These associations became nonsignificant after the impact of the well-being factors were removed from identity variables.

When the IPSQ measured identity styles, the model still had good fit to the Tuskegee data ($\chi 2$ (1, *N*= 94) = 2.131, *p*= .144; *CFI*= .958; and *RMSEA* = .090) but with no significant paths. The only path that was significant was before the well-being factors were controlled was that from everyday discrimination to the IPSQ-informational style (*B*=-.05, *SE*=.02 β=-.24**).

Overall, in terms of immediate environment influences, only everyday discrimination predicted identity styles before the well-being factors were controlled.

Results for the Bogazici sample

The three immediate environment factors simultaneously predicted identity styles using the ISI to measure them, and the four dimensions of identity formation after controlling for the well-being factors. The resulting model showed a good fit to the data ($\chi 2$ (3, N= 209) = 10.315, p= .081; *CFI*= .992; and *RMSEA* = .046). In the Bogazici sample, social support only predicted the ISI-normative style (see Table 29). The two links from social support that became nonsignificant after controlling for the well-being factors were to the ISI-informational style (*B*=.10, *SE*=.04, β=.17*), and to the exploration in-depth dimension (*B*=.14, *SE*=.06, β=.15*). Social support did not predict the two commitment dimensions or the exploration in-breadth dimension. Social support also did not predict the ISI-diffuse/avoidant style before or after controlling for well-being. None of the links from everyday discrimination to the identity variables were significant after controlling for the well-being factors. However, everyday discrimination had significant associations with the ISI-informational style (*B*=-.16, *SE*=.05, β=-.16*), the ISI-normative style (*B*=.19, *SE*=.07, β=.20**), the ISI-diffuse/avoidant style (*B*=-.30, *SE*=.07, β=-.21**), and with the dimension of commitment making (*B*=-.24, *SE*=.09, β=-.20**) before the effects of the well-being factors were removed. Everyday discrimination did not have significant associations with the dimensions of identification with commitments, exploration in-breadth, and exploration in-depth. As it is seen in Table 29, perceived personal opportunities only predicted identity formation behaviors, specifically commitment making, identification with commitments, and exploration in-depth, but not exploration in-breadth. As opposed to what we

expected, perceived opportunities did not have significant associations with the ISI-informational and the ISI-normative styles.

This model also showed a good fit to the Bogazici sample when identity styles were measured by the IPSQ ($\chi 2$ (1, *N*= 209) = 6.614, *p*= .085; *CFI*= .986; and *RMSEA* = .077). Similar to previous model, social support significantly and positively predicted the IPSQ-normative style (see Table 30), whereas its association with the dimension of exploration in-depth became non-significant when the model was residualized on the well-being factors (*B*=.14, *SE*=.06, β=.15* in the uncontrolled model). The rest of the links from social support were nonsignificant, which was not consistent with our expectations, as well as with the finding of the ISI model. As expected, everyday discrimination significantly and negatively predicted the IPSQ-informational style. It also had significant and negative associations with commitment making (*B*=-.30, *SE*=.09, β=-.21**) and with identification with commitments (*B*=-.29, *SE*=.08, β=-.20**) before the well-being factors were controlled; however, these associations became nonsignificant in the final model. The links from perceived personal opportunities did not change when the impact of well-being factors on identity variables were removed. Similar to the findings of the ISI model, personal opportunities had significant and positive associations with identity formation behaviors (three dimensions with the ISI and all four dimensions with the ipsq); however, they did not predict the identity styles in the Bogazici sample.

Results for the 3rd Research Question:

Mediation versus Additive Effects

The third research question addressed mediation effects models and their alternative, additive models, among the contextual influences, identity styles, and identity formation behaviors after controlling for the well-being factors. In the current study, whether identity style

mediated the association between a contextual influences and identity formation behavior was examined. It was expected that the addition of the identity styles to the model, would result in the direct path from contextual influences to identity formation behaviors becoming weaker or non-significant.

There are four conditions that must be met in order to show a mediation effect (Baron & Kenny, 1986). First, the independent variable must significantly predict the dependent variable, such as the path from contextual influences to identity formation behaviors; second, the independent variable must significantly predict the mediator, such as the path from contextual influences to identity styles; third, the mediator must significantly predict the dependent variable, such as the path from identity styles to identity formation behaviors; and last, the impact of the independent variable (i.e., contextual influences) on the dependent variable (i.e., identity formation behaviors) must be attenuated or become non-significant after including the mediator (i.e., identity styles) in the model. For the hypothesized mediation models of this research question, the first three conditions were already tested in the previous research questions.

A summary of the results for the first research question in each sample can be found in Table 31. This table includes the expected associations between identity styles and identity formation behaviors (the *Hypothesized* column); as well as what was found before the well-being factors were controlled and after their impact on identity variables were removed (the results before the slash represent the results before the well-being factors were controlled, whereas the results after the slash represent the associations after the well-being factors were controlled). Tables 33 to 38 summarize the results for the second research questions. In these tables, the associations for the identity formation behaviors represent the results for the ISI-models (i.e., when the four dimensions of identity formation were examined with the ISI-informational, the

ISI-normative, and the ISI-diffuse/avoidant styles). If any result was different in the IPSQ-models (when the four dimensions of identity formation were tested with the IPSQ-informational and the IPSQ-normative styles), the variation is noted in the tables. These results showed that some of the contextual influences significantly predicted only identity styles, but not identity formation behaviors, such as uncertainty avoidance, or father income; whereas other contextual influences significantly predicted only identity formation behaviors, but not identity styles, such as mother education. Some others significantly predicted both identity styles and identity formation behaviors. The associations also showed variation across the three samples. There was no single case that did not violate the assumptions of testing mediation in the Tuskegee sample. Moreover, very few cases did not violate the assumptions of testing mediation in the Auburn and Bogazici sample, and they were different across the two samples. The associations that met all assumptions for testing mediation in the Auburn and Bogazici samples are presented in the sections that follow.

Results for the Auburn Sample

Among the contextual influences, only future orientation, social support, and personal opportunities met the conditions of testing mediation (i.e., they had significant association with both identity styles and identity formation behaviors), but not for all the identity variables. Specifically, following paths were tested for mediation:

Path1: Future Orientation → ISI-Info Style → Identification with Commitments

Path 2: Future Orientation → ISI-Diff Style → Identification with Commitments

Path 3: Future Orientation → IPSQ-Info Style → Identification with Commitments

Path 4: Social Support → ISI-Info Style → Exploration In-breadth

Path 5: Social Support → ISI-Norma Style → Exploration In-breadth

Path 6: Personal Opportunities → ISI-Diff Style → Identification with Commitments

Path 7: Personal Opportunities → ISI-Diff Style → Exploration In-depth

Path 8: Personal Opportunities → IPSQ-Info Style → Identification with Commitments

Path 9: Personal Opportunities → IPSQ-Info Style → Exploration In-depth

Paths 1-3. The significant associations between future orientation and the ISI-informational style, between future orientation and the ISI-diffuse/avoidant style, as well as between future orientation and the dimension of identification with commitments were established in the previous research question (see Table 19). First, we examined if these associations remain significant when a direct path from the ISI-informational style to the dimension of identification with commitments was added (the unconstrained model). This model showed a good fit to the data ($\chi 2$ (3, N= 341) = 4.385, p= .223; CFI= .998; and $RMSEA$ = .037). The path from future orientation to the dimension of identification with commitments became nonsignificant (B=.01, SE=.02, β=.01), which suggests that the impact of future orientation on identification with commitment is likely to be through the ISI-informational style. Supportively, when the path from future orientation to identification with commitments was constrained to be equal to zero, the model showed a better fit to the Auburn data ($\chi 2$ (4, N= 341) = 4.449, p= .340; CFI= .999; and $RMSEA$ = .018). Model comparison using delta chi-square test did not reveal any significant difference between the unconstrained and constrained models ($\Delta\chi 2$ (1) = .064, *ns*), supporting that the link from future orientation to the dimension of identification with commitments was not significantly different from zero, when the path from the ISI-informational style to identification with commitments was added to the model.

Second, the mediation effect of the ISI-diffuse/avoidant style was examined following the same steps followed with the ISI-informational style. The unconstrained model, which included

direct paths from future orientation to the ISI-diffuse/avoidant style and to identification with commitments dimension, with a direct path from the ISI-diffuse/avoidant style to identification with commitments, showed a good fit to the data ($\chi 2$ (3, *N*= 341) = 4.381, *p*= .298; *CFI*= .998; and *RMSEA* = .032). All the associations were significant, except that the direct path from future orientation to identification with commitments dimension became nonsignificant (*B*=.00, *SE*=.02, β=.01). When we constrained this path to be equal to zero, the model still showed a good fit to the data ($\chi 2$ (4, *N*= 341) = 4.418, *p*= .358; *CFI*= .999; and *RMSEA* = .017). Comparison of two models revealed that the path from future orientation to the identification with commitments was not significantly different than zero ($\Delta\chi 2$ (1) = .037, *ns*) when it was mediated by the ISI-diffuse/avoidant style.

The same patterns were tested also when informational style was measured by the IPSQ. Tables 17 and 20 show already established associations between pairs of future orientation, the IPSQ-informational style, and identification with commitments dimension. When all the paths were added simultaneously (the unconstrained model), the model showed an adequate fit to the Auburn data ($\chi 2$ (3, *N*= 341) = 4.385, *p*= .321; *CFI*= .998; and *RMSEA* = .037), and the link from future orientation to the dimension of identification with commitments became nonsiginficant (*B*=.00, *SE*=.01, β=.00). When this path was constrained to be equal to zero, as expected, the model still showed a good fit to the data ($\chi 2$ (4, *N*= 341) = 4.413, *p*= .378; *CFI*= .999; and *RMSEA* = .019), revealing no significant difference between two models ($\Delta\chi 2$ (1) = .028, *ns*). In other words, the path from future orientation to identification with commitments was equal to zero when the path from the IPSQ-informational style to identification with commitments was in the model. The current findings showed that future orientation impacts the dimension of identification with commitments is through the mediation of informational style

(either the ISI-informational style or the IPSQ-informational style) and diffuse/avoidant style in the Auburn sample.

Paths 4-5. The mediation effects of the ISI-informational style and the ISI-normative style between social support and exploration in-breadth were also hypothesized based on the significant associations between pairs of these variables found in the previous research questions (see Table 15 and Table 27). First, the mediation effect of the ISI-informational style was examined, comparing the results of the unconstrained model with the results of the constrained model. The model, where the associations among social support, the ISI-informational style, and exploration in-breadth dimension were freed, showed an adequate fit to the data ($\chi 2$ (3, N= 341) = 8.090, p= .044; *CFI*= .992; and *RMSEA* = .072). However, the link from social support to exploration in-breadth dimension remained significant (B=.20, SE=.07, β=.16**). When we constrained this path to be equal to zero, the model showed a worse fit to the data ($\chi 2$ (4, N= 341) = 17.076, p= .002; *CFI*= .979; and *RMSEA* = .096). The delta chi-square test between the unconstrained and constrained models confirmed a significant difference ($\Delta\chi 2$ (1) = 8.986, p<.01), which suggested that the path from social support to the dimension of exploration in-breadth is still significant and positive even after adding the path from the ISI-informational style to exploration in-breadth dimension to the model. Thus, an additive model is supported.

The indirect effect of social support on exploration in-breadth dimension through the ISI-normative style was also tested. The unconstrained model, where all the associations were freed, showed an adequate fit to the data ($\chi 2$ (3, N= 341) = 8.012, p= .053; *CFI*= .993; and *RMSEA* = .071). As it was in the previous model, the path from social support to exploration in-breadth dimension remained significant in the unconstrained model (B=.12, SE=.04, β=.16**). When this path was constrained to be equal to zero, the model showed a worse fit to the data ($\chi 2$ (4, N=

341) = 18.250, p= .001; *CFI*= .976; and *RMSEA* = .102), suggesting that the path was significantly different than zero. The delta chi-square test confirmed the difference between unconstrained and constrained models ($\Delta\chi 2$ (1) = 10.233, p<.001).

An alternative to the mediation effects model is testing the additive model, where the ISI-informational style, the ISI-normative style, and social support predict exploration in-breadth dimension. To test this model, the delta chi square differences among the model with the ISI-informational style only, and the model with both the ISI-informational style and the ISI-normative style; and then the model with the ISI-informational style, the ISI-normative styles, and social support was examined. The results indicated that the ISI-informational style only model and the model with both the ISI-informational style and the ISI-normative style were significantly different from each other ($\Delta\chi 2$ (1)= 11.278, p<.001), and the second model showed a better fit to the data. Adding social support to the model also created significant difference between identity styles only model and identity styles with social support model ($\Delta\chi 2$ (1)= 7.235, p<.001), which supported the additive model. In other words, the current findings revealed that social support has an additive impact on the extent to which one explores his or her career alternatives in-breadth, in addition to the role of informational and normative styles as measured by the ISI.

Paths 6-9. The associations among the pairs of personal opportunities, the ISI-diffuse/avoidant style, the IPSQ-informational style, identification with commitments dimension, and exploration in-depth dimension were shown in the previous research questions (see Tables 16, 18, 27, & 28). The mediation effect of the ISI-diffuse/avoidant style and the IPSQ-informational style in the links from personal opportunities to the dimensions of identification with commitments and exploration in-depth were examined.

First, the associations were tested with the ISI-diffuse/avoidant style. The unconstrained model showed a good fit to data ($\chi 2$ (4, N=341)= 10.701, p= .073; *CFI*= .994; and *RMSEA* = .045). All the association remained significant, except the links from personal opportunities to the dimension of exploration in-depth (B=-.00, SE=.04, β=-,00) and to the dimension of identification with commitments (B=.04, SE=.03, β=.04). Although these links were significant in the previous models where personal opportunities predicted both identity styles and identity formation behaviors; they became nonsignificant when diffuse/avoidant style also predicted identity formation behaviors in the same model. The significance of mediation was also tested by calculating the chi-square differences between constrained and unconstrained models. When the paths from personal opportunities to both identification with commitments and exploration in-depth were constrained to be equal to zero, the model still showed a good fit to the data ($\chi 2$ (6, N=341)= 12.176, p= .058; *CFI*= .990; and *RMSEA* = .055). No significant difference was found between the unconstrained and constrained models ($\Delta\chi 2$ (2)= 1.48, *ns*), suggesting that the impact of personal opportunities on the dimensions of identification with commitments and exploration in-depth is fully mediated by the degree to which one is diffusion/avoidance oriented.

The same paths from personal opportunities were also tested with the IPSQ-informational style. The unconstrained model showed a good fit to the data ($\chi 2$ (4, N=341)= 29.595, p= .073; *CFI*= .991; and *RMSEA* = .053). All the associations were significant in this model. Thus, adding the indirect effect of personal opportunities through the IPSQ-informational style did not change the direct impact of personal opportunities on the identification with commitments and exploration in-depth. First, the path to identification with commitments was constrained. The constrained model was found to be significantly different from the unconstrained model ($\Delta\chi 2$

(1)= 11.30, p<.001). A similar results was found when the path to exploration in-depth was constrained to be equal to zero. The constrained and unconstrained models were significantly different from each other ($\Delta\chi 2$ (1)= 6.8, p<.01). In general the findings showed that the IPSQ-informational style did not mediate the relations between perceived personal opportunities and the two dimensions.

An alternative was testing an additive model, where both the IPSQ-informational style and the personal opportunities predicted the dimensions of identification with commitments and exploration in-depth. To test this model, the delta chi square differences between the model with the IPSQ-informational style only, and the model with both the IPSQ-informational style and perceived personal opportunities was examined. The results indicated that the IPSQ-informational style only model and the model with both the IPSQ-informational style and perceived personal opportunities are not significantly different from each other ($\Delta\chi 2$ (1)= 2.4, p= ns), which did not support the additive model too. In other words, the current findings revealed that perceived personal opportunities impact the dimensions of identification with commitments and exploration in-depth, regardless of the IPSQ_informational style level of individuals.

Results for the Bogazici sample

Among the contextual influences, only mother characteristics (i.e., mother occupational status) within the social-structural influences significantly predicted both identity styles and identity formation behaviors in the Bogazici sample (see Table 36). The current research question was whether styles would mediate the associations between mother characteristics and identity formation behaviors. Specifically, following paths were tested for mediation:

Path 1: Mother Occupation $\rightarrow$ IPSQ-Informational Style $\rightarrow$ Identification with Commitments

Path 2: Mother Occupation $\rightarrow$ IPSQ-Informational Style $\rightarrow$ Exploration In-breadth

Path 3: Mother Occupation $\rightarrow$ IPSQ-Normative Style $\rightarrow$ Identification with Commitments

Mother occupational status predicted both identity styles when they were measured by the IPSQ and identity formation behaviors in the Bogazici sample (see Table 25). First, we examined whether the IPSQ-informational style would mediate the relation between mother occupational status and the two dimensions of identification with commitments and exploration in-breadth. In order to test this hypothesis, a path from mother occupation to the IPSQ-informational style was added to a model where both mother occupation and the IPSQ-informational style predict the identity formation behaviors. The results showed a good fit of the model to the Bogazici data ($\chi 2$ (3, N=209)= .863, p= .833; CFI= 1.000; and $RMSEA$ = .000). Adding a path from mother occupation to the IPSQ-informational style changed the association between mother occupation and exploration in-breadth (B=.10, SE=.07, β=.09), but not the association between mother occupation and identification with commitments (B=.19, SE=.04, β=.16***). Delta chi-square tests were computed in order to see if the changes in the paths were significant. First, the path from mother occupation to identification with commitments was constrained to be equal to zero. The difference was significant ($\Delta\chi 2$ (1)= 17.90, p<.001), suggesting that mother occupation directly impacts identification with commitments in addition to its indirect effect through the IPSQ-informational style. On the other hand, constraining the path from mother occupation to exploration in-breadth did not reveal a significant difference from the unconstrained model ($\Delta\chi 2$ (1)= 1.84, *ns*). Therefore, the IPSQ-informational style was fully mediated the association between mother occupation and exploration in-breadth, but not the association between mother occupation and identification with commitments. An additive effects model for the IPSQ-informational style and mother occupation on identification with commitments also was tested; however the results did not support the additive model.

The associations between mother occupation and identification with commitments also was examined when the IPSQ-normative style was added to the model as a mediator. The unconstrained model showed a good fit to the Bogazici data ($\chi 2$ (4, N=209)= 6.61, p= .241; CFI= .995; and $RMSEA$ = .040). All the associations in the model were found to be significant. As it was the case in the previous model, the direct path from mother occupation to identification with commitments remained significant (B=.24, SE=.03, β=.22***). even after adding an indirect path from mother occupation to identification with commitments through the IPSQ-normative style. As expected, the comparison of unconstrained and constrained models showed that the direct path was significantly different from zero ($\Delta\chi 2$ (1)= 31.39, p<.001). Furthermore, an additive model also was tested to examine whether adding mother occupational status would make a difference and improve the quality of model fit. However, no significant difference was found between the model where the identity styles predicted identification with commitments and the model where both identity styles and mother occupation predicted identification with commitments ($\Delta\chi 2$ (1)= 2.20, *ns*), suggesting the lack of additive effect. Overall, three mediation effects were tested in the Bogazici sample. Only the path from mother occupational status to exploration in breadth was mediated by the IPSQ-informational style. Neither mediated nor additive models were supported for associations between mother occupational status, identity style and identification with commitments

Research Question 4: Multi-Group Analyses

The fourth and final research question of the current investigation aimed to examine the moderating effects of nation, sex, and the interaction of nation and sex on the mediation and additive models. Because the mediation and additive models were only examined in the Auburn and Bogazici samples, and the mediation models tested varied across samples, moderating effect

of nation on these models could not be tested in the current investigation. The moderating role of sex also could not be examined in the current study, due to imbalanced and small numbers of males across the three samples. Only 21 out of 341 participants in the Auburn sample, and 27 out of 94 participants in the Tuskegee sample were males; whereas 32% of the Bogazici sample was male. Thus, the minimum sample sizes, which are required for testing path analyses could not be achieved in any of the samples. However, the impact of sex was controlled in all the analysis by removing its effect from all variables.

It was determined that the sets of paths from identity styles to identity formation behaviors could be tested for their similarities and differences across the samples of the current investigation. Although, it was not proposed initially, the current investigators decided to report on whether the link between identity styles and identity formation behaviors operate similarly across the nations using the two measures of identity styles, the ISI, and the IPSQ. Similarities, rather than differences, were expected across the samples.

To compare the path coefficients multi group analysis was used. In the initial model, the parameters were freed, and then constrained to be equal to across groups. First, all the paths were constrained simultaneously. If the fully constrained model was found to be significantly different from the unconstrained model, each parameter was constrained separately in order to see which paths were similar across the samples and which were not.

First, the ISI model was tested, where the ISI-informational, the ISI-normative, and the ISI-diffuse/avoidant styles predicted the four dimensions of identity formation simultaneously. All the paths from identity styles to identity formation behaviors were constrained to be equal across the groups. As it is seen in Table 31, the fully constrained model was not found to be significantly different from the unconstrained model. In other words, all the paths operated

similarly across the samples. The ISI-informational style significantly and positively predicted the dimensions of identification with commitments, exploration in-breadth, and exploration in-depth, but not the dimension of commitment making. The ISI-normative style did not predict any of the dimensions, whereas the ISI-diffuse/avoidant style significantly and negatively predicted the two commitment dimensions and the dimension of exploration in-depth, but not the dimension of exploration in-breadth across the three samples of the current investigation.

The invariance of the paths from identity styles to identity formation behaviors across the Auburn, Tuskegee, and Bogazici samples was examined when the identity styles were measured by the IPSQ. Table 32 summarizes the results for the chi square difference tests across a series of models fitted. First, the unconstrained model and a model where all the paths from identity styles to identity formation behaviors were constrained, were fitted. The delta chi-square revealed that two models are significantly different from each other, suggesting that one or more paths are not similar across the three samples. In order to understand which paths were not equal across groups; each path was constrained in a sequence of models (see Table 32, Models 6 to 13). The majority of the paths were found to be equal across the Auburn, Tuskegee, and Bogazici samples. Across the three samples, the IPSQ-informational style and the IPSQ-normative style significantly and positively predicted the dimensions of commitment making and exploration in-depth. The association between the IPSQ-normative style and the dimension of exploration in-breadth was nonsignificant across the three groups. Only three paths were different across the groups, the two paths from the IPSQ-informational and the IPSQ-normative styles to identification with commitments dimension, and the path from the IPSQ-informational style to exploration in-breadth dimension. Pairs of groups were compared in order to investigate the different paths in detail.

Table 31. Invariant Tests of the Paths from Identity Styles to Identity Formation Behaviors across the Auburn Sample (*N*=341), the Tuskegee Sample (*N*=94), and the Bogazici Sample (*N*=209), when Identity Styles was Measured by the ISI.

Model Description	Groups	Baseline Model	$\chi 2$	df	$\Delta\chi 2$	Δdf	Sig.
Unconstrained Model (Model 1)	AU		6.286	3			
Unconstrained Model (Model 2)	TU		6.392	3			
Unconstrained Model (Model 3)	BU		4.274	3			
Unconstrained Model (Model 4)	AU & TU & BU		16.980	9			
All Paths Constrained Model (Model 5)	AU & TU & BU	Model 4	46.533	29	29.554	20	ns

NOTE: AU=Auburn Sample; *TU*=Tuskegee Sample; and *BU*=Bogazici Sample.

Table 32. Invariant Tests of the Paths from Identity Styles to Identity Formation Behaviors across the Auburn Sample (*N*=341), the Tuskegee Sample (*N*=94), and the Bogazici Sample (*N*=209), when Identity Styles was Measured by the IPSQ.

Model Description	Groups	Baseline Model	$\chi 2$	df	$\Delta\chi 2$	Δdf	Sig.
Unconstrained Model (Model 1)	AU		1.606	1			
Unconstrained Model (Model 2)	TU		.615	1			
Unconstrained Model (Model 3)	BU		.902	1			
Unconstrained Model (Model 4)	AU & TU & BU		2.017	3			
All Paths Constrained Model (Model 5)	AU & TU & BU	Model 4	52.726	19	51.120	17	*p < .001*
IPSQ-INFO to DIDS_CM was constrained (Model 6)	AU & TU & BU	Model 4	8.120	5	6.104	2	*ns*
IPSQ-INFO to DIDS_IC was constrained (Model 7)	AU & TU & BU	Model 4	21.145	5	19.728	2	*p < .001*
IPSQ-INFO to DIDS_EB was constrained (Model 8)	AU & TU & BU	Model 4	10.647	5	6.630	2	*p < .01*
IPSQ-INFO to DIDS_ED was constrained (Model 9)	AU & TU & BU	Model 4	5.624	5	3.607	2	*ns*
IPSQ-NORM to DIDS_CM was constrained (Model 10)	AU & TU & BU	Model 4	6.339	5	4.322	2	*ns*
IPSQ- NORM to DIDS_IC was constrained (Model 11)	AU & TU & BU	Model 4	9.123	5	7.106	2	*p < .05*
IPSQ- NORM to DIDS_EB was constrained (Model 12)	AU & TU & BU	Model 4	5.876	5	3.759	2	*ns*
IPSQ- NORM to DIDS_ED was constrained (Model 13)	AU & TU & BU	Model 4	2.380	5	.363	2	*ns*

NOTE:AU=Auburn Sample; *TU*=Tuskegee Sample; and *BU*=Bogazici Sample.

It was found that there was a stronger relation between the IPSQ-informational style and identification with commitments dimension in the Bogazici than it was in the Auburn sample ($\Delta\chi 2$ (1)= 13.960, p<.001), and than it was in the Tuskegee sample ($\Delta\chi 2$ (1)= 7.626, p<.001). However, the same path was found to be equal between the Auburn and Tuskegee samples ($\Delta\chi 2$ (1)= .325, *ns*). In other words, the link from the IPSQ-informational style to identification with commitments dimension was stronger in the Bogazici sample than it was in its American counterparts. The association between the IPSQ-normative style and the dimension of identification with commitments was also examined between the pairs of the samples. It was found that the path was not significantly different between the Tuskegee and the Bogazici samples ($\Delta\chi 2$ (1)= .994, *ns*), and between the Auburn and Tuskegee samples ($\Delta\chi 2$ (1)= 1.615, *ns*); however, it was significantly different between the Auburn and Bogazici samples ($\Delta\chi 2$ (1)= 7.101, p<.001). There was a stronger association in the Bogazici sample.

In terms of the association between the IPSQ-informational style and the dimension of exploration in-breadth, it was found that there was no significant difference between the Auburn and Tuskegee samplea ($\Delta\chi 2$ (1)= 2.271, *ns*); however the association was significantly stronger in the Bogazici sample than it was in the Auburn sample ($\Delta\chi 2$ (1)= 4.194, p< .05) and than it was in the Tuskegee sample ($\Delta\chi 2$ (1)= 7.005, p<.01).Overall, it was found that the differences in the paths from the two identity styles to identification with commitments, and the path from the IPSQ-informational style to exploration in-breadth were significantly different between the Bogazici sample and its American counterparts, but not between the two American samples. The rest of the paths were found to be equal across the three samples.

Summary

The first research question of the current study addressed the paths from identity styles to identity formation behaviors. As it can be seen in Table 33, the paths from diffuse/avoidant style to the dimensions of identity formation were similar across the samples and were as expected, except for the nonsignificant link to exploration in-breadth. Using the ISI or the IPSQ to measure identity styles resulted in some differences in the paths. For instance, informational style, when it was measured by the IPSQ, was significantly associated with almost all identity formation dimensions across the samples (except the Tuskegee sample), whereas when it was measured by the ISI, informational style significantly predicted exploration in-breadth dimension and did not predict commitment making dimension across the three samples, and its association with other dimensions showed variation. Variations across methods of measuring identity styles were also observed for normative style. When it was measured by the ISI, it did not have significant associations with identity formation behaviors in any of the samples, except for the significant and negative link with exploration in-breadth in the Auburn sample. However, when normative style was measured by the IPSQ, it had significant and positive associations with the dimensions of identity formation except for exploration in-breadth, and these associations were significant across the three samples.

Tables 33 to 35 summarize the results for the second research question. Majority of the contextual influences did not predict identity styles or identity formation behaviors; and when one contextual influence predicted any identity variable, it was generally sample specific. No specific pattern in the paths from contextual influences to identity variables was observed; some influences predicted only identity styles (i.e., uncertainty avoidance, father education, father income, and everday discrimination); other contextual influences predicted only identity

formation behaviors (i.e., mother education); whereas some other contextual influences predicted both (i.e., future orientation, father occupation, mother occupation, mother income, social support, and personal opportunities). In general, controlling for the well-being factors did not reveal any difference in the paths from contextual influences to identity variables, except for the paths from social support and everyday discrimination.

For the third research question, the mediation effects model, and its alternative, additive model were tested only with variables that met the conditions for testing mediation in the Auburn and Bogazici samples. Findings of the previous research questions did not support a general mediation effect of identity styles in the relations between contextual influences and identity formation behaviors; rather they pointed only a few potentially mediated associations. Table 36 summarizes the results for this research question. Within the models tested for mediation, more than half supported full mediation, such as the links from future orientation, personal opportunities, and mother occupation to identity formation behaviors.

Finally, the moderating role of nation was investigated only for the paths from identity styles to identity formation behaviors. The paths from identity styles to identity formation behaviors showed similarities across the Auburn, Tuskegee, and Bogazici samples, using either the ISI or the IPSQ, with the exception of three paths that were different between Bogazici and Auburn, when styles were measurd by the IPSQ.

Table 33. The Summary of Results for the RQ1 in the Auburn, Tuskegee, and Bogazici Samples: The Hypothesized Association (Hypothesized), the Association Found before/after the Well-being Factors were Controlled.

Predictor	Outcome	Hypothesized	Auburn Sample	Tuskegee Sample	Bogazici Sample
ISI-INFO with					
	DIDS-CM	sig +	ns/ns	ns/ns	ns/ns
	DIDS-IC	sig +	sig +/ns	sig +/ns	ns/ns
	DIDS-EB	sig +	sig +/sig +	sig +/sig +	sig +/sig +
	DIDS-ED	sig +	ns/ns	sig +/sig +	sig +/sig +
IPSQ-INFO with					
	DIDS-CM	sig +	sig +/sig +	sig +/sig +	sig +/sig +
	DIDS-IC	sig +	sig +/sig +	sig +/ns	sig +/sig +
	DIDS-EB	sig +	sig +/sig +	ns/ns	sig +/sig +
	DIDS-ED	sig +	sig +/sig +	sig +/sig +	sig +/sig +
The ISI-NORM with					
	DIDS-CM	sig +	ns/ns	ns/ns	ns/ns
	DIDS-IC	sig +	ns/ns	ns/ns	ns/ns
	DIDS-EB	sig -	ns/ns	ns/ sig -	ns/ns
	DIDS-ED	sig -	sig +/ sig +	ns/ns	ns/ns
IPSQ-NORM with					
	DIDS-CM	sig +	sig +/ sig +	ns/ns	sig +/sig +
	DIDS-IC	sig +	sig +/ sig +	ns/ns	sig +/sig +
	DIDS-EB	sig -	ns/sig +	ns/ns	ns/ns
	DIDS-ED	sig -	sig +/ sig +	ns/ns	sig +/ns
The ISI-DIFF with					
	DIDS-CM	sig -	sig -/sig -	sig -/sig -	sig -/sig -
	DIDS-IC	sig -	sig - /sig -	sig -/sig -	sig -/sig -
	DIDS-EB	sig -	ns/ns	sig + /ns	ns/ns
	DIDS-ED	sig -	sig -/sig -	sig -/ sig -	sig -/sig -

NOTE: The column labelled as "Hypothesized" refers to the expected association between the predictor and the outcome; "sig +" refers to a significant and positive association; "sig -" refers to a significant and negative association; "ns" refers to a nonsignificant association. The association before the dash represents the result found before the well-being factors were controlled, whereas the association after the slash represents the result found after the well-being factors were controlled.

Table 34. The Summary of Results for the Cultural Influences Section of RQ2 in the Auburn, Tuskegee, and Bogazici Samples: The Hypothesized Association (Hypothesized), the Association Found before/after the Well-being Factors were Controlled.

Predictor	Outcome	Hypothesized	Auburn Sample	Tuskegee Sample	Bogazici Sample
FTR ORINT with					
	ISI-INFO	sig +	sig +/ sig +	ns/ns	ns/ns
	ISI-NORM	ns	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	sig -/sig -	ns/ns	ns/ns
	DIDS-CM	sig +	sig +/ns	ns/ns	ns/ns
	DIDS-IC	sig +	sig +/sig +	ns/ns	ns/ns
	DIDS-EB	sig +	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	sig +/ sig +	sig +/sig +	ns/ns
	IPSQ-NORM	ns	ns/ns	ns/ns	ns/ns
UN AVOID with					
	ISI-INFO	sig -	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig +	sig +/sig +	sig +/sig +	ns/ns
	ISI-DIFF	ns	ns/ns	sig +/sig +	ns/ns
	DIDS-CM	sig -	ns/ns	ns/ns	ns/ns
	DIDS-IC	sig -	ns/ns	ns/ns	ns/ns
	DIDS-EB	sig -	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig -	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig -	ns/ns	sig -/sig -	ns/ns
	IPSQ-NORM	sig +	ns/ns	ns/ns	ns/ns

NOTE: The column labelled as "Hypothesized" refers to the expected association between the predictor and the outcome; "sig +" refers to a significant and positive association; "sig -" refers to a significant and negative association; "ns" refers to a nonsignificant association. The association before the dash represents the result found before the well-being factors were controlled, whereas the association after the slash represents the result found after the well-being factors were controlled. The results for the four dimensions of identity formation are based on the ISI models, and similar with the results of the IPSQ models. See Table 1 Notes for abbreviations.

Table 35. Summary of Results for the Social-Structural Influences - Father Section of RQ2 in the Auburn, Tuskegee, and Bogazici Samples: The Hypothesized Association (Hypothesized), the Association Found before/after the Well-being Factors were Controlled.

Predictor	Outcome	Hypothesized	Auburn Sample	Tuskegee Sample	Bogazici Sample
FEDU with					
	ISI-INFO	sig +	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	sig -/ns [a]	ns/ns	ns/ns
	DIDS-IC	sig +	sig -/ns	ns/ns	ns/ns
	DIDS-EB	sig +	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-NORM	sig -	ns/ns	sig +/sig +	ns/ns
FOCCUP with					
	ISI-INFO	sig +	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	ns/ns	ns/ns	ns/ns
	DIDS-IC	sig +	ns/ns	ns/ns	ns/ns
	DIDS-EB	sig +	ns/ns	sig +/sig +	sig +/sig +
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	ns/ns	sig +/sig +	ns/ns
	IPSQ-NORM	sig -	ns/ns	ns/ns	ns/ns
FINCOME with					
	ISI-INFO	sig +	ns/ns	sig +/sig +	sig +/sig +
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	ns/ns	ns/ns	ns/ns
	DIDS-IC	sig +	ns/ns	ns/ns	ns/ns
	DIDS-EB	sig +	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-NORM	sig -	sig +/sig +	ns/ns	sig +/sig +

NOTE: The column labelled as "Hypothesized" refers to the expected association between the predictor and the outcome; "sig +" refers to a significant and positive association; "sig -" refers to a significant and negative association; "ns" refers to a nonsignificant association. The association before the dash represents the result found before the well-being factors were controlled, whereas the association after the slash represents the result found after the well-being factors were controlled. The results for the four dimensions of identity formation are based on the ISI models, and similar with the results of the IPSQ models, except [a] where the association remained significant and positive after controlling for the well-being factors in the IPSQ model. See Table 1 Notes for abbreviations.

Table 36. The Summary of Results for the Social-Structural Influences - Mother Section of RQ 2 in the Auburn, Tuskegee, and Bogazici Samples: The Hypothesized Association (Hypothesized), the Association Found before/after Controlling for Well-being Factors.

Predictor	Outcome	Hypothesized	Auburn Sample	Tuskegee Sample	Bogazici Sample
MEDU with					
	ISI-INFO	sig +	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	sig -/ ns
	DIDS-CM	sig +	sig +/ns	sig -/sig -	sig +/sig +
	DIDS-IC	sig +	ns/ns	sig -/sig -	ns/ns
	DIDS-EB	sig +	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-NORM	sig -	ns/ns	ns/ns	ns/ns
MOCCUP with					
	ISI-INFO	sig +	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	ns/ns	sig +/sig +	sig +/sig +[b]
	DIDS-IC	sig +	sig +/sig +[a]	sig +/sig +	sig +/sig +
	DIDS-EB	sig +	ns/ns	ns/ns	sig +/ns[c]
	DIDS-ED	sig +	ns/ns	ns/ns	sig +/ns
	IPSQ-INFO	sig +	ns/ns	ns/ns	sig +/sig +
	IPSQ-NORM	sig -	ns/ns	ns/ns	sig -/sig -
MINCOME with					
	ISI-INFO	sig +	ns/ns	ns/ns	ns/ns
	ISI-NORM	sig -	sig -/sig -	ns/ns	ns/ns
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	ns/ns	ns/ns	sig -/sig -
	DIDS-IC	sig +	ns/ns	ns/ns	ns/ns
	DIDS-EB	sig +	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-INFO	sig +	sig +/sig +	ns/ns	sig -/ns
	IPSQ-NORM	sig -	ns/ns	ns/ns	ns/ns

NOTE: The column labelled as "Hypothesized" refers to the expected association between the predictor and the outcome; "sig +" refers to a significant and positive association; "sig -" refers to a significant and negative association; "ns" refers to a nonsignificant association. The association before the dash represents the result found before the well-being factors were controlled, whereas the association after the slash represents the result found after the well-being factors were controlled. The results for the four dimensions of identity formation are based on the ISI models, and similar with the results of the IPSQ models, except for [a] where the association was nonsignificant in the IPSQ model; [b] the association became nonsignificant after controlling for the well-being factors in the IPSQ model and [c] where the association remained significant and positive after controlling for the well-being factors in the IPSQ models. See Table 1 Notes for abbreviations.

Table 37. The Summary of Results for the Immediate Environment Influences Section of RQ2 in the Auburn, Tuskegee, and Bogazici Samples: The Hypothesized Association (Hypothesized), the Association Found before/after the Well-being Factors were Controlled.

Predictor	Outcome	Hypothesized	Auburn Sample	Tuskegee Sample	Bogazici Sample
SOC SUP with					
	ISI-INFO	sig +	sig +/sig +	ns/ns	sig +/ns
	ISI-NORM	sig +	sig +/sig +	ns/ns	sig +/sig +
	ISI-DIFF	ns	ns/ns	ns/ns	ns/ns
	DIDS-CM	sig +	sig +/ns	ns/ns	ns/ns
	DIDS-IC	sig +	sig +/ns	ns/ns	ns/ns
	DIDS-EB	sig +	sig +/sig +	ns/ns	ns/ns
	DIDS-ED	sig +	sig +/ns	ns/ns	sig +/ns
	IPSQ-INFO	sig +	ns/ns	ns/ns	ns/ns
	IPSQ-NORM	sig +	sig +/sig +	ns/ns	sig +/sig +
EVDY DISC with					
	ISI-INFO	sig -	ns/ns	ns/ns	sig -/ns
	ISI-NORM	sig +	ns/ns	sig +/ns	sig +/ns
	ISI-DIFF	ns	sig +/ns	sig -/ns	sig +/ns
	DIDS-CM	sig -	ns/ns [a]	ns/ns	sig -/ns
	DIDS-IC	sig -	ns/ns [a]	ns/ns	ns/ns
	DIDS-EB	sig -	ns/ns	ns/ns	ns/ns
	DIDS-ED	sig -	sig -/ns	ns/ns	ns/ns
	IPSQ-INFO	sig -	sig -/ns	sig -/ns	sig -/sig -
	IPSQ-NORM	sig +	ns/ns	ns/ns	ns/ns
PRS OPP with					
	ISI-INFO	sig +	sig +/ns	ns/ns	ns/ns
	ISI-NORM	sig -	ns/ns	ns/ns	ns/ns
	ISI-DIFF	ns	sig -/sig -	ns/ns	ns/ns
	DIDS-CM	sig +	ns/ns	ns/ns	sig +/sig +
	DIDS-IC	sig +	sig +/sig +	ns/ns	sig +/sig +
	DIDS-EB	sig +	ns/ns	ns/ns	sig +/sig +
	DIDS-ED	sig +	sig +/sig +	ns/ns	sig +/sig +
	IPSQ-INFO	sig +	sig +/sig +	ns/ns	ns/ns
	IPSQ-NORM	sig -	ns/ns	ns/ns	ns/ns

NOTE: The column labelled as "Hypothesized" refers to the expected association between the predictor and the outcome; "sig +" refers to a significant and positive association; "sig -" refers to a significant and negative association; "ns" refers to a nonsignificant association. The association before the dash represents the result found before the well-being factors were controlled, whereas the association after the slash represents the result found after the well-being factors were controlled. The results for the four dimensions of identity formation are based on the ISI models, and similar with the results of the IPSQ models, except [a] where the associations were significant and negative before the well-being factors were controlled. See Table 1 Notes for abbreviations.

Table 38. The Summary of Results for the Mediation and Additive Models of RQ 3 in the Auburn and Bogazici Samples after the Well-being Factors were Controlled.

Path	Mediator	Auburn Sample	Bogazici Sample
FTR ORINT → DIDS_IC			
	ISI-INFO	sig mediation	
	ISI-DIFF	sig mediation	
	IPSQ-INFO	sig mediation	
SOC SUP → DIDS_EB			
	ISI-INFO	additive	
	ISI-NORM	additive	
PRS OPP → DIDS_ED			
	ISI-DIFF	sig mediation	
	IPSQ-INFO	ns	
PRS OPP → DIDS_IC			
	ISI-DIFF	sig mediation	
	IPSQ-INFO	ns	
MOCCUP → DIDS_IC			
	IPSQ-INFO		sig mediation
	IPSQ-NORM		ns
MOCCUP→ DIDS_EB			
	IPSQ-INFO		sig mediation

Note: See Table 1 Notes for abbreviations.

CHAPTER 5: DISCUSSION

In the identity literature, various models and empirical studies have examined the process of identity formation in order to describe the mechanisms of this process. The current study aimed to contribute to this literature through investigating associations among identity processing styles, identity formation behaviors (i.e., exploration and commitment), and contextual influences, and by examining whether these associations operate similarly across national cultures/subcultures, and across two measures of identity styles. The results partially supported the study hypotheses.

Overall, the findings of the current study showed that identity styles significantly predicted identity formation behaviors. The associations were consistent across the three samples and measurement methods of identity styles with a few exceptions. However, no specific pattern in the paths from contextual influences to identity variables was observed; some contextual influences predicted only identity styles; other contextual influences predicted only identity formation behaviors; and still other contextual influences predicted both. Findings did not support a general mediation effect of identity styles in the relations between contextual influences and identity formation behaviors. Finally, the moderating role of nation (and subculture within nation) for the paths from identity styles to identity formation behaviors showed similarities across the Auburn, Tuskegee, and Bogazici samples, using either the ISI or the IPSQ, with the exception of three paths that were different between Bogazici and Auburn samples when styles were measured by the IPSQ.

In the sections that follow, a general discussion of how the samples differed on the key study variables is offered. This is followed by a discussion of the findings for each of the

research questions comparing the results with the results found in the literature. Finally, limitations and future research directions are discussed.

Similarities and Differences across the Samples

The three samples were high on information-orientation and low on diffuse/avoidance orientation; and were less likely to have a normative-orientation in their approach to identity issues. Consistent with the literature (Berzonsky, 1992; Nurmi et al., 1997; Pittman, et. al., 2009; Soenens et al., 2005), when identity styles were measured by the ISI, the diffuse/avoidant style had moderate negative correlations with informational and normative styles in the Auburn and Bogazici samples, but these expected associations were not found in the Tuskegee sample. A significant negative correlation also was found between informational and normative styles in all three samples, which was not consistent with the literature, where the results generally showed either moderate positive associations (Pittman, et al., 2009) or nonsignificant associations (Berzonsky, 1992; Nurmi et al., 1997; Soenens et al., 2005). The difference might be a result of using different versions of the ISI. The majority of the literature is based on the third version of the ISI; however, in the current study, a newer version of the ISI, the ISI-IV, was used. On the other hand, the correlation between informational and normative styles also was significant and negative in the Auburn and Bogazici samples when they were measured by the IPSQ, which is consistent with the ISI-IV and past research findings when the IPSQ has been used to measure identity styles (Eryigit & Kerpelman, 2009; Pittman et al., 2009). Thus, regardless of the measurement method, a negative correlation was found between informational and normative styles in the Auburn and Bogazici samples, which indicates that if individuals engage in certain approaches to exploration, such as seeking and evaluating relevant information, they are less

likely to engage in other types of identity formation activities, such as obeying the standards and norms of the family or community.

Engagement in the four identity formation behaviors in the career domain was high in the three samples. High scores were expected because career is an important area for identity formation, especially for college students. Career development researchers also agree that college students spend a significant amount of time and effort in activities related to the development of their future careers (Blustein et. al., 1989; Vondracek, et. al., 1995; Wallece-Broscious et. al., 1994). Average commitment (both making tentative career decisions, and identification with these decisions) was highest in the Tuskegee sample, whereas the Bogazici sample reported the lowest levels of career commitment. Exploring career alternatives in breadth was similar across the three samples, whereas the American samples reported significantly higher exploration of career alternatives in-depth than the Bogazici sample did. Differences in the university system are one of the likely reasons for the differences in commitment and exploration in-depth scores between the American and Bogazici samples. For instance, choosing a major, taking classes, or changing majors would be considered efforts to explore career alternatives in-depth. These opportunities are more available to the students in the American universities than they are in the Bogazici University, where only one or two students have an opportunity to change their majors each year (i.e., programs have quota for the number of students who can transfer to their program every year, and this number is on average two students).

The correlations among the four dimensions of identity formation were similar across the three samples. Strong positive correlations found between commitment making, identification with commitments, and exploration in-depth were consistent with the findings of Luyckx and his

colleagues (2008) using the DIDS, as well as with the findings in the career literature (Schimtt-Rodermund &Vondracek, 1999). These results support the thinking that the college years are an important period for individuals to engage actively in identity formation processes within the career domain. The association of exploration in-breadth with other dimensions showed variation across the samples. Consistent with the literature, it had a significant and negative correlation with the dimension of commitment making only in the Auburn sample but not in the other two samples; whereas it had a significant and positive association with exploration in-depth only in the Bogazici sample. Contrary to the findings of Luyckx and his colleagues, exploration in-breadth also had a significant and positive correlation with the identification with commitments in the Tuskegee sample. The differences in the current findings and the findings of the previous studies might be a result of variation in the way the exploration in-breadth factor was measured; two items were removed in the current investigation. The differences also might be a reflection of the variation in the meaning of identity constructs across cultural (e.g., American versus Turkish cultures) and subcultural groups (European-Americans versus African-Americans). The identity literature has been based on research with European-American and Western European middle class samples; however, the current study adds to the literature by including the experiences of less frequently studied groups (i.e., African American college students; Turkish college students).

Contextual influences also showed similarities and variation across the three samples. In terms of cultural influences, all the samples reported a high future orientation (the Auburn sample had significantly higher scores than the Bogazici sample did), and average levels of uncertainty avoidance. All the participants perceived that their society supports their engagement in the future-oriented behaviors, and that there is a balance between their society's attempt to

develop rules to control social behaviors and to support risk taking in trying new things. Similarities found in cultural influences across the samples might be related to sample characteristics. College students' experiences of the society might look more similar across cultural/subcultural groups than the non-college young adults' experiences of their society across cultural/subcultural contexts.

Social structural influences (i.e., parent education, occupation, and income) had higher mean levels in the American samples than in the Bogazici sample. This was not a surprising finding because the U.S. compared to Turkey has approximately ten times the gross domestic income rate, approximately twice the employment rate, and a larger proportion of the population attending college.

Social support and perceived opportunities also were higher in the American samples than they were in the Bogazici sample. Although no identified prior study has compared the amount of social support, perceived opportunities, or any other similar constructs between an American (or a Western European) sample and a Turkish sample, lower levels of perceived opportunities in the Bogazici sample was expected due to the higher unemployment rates, lower incomes, and less variety of jobs available in Turkey than in the U.S. In addition, Auburn students perceived the least everyday discrimination from their environment. Everyday discrimination implies the general unfair treatment towards oneself, such as being treated more poorly in comparison to others, or having people behave in suspicious or superior ways due to various possible reasons, such as race, sex, or religion. European-American females were the majority in the Auburn sample, and Auburn offers a relatively homogenous campus and community life (compared to the communities of the other two samples), which may reduce the

likelihood of perceiving everyday discrimination. Furthermore, in the U.S. context, African Americans are more likely than European Americans to experience discrimination.

Lastly, well-being factors, specifically, depression, self-esteem, and trait anxiety, were examined. As expected, on average, all the participants showed lower levels of depression and trait anxiety, but they were lowest in the Auburn sample. Average self-esteem was high in the three samples, however, it was higher in the two American samples than it was in the Bogazici sample. The variation in self-esteem between the Bogazici and the two American samples might be explained by the variation in child rearing practices in American and Turkish cultures. Current trends of child rearing practices in Turkey can be described as task-related interdependence with emotional relatedness, where parents are controlling, emphasizing interpersonal relationships and obligations in these relationships (Kagitcibasi, 1992, 1995, 1996). Thus, there is less focus on the individual in the Turkish culture than in the American culture, which might be a reason for lower average levels of self-esteem in a Turkish sample.

Associations between Identity Styles and Identity Formation Behaviors

Paths from identity styles to identity formation behaviors were examined for the first research question. The findings partially supported the hypotheses. When the ISI was used to measure identity styles, and before the well-being factors were controlled, the path from informational style to exploration in-breadth was significant and positive in all the samples, whereas the path from informational style to exploration in-depth was significant and positive only in the Tuskegee and Bogazici samples, but not in the Auburn sample. Controlling the impact of well-being factors on these variables did not change the associations between informational style and the two exploration dimensions.

For the paths from informational style to commitment dimensions, the only significant path was to the identification with commitments dimension in the two American samples, but not in the Bogazici sample. However, this association became nonsignificant in the American samples after well-being factors were controlled. Thus, when informational style was measured by the ISI, the results supported only the hypothesis related to exploration in-breadth, and partially supported the hypothesis related to exploration in-depth, but did not support the hypotheses for informational style and commitment. This may be due, in part, to the primary focus of the ISI-informational style items on gathering information about identity alternatives rather than on elaborating and evaluating those alternatives (see Appendix 1b1 for informational style items), which is consistent with the activities of the exploration in-breadth dimension of identity formation behaviors.

Our expectations regarding normative style and identity formation behaviors also were partially supported when normative style was measured by the ISI. Before the well-being factors were controlled, normative style significantly predicted only exploration of career alternatives in-depth in the Auburn sample, but not in the other two samples. After the well-being factors were controlled, it continued to have a significant and positive association with exploration in-depth in the Auburn sample; it also had significant but negative association with the exploration in-breadth dimension in the Tuskegee sample, but not in the other samples. As opposed to our expectations, the ISI-normative style did not have significant associations with the two commitment dimensions. As can be seen in Appendix 1b1, the normative items in the ISI emphasize relying on rules and norms when making decisions. That is, it emphasizes holding a firm set of beliefs, following what important people expect, and disregarding information that challenges beliefs and values. These items reflect learning about and maintaining one's current

identity alternatives. Although those alternatives were not chosen through a process of in-breadth exploration, maintaining those alternatives involves exploring those alternatives in-depth. Making and identifying with commitments may occur regardless of whether a normative or informational style is used.

Consistent with the literature, diffuse/avoidant style had significant and negative associations with the two commitment dimensions and the exploration in-depth dimension in the three samples. This finding supported the hypothesis that a more diffuse/avoidant orientation towards identity formation is related to less engagement in making tentative career decisions, evaluating and elaborating these decisions, and internalizing them (Berzonsky, 1989, Berzonsky & Kuk, 2000, Berzonsky & Neimeyer, 1994; Schwartz et al., 2000; Streitmatter, 1993). Diffuse/avoidant style had a significant and positive association with the exploration in-breadth dimension in the Tuskegee sample, but this association became nonsignificant after controlling for the well-being factors.

In general, the associations between identity styles (when measured by the ISI) and identity formation behaviors showed partial support for the hypotheses regarding how identity styles, as attitudinal aspects of the identity formation process, would influence the behavioral aspects of this process (exploration and commitment). Greater use of an informational style, after controlling for well-being, was particularly influential on the exploration of career alternatives in-breadth, whereas greater use of normative orientation, after controlling for well-being, predicted exploration of identity choices in-depth. On the other hand, having a stronger diffuse/avoidant style influenced negatively all identity formation dimensions, except for the dimension of exploration in-breadth. In other words, informational and normative identity styles, as measured by the ISI, varied based on their links to exploration dimensions of identity

formation behaviors, but not based on their links to commitment dimensions of identity formation behaviors (when diffuse/avoidant style was controlled). However, diffuse/avoidant style differed from informational and normative styles by having significant negative associations with commitment dimensions, and was characterized by lack of any commitment activities.

The associations between identity styles and identity formation behaviors also varied when identity styles were measured by the IPSQ. The majority of the hypotheses regarding the links between styles and behaviors was supported. When measured by the IPSQ, informational style had significant associations with the four dimensions in all the three samples, except for the exploration in-depth dimension in the Tuskegee sample. However, when the well-being factors were controlled, informational style significantly predicted commitment making and exploration in-depth dimensions in all the three samples, and also significantly predicted the identification with commitments dimension in the Auburn and Bogazici samples. In general, consistent with the theory, the more a person employs an informational style the more she or he engages in identity formation activities across the exploration and commitment dimensions (Erikson, 1968; Grotevant, 1987). The current IPSQ results showed that in the Auburn and Bogazici samples, information-orientated college students were more likely to search for possible career alternatives that would be good for them, make tentative career choices, evaluate and elaborate their choices, and internalize the career path they think is the best for them. These findings are consistent with research conducted in the career literature (Blustein et. al., 1989; Schimtt-Rodermund & Vondracek, 1999; Vondracek et. al., 1995; Wallece-Broscious et. a., 1994). However, in the Tuskegee sample, information-orientation was only associated with making tentative career choices and evaluating these choices in-depth. The variation between the

Tuskegee sample and the other two samples might be a result of a Type 2 error due to the small size of the Tuskegee sample. Alternately, the differences may be due to sample characteristics. Although they had higher levels of average exploration in-depth and commitment making scores; average exploration in-breadth scores were lowest in the Tuskegee sample. Thus, the Tuskegee sample, in general, might be focusing on making decisions and gathering information about those decisions. A stronger use of the informational style in the Tuskegee sample might reflect greater efforts on making tentative choices and elaborating these choices, rather than on examining various alternatives or trying to internalize some of the choices made.

When measured by the IPSQ, stronger use of the normative style did not look very different than stronger use of the informational style, except that normative-orientation was not associated with exploration in-breadth. The results of the current study showed that before well-being factors were controlled, both American and Turkish college students who employed high use of normative style were likely to make tentative career choices, evaluate and elaborate these choices, and internalize the direction they wanted to follow in their future career. After the well-being factors were controlled; normative style continued to have significant associations with the three dimensions, but the associations varied across the samples. It had significant and positive associations with the two commitment dimensions in the Auburn and Bogazici samples, and had significant and positive associations with exploration in-depth. In the Auburn sample only, it had a modest association with exploration in-breadth. Berzonsky (1992) defines normative style as internalizing and conforming to standards and expectations of significant others without engaging in exploration activities. However, the current study suggests that college students who employ a normative style in their identity formation might use significant others' standards or expectations in order to make their tentative career commitments and then explore these

alternatives in-depth in order to internalize and identify with those commitments. These results could explain the conflicting findings in the identity status literature, where normative style significantly predicts both foreclosed and achieved statuses (Berzonsky, 1989; Berzonsky & Kuk, 2000; Berzonsky & Neimeyer, 1994; Schwartz et. al., 2000; Streitmatter, 1993). It is necessary to examine exploration in breadth as well as in depth to capture the difference between the exploration activities of young adults using varying levels of informational and normative styles. Although information orientation has been associated with greater exploration in past research (Berzonsky & Neimeyer, 1994; Schwartz, et. al., 2000), the current study shows that the nature of the exploration matters. That is, although informational style is associated with more exploration in breadth, both informational and normative styles are positively associated with exploration in depth.

Overall, these results indicate that the different paths and procedures individuals follow in the process of identity formation could account for the variation between a well-established identity and role confusion (Erikson, 1968). The more a young adult uses a diffuse/avoidant style, the less likely he or she is to engage in identity formation activities at any level, and therefore, is more likely to end up in role confusion. Few differences were observed between informational and normative styles (especially when measured by the IPSQ), suggesting that the difference between these two styles may be most about whether an individual engages in exploration in breadth. It was only for informational style that there was a significant association consistently with exploration of various career alternatives in-breadth. Although use of a normative style tended not to be associated with exploration in breadth activities, use of the normative style was associated with exploration of identity choices in-depth. Therefore, the current study helps to clarify links between identity styles (i.e., the orientation brought to identity

work) and the process of identity formation in the career domain (i.e., the actual work of identity exploration and commitment at multiple levels).

The Influence of Context on Identity Formation

For the second research question, the impact of contextual influences on identity styles and identity formation behaviors before and after removing the impact of well-being factors was examined. Three sets of contextual variables were investigated, cultural influences, social-structural influences, and immediate environment influences. The cultural influences set included future orientation and uncertainty avoidance, whereas the social-structural influences set was composed of parent education, occupation, and income; and the immediate environment influences set included social support, everyday discrimination, and perceived personal opportunities. We expected that these influences would relate significantly to informational and normative styles, but not to diffuse/avoidant style after controlling for the well-being factors. Overall, the results did not support our hypotheses. Based on the findings of the current study, it can be concluded that the context, the way it was operationalized in the current study, is less likely to influence different aspects of the identity formation process, except in some instances.

The results showed that in the Auburn sample, future orientation was significantly associated with both identity styles and identity formation behaviors, whereas uncertainty avoidance was significantly associated only with identity styles. Father characteristics predicted only identity styles, whereas mother characteristics predicted both identity styles and identity formation behaviors. Social support, everyday discrimination, and perceived opportunities had significant relations with both identity styles and identity formation behaviors. On the other hand, in the Tuskegee sample, both future orientation and uncertainty avoidance predicted only identity styles. Father characteristics predicted both identity styles and behaviors, whereas

mother characteristics predicted only identity formation behaviors. Finally, in the Bogazici sample, both father and mother characteristics predicted identity styles and identity formation behaviors behaviors. Social support and everyday discrimination had significant association only with styles, whereas perceived opportunities had significant association only with identity formation behaviors. Overall, the patterns observed suggest no specific way through which the contextual influences predict aspects of the identity formation process; instead, they suggest multiple ways the contextual influences may matter for identity formation. For instance, the impact of cultural and immediate environment influences on identity variables showed variation across the three samples, whereas, in general, social-structural characteristics predicted both identity styles and identity formation behaviors in all three samples.

Cultural factors

Future orientation, as measured in the current study, was about society's attitudes towards planning and investing in the future. College students in the American samples were more likely to be information-oriented in their attitudes toward identity formation if they perceived more future orientation in their society; Auburn students also were likely to show more identification with their career commitments when they perceived greater societal future orientation. On the other hand, uncertainty avoidance was about society's attitude towards relying on established rituals, and developing rules to control social behaviors. Thus, uncertainty avoidance was expected to have a negative association with informational style and a positive association with normative style. This hypothesis was partially supported in the American samples. Perceiving more uncertainty avoidance was related to having a stronger normative style when approaching identity formation (when normative style was measured by the ISI) in the Auburn sample. Uncertainty avoidance was also significantly and positively associated with normative and

diffuse/avoidant styles in the Tuskegee sample, even after controlling for well-being. Cultural influences did not predict either identity styles or identity formation behaviors in the Bogazici sample. Previous studies regarding cultural factors found that regardless of their identity style preferences, Bogazici students perceive both a traditional and a collective cultural orientation in their society (Eryigit & Kerpelman, 2009). This might hold true for future orientation and uncertainty avoidance aspects of culture too. Alternately, it might be true only for this particular sample and in the career domain. The Turkish sample for this study was recruited from a university where the campus life can be characterized as Western in style yet also retains some aspects consistent with traditional Turkish culture (e.g., supporting values of traditional Turkish families), with a strong focus on career development.

Social structural influences

Although few of the paths from social structural influences were significant, there were certain patterns that warrant further explanation. First of all, mother characteristics seemed to have a stronger influence on identity styles and identity formation behaviors than father characteristics did. After controlling for the well-being factors, mother education had significant and negative associations with the commitment dimensions in the Tuskegee sample, whereas its association with commitment making was positive in the Bogazici sample. Maternal occupational status was the strongest predictor. As it was hypothesized, higher mother occupational status was associated positively with making career choices and internalizing these choices in all three samples. Moreover, in the Bogazici sample, college students with higher maternal occupational status were less likely to be normative-oriented, and more likely to be information-oriented in their approach to identity work in the career domain. Employed mothers might be serving as role models for less normative thinking for their children in Turkey. The

negative associations between mother income and identity commitment in the Bogazici sample, and the negative associations between mother education and identity commitment in the Tuskegee sample were not in the expected direction. In these samples, mother education or income yielded less commitment with career choices. These findings were not consistent with the findings of the few studies found in the literature. For instance, Orgocka and Jovanovic (2006) found no significant association between mother education and identity commitment and identity exploration in an Albanian sample. On the other hand, Celen and Kusdil (2006) found that mothers with higher levels of education are likely to have children with high information orientation. However, these studies have examined identity styles or identity formation behaviors either as domain-free or referring to multiple domains (e.g., education, occupation, family, romantic relations). In the current study, when identity styles and behaviors were examined specifically in the career domain, in some instances higher mother education and income appear to be providing opportunities for a moratorium period where the college students can explore their future career alternatives freely, and can delay the commitment process.

In terms of father characteristics, college students in the Bogazici and Tuskegee samples with higher levels of paternal occupational status reported more exploration of various career alternatives in-breadth, whereas this association was nonsignificant in the Auburn sample. Father income also was associated with identity styles, partially supporting the hypotheses. Specifically, father income was significantly and positively related to informational style (measured by the ISI) in the Tuskegee and Bogazici samples, and to normative style (measured by the IPSQ) in the Auburn and Bogazici samples; however, the latter link was expected to be negative. Overall, past research has shown in the occupational domain, that students from higher SES families are more likely to engage in exploration activities, whereas students from lower SES families are more

likely to be normative or not engaging in exploration activities at all (Celen & Kusdil, 2006; Ojeda & Flores, 2008; Pulkkinen & Ronka, 1994; Stewart & Ostrove, 1993; Solomontos-Kountouri & Hurry, 2008). The findings of the current study were partially consistent with the findings in past research; however the variation observed might be a result of the way the social structural factors were operationalized. Past research typically has used a global measure of SES or used a single indicator as a proxy for SES. No identified study has examined the social structural influences on identity looking at multiple SES indicators for mothers and for fathers. Including a wider array of indicators permits identification of where mothers' and fathers' SES matters for their children's identity formation and builds on prior research by showing that mother characteristics may be more crucial than father characteristics in identity formation processes in the career domain. This may be particularly true for the female young adults who dominated the samples (especially the Auburn sample) in the current investigation. Supportively, father characteristics, such as occupational status and income, were more important for identity formation in the Tuskegee and Bogazici samples (which contained a larger percentage of male participants) than they were in the Auburn sample.

Immediate environment influences

Immediate environment influences were the strongest predictors of both identity styles and identity formation behaviors, and partially supported our hypotheses. Social support significantly and positively predicted normative style in the Auburn and Bogazici samples regardless of the method used to measure identity styles. Perceiving more social support from the environment, including family members, close friends, and romantic partners, also yielded higher information orientation and engaging in more exploration in-breadth activities in the Auburn sample. Supportively, Smits and her colleagues (2008b) found that parental support

positively predicted both informational and normative orientations but not diffuse/avoidance orientation when they were measured by the ISI. It was interesting that social support's associations with the two commitment dimensions and the exploration in-depth dimension of identity formation process became nonsignificant after controlling for the well-being factors, even though they were significant and positive before the impact of the well-being factors were removed. This suggests that the impact of social support on identity variables was due, in part, to its moderate association with well-being (see Tables 7-9). More focused social support from the immediate environment relates to lower levels of depression and trait anxiety, as well as higher levels of self-esteem. It also was interesting to find that social support did not predict any of the identity variables in the Tuskegee sample, although Tuskegee participants reported moderate levels of social support from their significant others. There are possible explanations that future research can investigate in order to better understand the reasons for nonsignificant associations found between social support and identity variables in the Tuskegee sample. First, the nonsignificant associations may be misleading due to the small Tuskegee sample size. Second, the nonsignificant associations might be a result of sample characteristics. The Tuskegee sample was comprised of low- to middle-income African-American college students who perceived less social support from their immediate environment than their Auburn counterparts did. Therefore, the Tuskegee students may rely more on factors other than social support for their engagement in the identity formation process in the career domain. Alternately, it may be that social support does matter for the Tuskegee participants, but the way social support was measured in the current study (i.e., general social support) does not capture the types of social support that are most relevant for addressing educational and career issues. Future research will need to examine the

nature of the social support received and whether the person receiving the social support perceives it as relevant to identity formation in the area of career (or in other identity domains).

Perceived discrimination is another crucial factor for identity formation processes. According to Yoder (2000), discrimination might inhibit identity formation. Although no identified study examined the direct link between perceived discrimination and any aspect of the identity formation process, some literature found that it affects attitudes, motivations, and expectations for educational and career goals in college (Kenny et al., 2007; Panter et al., 2008). In the current investigation, everyday discrimination was a strong predictor of both identity styles and identity formation behaviors in all three samples before the well-being factors were controlled. Examination of associations between everyday discrimination and identity variables before the well-being factors were controlled showed some interesting patterns. As expected everyday discrimination was negatively associated with informational style (when measured by the IPSQ) in all the three samples; however, the association was significant only in the Bogazici sample when informational style was measured by the ISI. Bogazici and Tuskegee participants who reported higher levels of discrimination perceived from the immediate environment also reported normative attitudes toward identity formation but only when normative style was measured by the ISI, not when it was measured by the IPSQ. Therefore, the significant associations between everyday discrimination and informational and normative styles were sensitive to the measurement method used. Another interesting finding was for the path from perceived discrimination to diffuse/avoidance orientation. Before the well-being factors were controlled, a significant positive association was expected; however, this expectation was supported only in the Auburn and Bogazici samples. Greater discrimination perceived from the immediate environment was associated with less diffusion/avoidance orientation in the Tuskegee

sample. Possibly, the Tuskegee college students who were less diffuse/avoidant in their identity style were more aware of everyday discrimination because they were more actively engaged in the identity formation process and therefore more likely to encounter situations where they perceived discrimination.

However, after the well-being factors were controlled, the impact of everyday discrimination on identity styles and identity formation behaviors disappeared, except the path from everyday discrimination to informational style (measured by the IPSQ) in the Bogazici sample. Thus, the current findings revealed that the impact of everyday discrimination was primarily due to its association with depression, self-esteem, and trait anxiety. This is supported by the moderate correlations between everyday discrimination and the three well-being factors.

The last factor that was investigated for its impact on identity styles and identity formation behaviors was perceived opportunities in the immediate environment. Among the other factors, this was found to be the strongest predictor of identity formation, especially in the Auburn and Bogazici samples. As it was found in the study conducted by Orgocka and Jovanovic (2006) with an Albanian sample, perceived available opportunities significantly predicted identity exploration and commitment activities in the Bogazici sample. However, it predicted only exploration of career choices in-depth and identification with these choices in the Auburn sample. Surprisingly, perceived available opportunities did not have significant associations with any aspect of the identity formation process in the Tuskegee sample, although average opportunities perceived was the highest in the Tuskegee sample. The reasons for not finding significant associations between perceived personal opportunities and any of the identity variables in the Tuskegee sample might be similar to the reasons explained for the lack of impact of social support on the same variables in the Tuskegee sample. It is a possibility that size of the

Tuskegee sample was not large enough to detect the true nature of associations between perceived personal opportunities and identity variables. However, the bivariate associations among personal opportunities and the identity variables are small and close to zero (see Table 11). Alternately, perceived personal opportunities in the current study reflect one's perception of his or her opportunities compared to an average person in his or her environment. Thus, it is meaningful to find that African-American students who are attending college perceive more opportunities than an average person in their community who most likely does not have a college education. However, this might not mean that the amount of opportunities they perceive is actually higher than the amount of opportunities perceived in the other two samples. As was suggested for social support, future research should compare the amount and nature of perceived opportunities and assess whether individuals view such opportunities, or lack of opportunities, as meaningful for their identity formation within the career domain.

Perceived available opportunities had some significant associations with identity styles in the Auburn sample. Specifically, perception of greater opportunities available to oneself was associated with less diffusion/avoidance orientation and with more information-orientation. It was interesting to learn that perceived opportunities were less likely to be influenced by well-being. Controlling for well-being did not change the associations between this immediate environment influence and identity variables (except for its path to informational style in the Auburn sample when it was measured by the ISI). Lastly, perceived opportunities available to oneself in the immediate environment did not predict normative-orientation. This might be explained by the conceptualization of normative style, which implies relying on norms and standards of family or society. Thus a young adult who emphasizes use of this style is likely to view a limited range of appropriate opportunities that exist in the immediate environment.

Therefore, the amount of opportunities available to oneself is not as influential on the strength of the normative style. A longitudinal and qualitative examination of this association between perceived available opportunities and normative style may help elucidate the nature of this relation. It may be that individuals who use a strong normative style in the identity formation process do not take the amount of career alternatives available to them into account, because the alternatives that would fit with the expectations of significant others may be clearly identified; thus having many options is not a concern or a desire.

Overall, the findings of the current study, regarding the impact of contextual influences on identity styles and identity formation do not fully support either Berzonsky's perspective or the novel perspective taken by the current investigators. The findings also showed differences across the three samples. Cultural influences predicted identity styles, as well as identity formation behaviors only in the American samples, not in the Bogazici sample; whereas social structural influences predicted both identity styles and identity formation behaviors in all the three samples. Lastly, the immediate environment influences were significantly associated with both identity styles and identity formation behaviors in the Auburn sample. However, in the Bogazici sample, social support and everyday discrimination had significant associations only with identity styles and perceived opportunities had significant association only with identity formation behaviors. Therefore, there was partial support for Berzonsky's perspective which suggested that contextual influences would predict identity formation behaviors but not identity style preferences, and more limited support for the current investigators' perspective, which suggested that contextual influences would predict identity style preferences, and in turn identity formation behaviors (discussed in more detail in reference to research question 3). From Berzonsky's perspective, the influence of context is more apparent for what individuals actually

do in the process of identity formation. Identity style preference is more a product of intra-individual factors. The majority of associations that became nonsignificant after controlling for the well-being factors were the paths from contextual factors to identity styles with only a few exceptions. However, not all the paths from contextual influences to identity styles became nonsignificant after controlling for well-being, suggesting that Berzonsky's perspective may not be fully accurate in capturing relations among context, style and behavior. If identity style preferences are a product of intra-individual factors only, than all the paths from contextual influences to identity styles investigated in the current study should have become nonsignificant after controlling for the well-being factors. The exceptions suggest that both intra-individual and contextual influences, especially influences related to the immediate environment including family and parent characteristics, might be important for identity style preferences.

Testing Mediated and Additive Models

The third research question of the current study aimed to investigate an alternative to Berzonsky's perspective about the associations among contextual factors, and attitudinal and behavioral aspects of the identity formation process. Based on Grotevant's process model of identity formation, it was hypothesized that context's influence on actual behaviors of identity work might be mediated by the identity processing orientation of individuals. When testing mediation, indicators of cultural influences and immediate environment influences were examined in the Auburn sample; whereas indicators of social-structural influences were examined in the Bogazici sample. Out of 220 possible mediation effect paths (11 contextual variables X 5 identity styles X 4 identity formation behaviors = 220) in each sample, only nine were tested in the Auburn sample, and only three were tested in the Bogazici sample, given the limited associations among the variables that met the assumptions for testing mediation. The

overall conclusion, therefore, is that styles generally do not mediate associations between context and behavior.

There are at least two different explanations for the lack of evidence supporting the mediation or additive models. The first explanation is related to the quality of the measures of the contextual influences tested in the current study. For instance, the internal consistency of the cultural influences scale was lower than desired. The associations tested in the current investigation might not have been significant because the cultural influences scale were not internally consistent enough. Better measures of cultural influences might yield more significant associations. The contextual influences assessed in the current study also might not be the prominent contextual influences on the identity formation aspects addressed in the current study. Assessment of other contextual influences, such as whether social roles are acquired or ascribed in the given society, and a better measure of gender egalitarianism, might reveal different results.

The second explanation is related to the mechanisms of the identity formation process. It is possible that, in general, context might be less influential on various aspects of the identity formation process, especially on identity processing styles. As Berzonsky would suggest, contextual influences might be more crucial for identity formation behaviors, than they are for identity styles. This might be true especially for the perceived opportunities available to oneself. Regardless of one's identity processing orientation, one might engage in less exploration and commitment activities if she or he thinks there are not many alternatives (i.e., career alternatives) to consider. The results regarding this variable showed that the amount of available opportunities perceived in the immediate environment is more likely to influence exploration and commitment efforts in the career domain rather than style preferences. Supportively, the mediation models revealed significant mediation only for diffuse/avoidant style not for informational style.

Individuals who perceive less life opportunities available to them might show reluctance to deal with the identity formation process, and in turn, might not actively work on developing a well-established identity. However, further research is needed to examine associations between context, style and behavior in more detail.

Mediated/additive Models in the Auburn Sample

Within the few mediation models tested in the Auburn sample, one interesting finding was that social support's influence on identity formation behaviors was not mediated by identity styles, but had an additive effect. These results suggest that social support is crucial for the attitudinal aspect (i.e., identity style) of identity formation, and that both style and social support matter for identity formation behaviors (i.e., exploration and commitment).

On the other hand, future orientation's influence on identity formation behaviors was fully mediated by identity styles in the Auburn sample. This particular finding suggests that one's perception of society's cultural orientation is influential on identity processing style preferences, which in turn influence identity formation behaviors. As an indicator of cultural factors, future orientation differs from other aspects of contextual influences examined in the current study. Future orientation is more about one's beliefs and perceptions about society's norms, attitudes, and expectations about life and reality, whereas social-structural influences and immediate environment influences are about which opportunity structures and life alternatives exist in the environment. From this perspective, perceived beliefs and norms of one's culture are likely to influence one's own beliefs and attitudes about life (i.e., what is allowed in the society), which in turn would reinforce certain attitudes taken when dealing with identity issues. However, opportunities and barriers perceived in the context (i.e., what is available in the society) would influence both attitudinal and behavioral aspects of identity formation. Moreover, the current

results suggest that social structural and immediate environment influences are more likely to influence identity styles when the context has more barriers with less resources and opportunities; and accounts for greater use of diffusion/avoidance orientation, which in turn inhibits exploration and commitment activities. However, social structural and immediate environment influences are more likely to influence identity formation behaviors when the context has more opportunities with various resources and less barriers.

Mediated/additive Models in the Bogazici Sample

In the Bogazici sample, mother occupational status's influence on identity formation behaviors was mediated by informational style. In general, mother's occupational status was found to be one of the strongest social-structural influences on identity styles in the Bogazici sample. In the majority of the Turkish population, mothers are the main caregivers (Kagitcibasi, 1996). Thus, the primary context of an individual's development are more under the mother's than the father's control. A mother with a higher occupational status might support a context where child can develop a strong informational style while forming a well-established identity; furthermore, a mother with a higher occupational status might serve as a role model for her child for what the application of an informational style looks like.

Overall, the third research question of the current study was tested with a limited number of models in the Auburn and Bogazici samples. Although the results of the previous questions indicated that context has a crucial role on both the amount of identity alternatives individuals explore and evaluate, and their view of how to approach the identity formation process, little evidence was found for identity style as the mechanism linking context to identity formation behaviors.

Nation/Subculture as a Moderator of the Associations between Styles and Behaviors

The last question of the current investigation aimed to compare the findings of the third research question, mediated and additive models, across the three samples in order to determine whether the models were invariant across the samples. However, this last research question was not examined due to the small number of mediated or additive models that could be tested, and the lack of similarity of the models that were tested across the college samples. Thus, an alternative route was taken using multi group analysis to compare associations between identity styles and identity formation behaviors (models tested in the 1st research question) across the three college samples.

The results showed that when identity styles were measured by the ISI, the model was similar across three samples; although, some of the paths showed variation when they were individually examined. Informational style was positively related to exploration in-depth in Tuskegee and Bogazici samples, but not in the Auburn sample; however, all three paths were found to be similar in the multi group analysis. Discrepancies across the samples were found when identity styles were measured by the IPSQ. Three paths were significantly different across the three samples, two of the paths were from informational and normative styles to the identification with career commitments dimension, and the other path was from informational style to exploration of career alternatives in-breadth. All the paths that were different across the samples, had a stronger association in the Bogazici sample. Overall, although there were some variations in some of the paths, they were still in the same direction. Thus, it can be concluded that the identity formation process in the career domain, among college students, is more similar than different across the divergent cultural/subcultural contexts examined.

Limitations and Future Directions

There are several important limitations of the current investigation. First, the current study focused on college students. Although ethnically and economically diverse samples were recruited for the American samples, on average lower middle class Turkish students were recruited for the Bogazici sample. Future research should replicate this study with more diverse samples across the different nations included. Second, some of the contextual variables did not have high reliabilities, and some contextual variables had significant associations only with certain aspects of identity formation. Future research should examine other contextual factors that may influence the identity formation process, such as a better measure of gender egalitarianism, or society's attitudes toward identity formation. In addition, ensuring that the measures for the contextual factors are reliable across samples will be important.

Third, the moderation effect of gender and its interaction with nation were not tested in the current study due to the small number of males in each sample, especially in the Auburn sample. However, few gender differences were found at mean levels in the Tuskegee and Bogazici samples; and gender was controlled in all analyses. Future research should put more emphasis on recruiting males and testing the potential moderating role of gender in the associations between various components of identity formation. Fourth, the sample sizes of the current study, especially for the Tuskegee sample, were smaller than was desired. Thus, we could not test some of the models fully in the Tuskegee sample. In addition, some of the differences between the findings of the Tuskegee sample and the other two samples, especially when the associations were nonsignificant in the Tuskegee sample but significant and similar in the Auburn and Bogazici samples, might be due, in part, to a Type 2 error.

Fifth, the current investigation was a cross-sectional study which limits the ability to truly test mediation or order of effects. Future research should collect longitudinal data in order to better understand the true nature of the associations among context, style and behavior. Collecting qualitative information about identity formation experiences of young adults residing in different regions of the World also would contribute to the understanding and interpretation of the current results.

Sixth, there were strong positive associations among the identity formation behaviors, especially between the two commitment scales when measured by the DIDS in the three samples. The two dimensions of commitment were not clearly distinct. Thus, future research is likely to benefit from using more than one measure of exploration and commitment activities in order to more clearly capture these dimensions of identity formation.

Seventh and finally, the current study emphasized the career domain when measuring identity formation behaviors. Future studies should investigate identity formation behaviors and their associations with other factors in a range of identity domains, such as relationships, worldview/religion, citizenship, and sex role. Different contextual and individual factors might be influential, and vary in the strength of their influence, on various aspects of identity formation in different domains. Although it is important to be domain specific when examining identity formation processes, further investigation is needed to understand whether the patterns of identity formation look similar or different across various domains. For instance, contextual influences might be more influential on the identity formation process in the romantic relationships domain which is another crucial and prominent domain for young adults.

Conclusions

Despite its limitations, the current study makes multiple contributions to the understanding of identity formation processes in the career domain across diverse samples. First, the current study clarified the associations between identity styles and identity formation behaviors, and challenged the current view that normative orientation is associated with lack of exploration by showing a significant association between normative orientation and exploration in-depth. Second, the importance of considering well-being indicators when examining the associations between various aspects of the identity formation process, as well as their associations with contextual influences was delineated in the current study. Third, the role of context on the identity formation process virtually has been ignored in past research; the current study was an initial attempt to understand the role of context and provided various future directions that can be studied in more detail. Understanding the variations and similarities in identity formation processes across national cultures or subcultures is important. This especially is true for the identity literature that has largely been established based on the experiences of North American or Western European young adults. Finally, the current study showed that using a multi-method approach when assessing identity styles, replicating the ISI models with the IPSQ models, revealed similarities and differences across these measures of identity styles. Overall, the current study was an attempt to better understand identity formation processes from a developmental perspective taking the context of this process at multiple levels into account. In this regard, not only do the results of the current study provide insight into the specific directions that future research can follow, the contextual, multi-nation, and multi-method approaches taken in the current study show the need for developing identity theory in ways that better delineate the nature of the identity formation process.

REFERENCES

Adams, G. R., & Marshall, S. (1996). A developmental social psychology of identity: Understanding the person-in-context. *Journal of Adolescence,* 19, 429-442.

Adams, G. R., Berzonsky, M. D., & Keating, L. (2006). Psychosocial resources in first-year university students: The role of identity processes and social relationships. *Journal of Youth and Adolescence,* 35, 81-91.

Adams, G. R., Munro, B., Dohert-Poirer, M, Munro, G., Peterson, A, R, & Edwards, J. (2001). Diffuse-avoidance, normative, and informational identity styles: Using identity theory to predict maladjustment. *Identity,* 1, 307-320.

Akman, Y. (2007). Identity status of Turkish university students in relation to their evaluation of family problems. *Social Behavior and Personality,* 35, 79-88.

Aries, E., & Seider, M. (2007). The role of social class in the formation of identity: A study of public and elite private college students. *Journal of Social Psychology*, 147, 137-157.

Ashkanasy, N., Gupta, V., Mayfield, M. S., & Trevor-Roberts, E. (2004). Future orientation. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 282 -331). Thousands Oaks, CA: Sage Publications.

Aygun, Z. K., Arslam. M., & Guney, S. (2008). Work values of Turkish and American University students. *Journal of Business Ethics,* 80, 205-223.

Balistreri, E., Busch-Rossnagel, N. A., & Geisinger, K. F. (1995). Development and preliminary validation of the Ego Identity Process Questionnaire. *Journal of Adolescence,* 18, 179-192.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 51, 1173–1182.

Baumeister, R. F. (1986). *Identity: Cultural change and the struggle for self*. New York: Oxford University Press.

Baumeister, R. F., & Muraven, M. (1996). Identity as adaptation to social, cultural, and historical context. *Journal of Adolescence*, 19, 405-416.

Bentler, P. M. (1987). Structural modelling and the scientific method: Comments on Freedman's critique. *Journal of Educational Statistics,* 12, 151-157.

Berman, A. M., Schwartz, S. J., Kurtines, W. M., & Berman, S. L. (2001). The process of exploration in identity formation: The role of style and competence. *Journal of Adolescence*, 24, 513-528.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaptation. *Applied Psychology: An International Review*, 55, 303-332.

Berzonsky, M. D. (2008). Identity formation: The role of identity processing style and cognitive processes. *Personality and Individual Differences*, 44, 645-655.

Berzonsky, M. D. (2005). Ego identity: A personal standpoint in a postmodern world. *Identity,* 5, 125-136.

Berzonsky, M. D. (2004). Identity style, parental authority, and identity commitment. *Journal of Youth and Adolescence*, 33, 213-220.

Berzonsky, M. D. (2003). Identity style and well-being: Does commitment matter? *Identity*, 3, 131-142.

Berzonsky, M. D. (1997). Identity development, control theory, and self-regulation: An individual differences perspective. *Journal of Adolescent Research,* 12, 347-353.

Berzonsky, M. D. (1993a). Identity style, gender, and social-cognitive reasoning. *Journal of Adolescent Research*, 8, 289-296.

Berzonsy, M. D. (1993b). A constructivist view of identity development: People as postpositivist self-theorists. In J. Kroger (Ed.), *Discussions on ego identity* (pp. 169-203). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.

Berzonsky, M. D. (1992). Identity style and coping strategies. *Journal of Personality*, 60, 771-788.

Berzonsky M. D. (1990). Self-construction over the life-span: A process perspective on identity formation. In G. J. Neimeyer & R. A. Neimeyer (Eds.), *Advances in personal construct psychology: A research annual, Vol. 1* (pp. 155-186). US: Elsevier Science/JAI Press.

Berzonsky, M. D. (1989). Identity style: Conceptualization and measurement. *Journal of Adolescent Research*, 4, 268-282.

Berzonsky, M. D., & Kuk, L. S. (2005). Identity style, psychosocial maturity, and academic performance. *Personality and Individual Differences*, 39, 235-247.

Berzonsky, M. D., & Kuk, L. S. (2000). Identity status, identity processing style, and the transition to university. *Journal of Adolescent Research,* 15, 81-98.

Berzonsky, M. D., & Neimeyer, G. J. (1994). Ego identity status and identity processing orientation: The moderating role of commitment. *Journal of Research in Personality,* 28, 425-435.

Berzonsky, M. D., & Sullivan, C. (1992). Social-cognitive aspects of identity styles: Need for cognitions, experiential openness, and introspection. *Journal of Adolescent Research,* 7, 140-155.

Berzonsky, M. D., Branje, S. J. T., & Meeus, W. (2007). Identity-processing style, psychological resources, and adolescents' perception of parent-adolescent relations. *The Journal of Early Adolescence,* 27, 324-345.

Berzonsky, M. D., Macek, P., & Nurmi, J. E. (2003). Interrelationships among identity process, content, and structure: A cross-cultural investigation. *Journal of Adolescent Research*, 18, 112-130.

Berzonsky, M. D., Nurmi, J., Kinney, A., & Tammi, K. (1999). Identity processing style and cognitive attributional strtegies: Similarities and differences across different contexts. *European Journal of Personality*, 13, 105-120.

Beyers, W., & Cok., F. (2008). Adolescent self and identity development in context (Special Issue). *Journal of Adolescence,* 321, 147-150.

Beyers, W., & Gossens, L. (2008). Dynamics of perceived parenting and identity formation in late adolescence (Special Issue). *Journal of Adolescence*, 31, 165-184.

Blustein, D. L. (1997). A context-rich perspective of career exploration across the life roles. *The Career Development Quarterly,* 45, 260-274.

Blustein, D. L., Devenis, L. E., & Kidney, B. A. (1989). Relationship between the identity formation process and career development. *Journal of Counseling Psychology*, 36,196-202.

Bollen, J. S. (1984). *Testing structural equation models.* Newbury Park, CA: Sage Publications.

Bosma, H. A. (1992). Identity in adolescence: Managing commitments. In G. R. Adams, T. P. Gullotta, & R. Montemayor (Eds.), *Adolescent Identity Formation* (pp. 91-121). Thousands Oaks, CA: Sage Publications, Inc.

Bosma, H. A., & Kunnen, E. S. (2001). Determinants and mechanisms in ego identity development: A review and synthesis. *Developmental Review,* 21, 39-66.

Brandstadter, J. (1998). Action perspectives in human development. In R. M. Lerner & W. Damon (Eds.) Handbook of child psychology (6th ed.): Vol 1, Theoretical models of human development (pp. 516-568). Hoboken, NJ, US: John Wiley & Sons Inc.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology,* 1, 185-216.

Brown, C., & Lavish, L. A. (2006). Career assessment with Native Americans: Role salience and career decision-making self-efficacy. *Journal of Career Assessment,* 14, 116-129.

Byrne, B. M. (2001). *Structural equation modeling with AMOS.* Mahwah, NJ: Erlbaum.

Cakir, S. G. & Aydin, G. (2005). Parental attitudes and ego identity status of Turkish adolescents. *Adolescence 40,* 847-859.

Celen, N. & Kusdil, M. E. (2006). Parental control mechanisms and their reflection to identity styles of Turkish adolescents. Paper presented at the conference of European Association of Research on Adolescence (EARA), Antalya, Turkey.

Cirino, P. T., Chin, C. E., Sevcik, R. A., Wolf, M., Lovett, M., & Morris, R. D. (2002). Measuring socioeconomic status: Reliability and preliminary validity for different approaches. *Assessment,* 9, 145-155.

Collinger, S. M. C. (1995). Identity styles and the five-factor model of personality. *Journal of Research in Personality,* 29, 475-479.

Costa, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders,* 6, 343-359.

Cote, J. E. (1986). Traditionalism and feminism: A typology of strategies used by university women to manage career-family conflicts. *Social Behavior and Personality*, 14, 133-143.

Cote, J. E., & Levine, C. G. (2002). *Identity formation, agency, and culture: A social psychological synthesis*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Cote, J. E., & Levine, C. G. (1988). A critical examination of the ego identity status paradigm. *Developmental Review*, 8, 147-184.

Cramer, P. (2000). Development of identity: Gender makes a difference. *Journal of Research in Personality,* 34, 42-72.

Creed, P. A. & Patton, W. (2003). Predicting two components of career maturity in school based adolescents. *Journal of Career Development,* 29, 277-290.

Crocetti, E., Rubini, M., & Meeus, W. (2001). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. Manuscript submitted for publication.

Cuhadaroglu, F. (1990). Self-esteem and psychopathology among adolescents. *Dusunen Adam,* 3, 71-75.

De Luque, M. S., & Javidan, M. (2004). Uncertainty avoidance. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 602 - 644). Thousands Oaks, CA: Sage Publications.

Duriez, B., & Soenens, B. (2006). Personality, identity styles and authoritarianism: An integrative study among late adolescents. *European Journal of Personality,* 20, 397-417.

Eker, D., & Arkar, H. (1995). Perceived social support: Psychometric properties of the MSPSS in normal and pathological groups in a development country. *Social Psychiatry and Psychiatric Epidemiology,* 30, 121-126.

Emrich, C. G., Denmark, F. L., & den Hartog, D. N. (2004). Cross-cultural differences in gender egalitarianism: Implications for societies, organizations, and leaders. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 343 - 386). Thousands Oaks, CA: Sage Publications.

Erikson, E. H. (1968). *Identity: youth and crisis.* Oxford, England: Norton & Co.

Eryigit, S., & Kerpelman, J. L. (2009). Using the identity q-sort to examine the identity styles of Turkish young adults. *Journal of Adolescence, 32,* 1137-1158

Garson, D. (2006). Structural equation modeling example using WinAMOS. Retrieved October, 16, 2008 from http://www2.chass.ncsu.edu/garson/pa765/semAMOS1.htm

Gee, G. C., Spencer, M. S., & Chen, J., & Takeuchi, D. (2007). A nationwide study of discrimination and chronic health conditions among Asian Americans. *American Journal of Public Health,* 97, 1275-1282.

Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research,* 2, 203-222.

Grotevant, H. D., & Cooper, C. R. (1981). Patterns of interaction in family relationships and the development of identity exploration in adolescence (Special Issue). *Child Development,* 56, 415-428.

Grotevant, H. D., & Thorbecke, W. L. (1982). Sex differences in styles of occupational identity formation in late adolescence. *Developmental Review,* 18, 396-405.

Guerra, A. L., & Braungart-Rieker, J. M. (1999). Predicting career indecision in college students: The role of identity formation and parental relationship factors. *The Career Development Quarterly,* 47, 255-266.

Hall, S. P., & Brassard, M. R. (2008). Relational support as a predictor of identity status in an ethnically diverse early adolescent sample. *The Journal of Early Adolescence*, 28, 92-114.

Harges, P. J., & Dickson, M. W. (2004). The development and validation of the GLOBE: Culture and leadership scales. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 122 -151). Thousands Oaks, CA: Sage Publications.

Harren, V. A. (1966). The vocational decision-making process among college males. *Journal of Counseling Psychology,* 13, 271-277.

Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organization: software of the mind*. New York: McGraw-Hill.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind.* London: McGraw-Hill.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Newbury Park, CA: Sage.

Holland, J. J., Gottfredson, D. C. & Power, P. G. (1980). Some diagnostic scales for research in decision making and personality: Identity, information, and barriers. *Journal of Personality and Social Psychology*, 39, 1191-1200.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies.* Thousands Oaks, CA: Sage Publications.

Imamoglu, E. O. (2003). Individualism and relatedness: Not opposing but distinct and complementary. *Genetic, Social, and General Psychology Monographs, 129,* 367-402.

Imamoglu, E. O. (1998). Individualism and collectivism in a model and scale of balanced differentiation and integration. *Journal of Psychology: Interdisciplinary and Applied, 132,* 95-105.

Kabasakal & Bodur (2004). Humane orientation in societies, organizations, and leader attributes. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 564 - 602). Thousands Oaks, CA: Sage Publications.

Kagitcibasi, C, (1996). *Family and human development across cultures: A view from the other side.* Hillsdale, NJ, England: Lawrence Erlbaum Associates Inc.

Kagitcibasi, C. (1995). Is psychology relevant to global human development issues? Experience from Turkey. *American Psychologist, 50,* 293-300.

Kagitcibasi, C. (1992). Research on parenting and child development in a cross-cultural perspective. In M. R. Rosenzweig (Ed.) International psychological science: Progress, problems, and prospects (pp.137-160).Washington, DC: American Psychological Association.

Kalakoski, V., & Nurmi, J. E. (1998). Identity and educational transitions: Age differences in adolescent exploration and commitment related to education, occupation, and family. *Journal of Research on Adolescence*, 8, 29-47.

Karagozoglu, C., Masten, W. G., & Baloglu, M. (2005). Evidence for differentiating between anxiety and depression in Turkish college students. *Social Behavior and Personality,* 33, 579-586.

Karakitapoglu-Aygun, Z. (2004). Self, identity, and emotional well-being among Turkish university students. *The Journal of Psychology, 138,* 457-478.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 1, 4th ed., pp. 233-265). Boston, MA: McGraw-Hill.

Kenny, M. E., Gualdron, L., Scanlon, D., Sparks, E., Blustein, D. L., & Jernigan, M. (2007). Urban adolescents' construction of support and barriers to educational and career attainment (Special Issue). *Journal of Counseling Psychology,* 54, 336-343.

Kerpelman, J. L., & Pittman, J. F. (2001). The instability of possible selves: Identity processes within late adolescents' close peer relationships. *Journal of Adolescence,* 24, 491-512.

Kerpelman, J. L., Eryigit, S., & Stephens, C. (2008). African American adolescents' future education orientation: Associations with self-efficacy, ethnic identity, and perceived parental support. *Youth and Adolescence*, 37, 997-1008.

Kluegel, J. R., & Smith, E. R. (1986). *Beliefs about inequality: Americans' view of what is and what ought to be.* New York, NY: Aldine De Gruyter.

Kluegel, J. R., & Smith, E. R. (1982). Whites' beliefs about Blacks' opportunities. *American Sociological Review,* 47, 518-532.

Knafo, A., & Schwartz, S. H. (2004). *Identity formation and parent-child value congruence in adolescence. British Journal of Developmental Psychology*, 22, 439-458.

Kroger, J. (2005). Critique of a postmodernist critique. *Identity,* 5, 195-204.

Kroger, J. (2000). Ego identity status research in the new millennium. *International Journal of Behavioral Development,* 24, 145-148.

Kroger, J. (1993). The role of historical context in the identity formation process of late adolescence. *Youth & Society*, 24, 363-376.

Kumru, A. & Thompson, R. A. (2003). Ego identity status and self-monitoring behavior in adolescents. *Journal of Adolescent Research,* 18, 481-495.

Li, C. (2005). Identity and young adult well-being: A closer look at identity style and identity structure (Doctoral dissertation, Auburn University, 2005). *Dissertation Abstracts International*, 66, 6962.

Loehlin, J. C. (1992). Latent variable models: An introduction to factor, path, and structural analysis (2nd ed.). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.

Low, J. M., Akande, D., & Hill, C. (2005). A cross-cultural comparison of identity development: South Africa and the United States. *Identity,* 5, 303-314.

Lucas, M. (1997). Identity development, career development, and psychological separation from parents: Similarities and differences between men and women. *Journal of Counseling Psychology,* 44, 123-132.

Luyckx, K., Goossens, L., & Soenens, B. (2006b). A developmental contextual perspective on identity construction in emerging adulthood: Change dynamics in commitment formation and commitment evaluation. *Developmental Psychology,* 42, 366-380.

Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006a). Unpacking commitment and exploration: Preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence,* 29, 361-378.

Luyckx, K., Goosens, L., Soenens, B., Beyers, W., & Vansteenkiste, M. (2005). Identity statuses based on 4 rather than 2 identity dimensions: Extending and refining Marcia's paradigm. *Journal of Youth and Adolescence*, 34,605-618.

Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality,* 42, 58-82.

Marcia, J. E. (1994). The empirical study of ego identity. In H. A. Bosma, T. L. Graafsma, H. D. Grotevant, & D. J. de Levita (Eds.), *Identity and Development: An Interdisciplinary Approach* (pp. 67-80). Thousand Oaks, CA: Sage Publications, Inc.

Marcia, J. E. (1993). The relational roots of identity. In J. Kroger (Ed.), *Discussions on Ego Identity* (pp. 101-120). NJ, England: Lawrence Erlbaum Ass. Inc.

Marcia, J. E. (1980). Identity in adolescence. In Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159-187). New York: Wiley.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551-558.

Matheis, S., & Adams, G. R. (2004). Family climate and identity style during late adolescence. *Identity,* 4, 77-95.

Matula, K. E., Huston, T. L., Grotevant, H. D., & Zammut, A. (1992). Identity and dating commitment among women and men in college. *Journal of Youth and Adolescence,* 21, 339-356.

Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence,* 25, 569-598.

Meeus, W., & Dekovic, M. (1995). Identity development, parental and peer support in adolescence: Results of a national Dutch survey. *Adolescence,* 30, 931-944.

Meeus, W., & de Wied, M. (2007). Relationship with parents and identity in adolescence: A review of 25 years of research. In M. Watzlawik & A. Born (Eds.), *Capturing identity: Quantitative and qualitative methods* (pp. 131-147). MD, US: University Press of America.

Meeus, W., Idema, J., & Massen, G. H. (2002). Commitment and exploration as mechanisms of identity formation. *Psychological Reports,* 90, 771-785.

Mocan-Aydin, G. (2000). Western models of counseling and psychotherapy within Turkey: Crossing cultural boundaries. *Counseling Psychologist, 28,* 281-298.

Newman, D. L. (2005). Ego development and ethnic identity formation in rural American Indian adolescents. *Child Development,* 76, 734-746.

Norenzayan, A. & Heine, S. J. (2005). Psychological universals: What are they and how can we know? *Psychological Bulletin,* 131, 763-784.

Nurmi, J., Berzonsky, M. D., Tammi, K., & Kinney, A. (1997). Identity processing orientaion, cognitive and behavioural strategies and well being. *International Journal of Behavioral Development,* 21, 555-570.

Nurmi, J. E., Poole, M. E., & Kalakoski, V. (1996). Age differences in adolescent identity exploration and commitment in urban and rural environments. *Journal of Adolescence,* 19, 443-452.

Ojeda, L., & Flores, L. Y. (2008). The influence of gender, generation level, parent's education level, and perceived barriers on the educational aspirations of Mexican high school students. *The Career Development Quarterly*, 57, 84-95.

Okman-Fisek, G. (1982). Psychopathology and the Turkish Family: A family systems theory analysis. In C. Kagitcibasi (Ed.), Sex roles, family, & community in Turkey (pp. 295-321). Bloomington, IN: Indiana University Turkish Studies.

Oner, N. (1997). *Turkiye'de kullanilan psikolojik testler: Bir basvuru kaynagi (The psychological instruments used in Turkey: A resource book).* Istanbul: Bogazici Publications.

Oner, N. (1976). *Durumluluk-surekli kaygi envanterinin Turk toplumunda gecerliligi (The validity of state trait anxiety inventory in Turkish society*). Unpublished doctoral dissertation, Hacettepe University, Ankara.

Oner, N., LeCompte, A. (1983). *Durumluluk surekli kaygi envanteri el kitabi (The handbook of the state-trait anxiety inventory).* Istanbul: Bogazici Publications.

Orgocka, A. & Jovanovic, J. (2006). Identity exploration and commitment of Albanian youth as a function of social opportunity structure. *European Psychologist,* 11, 268-276.

Ostrove, J. M., & Cote, E. R. (2003). Privileging class: Toward a critical psychology of social class in the context of education. *Journal of Social Issues,* 59, 677-692.

Panter, A. T., Daye, C. E., Allen, W. R., Wightman, L. F., & Deo, M. (2008). Everyday discrimination in a national sample of incoming law students. *Journal of Diversity in Higher Education,* 1, 67-79.

Phillips, T. M., & Pittman, J. F. (2007). Adolescent psychological well-being by identity styles. *Journal of Adolescence*, 30, 1021-1034.

Phillips, T. M., & Pittman, J. F. (2003). Identity processes in poor adolescents: Exploring the linkages between economic disadvantage and the primary task of adolescence. *Identity*, 3, 115-129.

Phinney, J. S. (2005). Ethnic identity in late modern times: A response to Rattansi and Phoenix. *Identity*, 5, 187-194.

Phinney, J. S. (2000). Identity formation across cultures: The interaction of personal, societal, and historical change. *Human Development*, 43, 27-31.

Phinney, J. S. (1993). Multiple group identities: Differences, conflict, and integration. In J. Kroger (Ed.), *Discussions on ego identity* (pp/ 47-73). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Pittman , J., Kerpelman, J., Lamke, L. & Sollie, D. (2009). Development and validation of a q-sort measure of identity processing styles: The Identity Processing Styles Q-sort. *Journal of Adolescence, 32,* 1239-1265.

Powers, D. A. (1996). Social background and social context effects on young men's idleness transition. *Social Science Research,* 25, 50-72.

Pulkkinen, L. & Ronka, A. (1994). Personal control over development, identity formation, and future orientation as components of life orientation: A developmental approach. *Developmental Psychology,* 30, 260-271.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement,* 1, 385-401.

Radloff, L. S., & Teri, L. (1986). Use of the Center for Epidemiological Studies- Depression Scale with older adults. *Clinical Gerontologist,* 5, 119-136.

Rankin, B. H. & Aytac, I. A. (2006). Gender inequality in schooling: The case of Turkey. *Sociology of Education,* 79, 25-43.

Roberts, R. E., Andrews, J. A., Lewinsohn, P. M., & Hops, H. (1990). Assessment of depression in adolescents using the Center for Epidemiologic Studies Depression Scale.

Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2, 122-128.

Rosenberg, M. (1965). *Society and adolescents' self-image.* Princeton, NJ: Princeton University Press.

Rudmin, F. W. (2008). Review of immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts. *Journal of Cross-Cultural Psychology*, 39, 230-233.

Sabatier, C. (2008). Ethnic and national identity among second-generation immigrant adolescents in France: The role of social context and family (Special Issue). *Journal of Adolescence*, 31, 185-205.

Sartor, C. E., & Youniss, J. (2002). The relationship between positive parental involvement and identity achievement during adolescence. *Adolescence*, 37, 221-234.

Schmitt-Rodermund, E., & Vondracek, F. W. (1999). Breadth of interests, exploration, and identity development in adolescence. *Journal of Vocational Behavior*, 55, 298-317.

Schulenberg, J. E., Bryant, A. L., O'Malley, P. M. (2004). Taking hold of some kind of life: How developmental tasks relate to trajectories of well-being during the transition to adulthood (Special Issue). *Development and Psychopathology*, 16, 1119-1140.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner guide to structural equation modelling (2nd edition).* US: Lawrence Erlbaum Associates Publishers.

Schwartz, S. J. (2001). The evolution of Eriksonian and neo-Eriksonian identity theory and research: A review and integration. *Identity*, 1, 7-58.

Schwartz, S. J., Montgomery, M. J., & Briones, E. (2006). The role of identity in acculturation among immigrant people: Theoretical propositions, empirical questions, and applied recommendations. *Human Development*, 49, 1-30.

Schwartz, S. J., Mullis, R. L., Waterman, A. S., & Dunham, R. M. (2000). Ego identity status, identity style, and personal expressiveness: An empirical investigation of three convergent constructs. *Journal of Adolescent Research*, 15, 504-521.

Sener, A., Terzioglu, R. G., & Karabulut, E. (2007). Life satisfaction and leisure activities during men's retirement: A Turkish sample. *Aging & Mental Health,* 11, 30-36.

Sirin, S,, Bikmen, N., Mir, M., Fine, M., Zaal, M., & Katsiaficas, D. (2008). Exploring dual identification among Muslim-American emerging adults: A mixed methods study (Special Issue). *Journal of Adolescence,* 31, 259-279.

Skorikov, V. (2007). Continuity in adolescent career preparation and its effects on adjustment. *Journal of Vocational Behavior*, 70, 8-24.

Smits, I., Berzonsky, M. D., Luyckx, K., Gossens, L., Kunnen, S., & Bosma, H. (2008). The Identity Styles Inventory – Version 4: A cross-national study in scale development and validation. Unpublished Measure, Katholieke Universiteit Leuven, Belgium.

Smith, E. R., & Kluegel, J. R. (1984). Beliefs and attitudes about women's opportunity: Comparisons with beliefs about Blacks and a general perspective. *Social Psychology Quarterly,* 47, 81-95.

Smits, I., Soenens, B., Luyckx, K., Berzonsky, M. D., & Gossens, L. (2008b). Perceived parenting dimensions, and identity styles: Exploring the socialization of adolescents' processing of identity-relevant information. *Journal of Adolescence,* 31, 151-164.

Soenens, B., Berzosnky, M. D., Vansteenkiste, M., Beyers, W., & Gossens, L. (2005) Identity styles and causality orientations: In search of the motivational underpinnings of the identity exploration process. *European Journal of Personality*, 19, 427-442.

Solomotos- Kountori, O., & Herry, J. (2008). Political, religious, and occupational identities in context: Placing identity status paradigm context (Special Issue). *Journal of Adolescence*, 31, 241-256.

Spijker, J., de Graaf, R., Bijl, R. V., Beekman, A. T. F., Ormel, J., & Nolen, W. A. (2004). Functional disability and depression in the general population. Results from Netherlands mental health survey and incidence study (NEMESIS). *Acta Psychiatrica Scandinavica*, 110, 208-214.

Speilberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press.

Stankov, L. (2007). The structure among measures of personality, social attitudes, values, and social norms. *Journal of Individual Differences*, 28, 240-251.

Stanton, J. M. (1998). An empirical assessment of data collection using the Internet. *Personnel Psychology*, 51, 709-725.

Stephens, N. M., Markus, H. R., & Townsend, S. S. M. (2007). Choice as an act of meaning: The case of social class. *Journal of Personality and Social Psychology*, 93, 814-830.

Stewart, A. J. & Ostrove, J. M. (1993). Social class, social change, and gender: Working-class women at Radcliffe and after. (Special Issue) *Psychology of Women Quarterly*, 17, 475-497.

Streitmatter, J. (1993). Identity status and identity styles: A replication study. *Journal of Adolescence*, 16, 211-215.

Strickland, O. L., Moloney, M. F., Dietrich, A. S., Myerburg, S., Cotsonis, G. A., & Johnson, R. V. (2003). Measurement issues related to data collection on the world wide web. *Advances in Nursing Science*, 26, 246-256.

Super, D. E., & Hall, D. T. (1978). Career development: exploration and planning. *Annual Review of Psychology*, 29, 333-372.

Syed, M., Azmitia, M., & Phinney, J. S. (2007). Stability and change in ethnic identity among Latino emerging adults in two contexts. *Identity*, 7, 155-178.

Taylor, R. D., & Oskay, G. (1995). Identity formation in Turkish and American late adolescents. *Journal of Cross-Cultural Psychology, 26,* 8-22.

Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology,* 53, 133-160.

Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence*, 27, 139-146.

Van de Vijver, F. J. R., & Leung, K. (2001). Personality in cultural context; Methodological issues. *Journal of Personality*, 69, 1007-1032.

Vedder, P., Sum, D. L., van de Vijver, F. J. R., & Phinney, J. S. (2006). Vietnamese and Turkish immigrant youth: Acculturation and adaptation in two ethnocultural groups. In J. W. Berry, J. S. Phinney, D. L., Sam, & P. Vedder (Eds.), *Immigrant Youth in Cultural Transition: Acculturation, Identity, and Adaptation Across National Contexts (*185-209*).* Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Vleioras, G. (2007). Not all identity style items refer to identity: Does it matter? *Identity, 7*, 255-262.

Vleioras, G., & Bosma, H. A. (2005). Are identity styles important for psychological well-being? *Journal of Adolescence,* 28, 397-409.

Vondracek, F. W. (1995). Vocational identity across the life-span: A developmental-contextual perspective on achieving self-realization through vocational careers. *Man and Work,* 6, 85-93.

Vondracek, F. W.; Schulenber, J., Skorikov, V., & Gillespie, L. K. (1995). The relationship of identity status to career indecision during adolescence. *Journal of Adolescence,* 18, 17-29.

Vygotsky, L. S. (1962). A experimental study of concept formation. In L. S. Vygtosky, E. Hanfmann, & G. Vakar (Eds.), *Thought and Language.* Cambridge: MIT Press.

Wall, J., Covell, K., & Macintyre, P. D. (1999). Implications of social supports for adolescents' education and career aspirations. *Canadian Journal of Behavioral Science,* 31, 63-71.

Wallece-Broscious, A., Serafica, F. C., & Osipow, S. H. (1994). Adolescent career development: Relationships to self-concept and identity status. *Journal of Research on Adolescence,* 4, 127-149.

Waterman, A. S. (2004). Finding someone to be: Studies on the role of intrinsic motivation in identity formation. *Identity,* 4, 209-228.

Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678-691.

Wheeler, H. A., Adams, G. R., & Keating, L. (2001). Binge eating as a means for evading identity issues: The association between an avoidance identity style and bulimic behavior. *Identity,* 1, 161-178.

Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress, and discrimination (Special Issue). *Journal of Health Psychology,* 2, 335-351.

Yetim, U. (2003). The impact of individualism/collectivism, self-esteem, and feeling of mastery on life satisfaction among the Turkish university students and academicians. *Social Indicators Research,* 61, 297-317.

Yetim, U. (1993). Life satisfaction: A study based on the organization of personal projects. *Social Indicators Research,* 29, 277-289.

Yoder, A. E. (2000). Barriers to ego identity status formation: A contextual qualification of Marcia's identity status paradigm. *Journal of Adolescence,* 23, 95 -106.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment,* 52, 30-41.

APPENDIX 1a

Demographic Questions

Please enter your birthday
Month _____
Day _____
Year _____

Please indicate your gender
Female ___
Male ___

Please indicate your Race/Ethnicity
White/European-American ___
Black/African-American ___
Hispanic/Latino ___
Asian-American ___
Native-American ___
Other (please specify) _____

Who do you currently live with?
Parents ___
Roommate ___
Romantic partner ___
Alone ___
Other (please specify) _____

What is your major?
_____

Please indicate your grade level
Freshman ___
Sophomore ___
Junior ___
Senior ___
Other (please specify) _____

APPENDIX 1b1

Identity Styles Inventory (ISI) Items

You will find a number of statements about beliefs, attitudes, and/or ways of dealing with identity issues. Read each carefully and use it to describe yourself in a five-point scale (1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree).

1) Talking to others helps me explore my personal beliefs.
2) I automatically adopt and follow the values I was brought up with.
3) I'm not sure where I'm heading in my life; I guess things will work themselves out.
4) When facing a life decision, I take into account different points of view before making a choice.
5) I strive to achieve the goals that my family and friends hold for me.
6) Many times, by not concerning myself with personal problems, they work themselves out.
7) When facing a life decision, I try to analyze the situation in order to understand it.
8) I never question what I want to do with my life because I tend to follow what important people expect me to do.
9) I am not really thinking about my future now, it is still a long way off.
10) When making important life decisions, I like to think about my options.
11) I think it is better to adopt a firm set of beliefs than to be open-minded.
12) When I have to make an important life decision, I try to wait as long as possible in order to see what will happen.
13) I handle problems in my life by actively reflecting on them.
14) When making important life decisions, I like to have as much information as possible.
15) I think it's better to hold on to fixed values rather than to consider alternative value systems.
16) I try not to think about or deal with personal problems as long as I can.
17) It is important for me to obtain and evaluate information from a variety of sources before I make important life decisions.
18) Many times, by not concerning my self with personal problems, they work themselves out.
19) I try to avoid personal situations that require me to think a lot and deal with them on my own.
20) Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.
21) Who I am changes from situation to situation.
22) When personal problems arise, I try to delay acting as long as possible.
23) I prefer to deal with situations in which I can rely on social norms and standards.
24) When I make a decision about my future, I automatically follow what close friends or relatives expect from me.
25) When others say something that challenges my personal values or beliefs, I automatically disregard what they have to say.

APPENDIX 1b2

Identity Processing Styles Q-sort (IPSQ) Items

1) When faced with a problem, I put a lot of energy into thinking of possible solutions.
2) I prefer doing things that make me feel better, rather than working a long time to fix a difficult problem.
3) I am someone who likes to gather a lot of information about myself.
4) I often try out different ways of thinking and behaving to learn about myself.
5) I think it's important to do volunteer work that helps other people.
6) How I see myself feels like a roller coaster-changing from day-to-day.
7) Most of the time I feel good about myself.
8) If another person's point of view differs greatly from my own, I work hard to understand how that person sees things.
9) Once I make a decision about myself, I'm not open to new information.
10) What my parents (parent-figures) think I should do is one of the MOST important influences on my life choices.
11) A lot of what influences me in life comes from what my friends think I should do.
12) I consider myself to be someone who is open-minded.
13) Often I feel like my life has little direction or purpose.
14) Having self-control is important to me.
15) I take responsibility for my choices and behavior.
16) I really enjoy talking with people who have different values and beliefs than my own.
17) I tend to put decisions off.
18) It is difficult for me to come up with different possibilities for my own life choices.
19) When problems arise, I try to avoid dealing with them if at all possible.
20) My family and friends can pretty much predict how I will behave in different situations.
21) Rather than thinking about who I will be in the future, I prefer to deal with life day to day.
22) My future is something I think about a lot.
23) I don't like it when people question my beliefs.
24) It is more important for me to be connected to members in my family than to anyone else.
25) For me it's important to work hard in school.
26) Earning money is important to me.
27) It is important to me to spend time developing my talents/skills.
28) Having close relationships with my family is important to me.
29) I like to participate in organized groups (e.g., teams, clubs, fellowships).
30) It is important for me to be independent.
31) Having a sense of belonging with other people is a necessary part of my life.
32) Although I consider what other people think, I make the final decision when it comes to important choices about my life.
33) When making decisions, I am inclined to think about what important people in my life believe is right for me.
34) I am pretty good at looking at the possible consequences of my life choices.
35) I tend to seek out novel experiences where I can try out new things and learn about myself.

36) In new situations, I am uncomfortable until I figure out the rules for behavior.
37) I think it is important to respect other people's beliefs and lifestyles.
38) I think boys should behave like boys, and girls should behave like girls.
39) I find that, if I wait long enough to make a decision, the decision will get made for me.
40) I think it's important to be aware of my ethnic background.
41) I am open to the range of possibilities of who I could become.
42) It is important to me to work toward becoming the kind of person that important people in my life can be proud of.
43) I work very hard at really knowing who I am.
44) It's hard for me to explain to other people what's important to me.
45) I am confidant about who I am because I know what is most important to my family and friends.
46) I really don't care about making things happen; whatever happens, happens.
47) I watch how others are acting before I decide how to act.
48) Sometimes I brush off information that is not consistent with my beliefs.
49) I am open to questioning my beliefs when I receive information that is different from them.
50) Often my friends and family are surprised at the choices I make.
51) I have ended friendships in the past because I discovered we differed in our core beliefs.
52) The problems I encounter in my life tend to be caused by someone or something else.
53) I'm different people in different situations.
54) When I think about the future, I have specific goals in mind that I am striving for.
55) I am not concerned with finding out who I am right now.
56) Being part of a group of friends is important to me.
57) It is important to me to save money.
58) Having a job is important to me.
59) It is important to me to have at least one close friend.
60) Having a romantic partner is important to me.

APPENDIX 1c

Adapted Version of Dimensions of Identity Development Scale (DIDS) Items

Thinking about LAST THREE MONTHS, indicate how much you agree with each statement about how you think about your career, such as career choices you have made, in a scale from 1 (strongly disagree) to 5 (strongly agree).

1) I have decided on the direction I want to follow in my career.
2) I think actively about the direction I want to take in my career.
3) I am doubtful about what I really want to achieve in my career.
4) My plans for my career match with my true interests and values.
5) I talk with other people about the career plans I have made for myself.
6) I know what I want to do with my career.
7) I think purposefully about how I see my career.
8) I worry about what I want to do with my career.
9) My career plans give me self-confidence.
10) I work out for myself if the aims I put forward for my career life really suit me.
11) I have a clear view on my career.
12) I try to figure out regularly which career type would suit me.
13) I keep looking for the direction I want to take in my career.
14) Because of the path of career I have mapped out for myself, I feel certain about myself.
15) I try to find out what other people think about the specific direction I want to take in my career.
16) I have made a choice concerning some of my plans for the career.
17) Lately, I think about what I am aiming for in my career life.
18) I keep wondering which direction my career has to take.
19) I sense that the direction I want to take in my career life will really suit me.
20) I actively think about if the career plans I strive for, correspond to what I really want.
21) I know what I want to achieve in my career life.
22) I try to find out which career type would be good for me.
23) It is hard for me to stop thinking about the direction I want to follow in my career.
24) I value my plans for my career very much.
25) I regularly dwell upon the career plans I have made.

APPENDIX 1d

Cultural Influences Items (GLOBE)

In these following questions we are interested in your beliefs about the norms and practices IN YOUR SOCIETY. Please think about the way your society is, and respond to the questions by circling the number that most closely represents your observations about your society, in a 7-point scale.

Future-Orientation Items:

1) The way to be successful in your society is to:

Take life events as they occur.						Plan ahead
1.	2.	3.	4.	5.	6.	7.

2) In your society, the accepted norm is

Accept the status quo						Plan for the future
1.	2.	3.	4.	5.	6.	7.

3) In your society, social gatherings are:

Spontaneous (planned less than an hour in advance)						Planned well in advance (2 or more weeks in advance)
1.	2.	3.	4.	5.	6.	7.

4) In your society, many people live,

Live for the present than live for the future						Live for the future than live for the present
1.	2.	3.	4.	5.	6.	7.

5) In your society, people place more emphasis on:

Solving current problems						Planning for the future
1.	2.	3.	4.	5.	6.	7.

Uncertainty-Avoidance Items:

6) In your society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.

Strongly Agree						Strongly Disagree
1.	2.	3.	4.	5.	6.	7.

7) In your society, most people lead highly structured lives with few unexpected events.

Strongly Agree						Strongly Disagree
1.	2.	3.	4.	5.	6.	7.

8) In your society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.

Strongly Agree						Strongly Disagree
1.	2.	3.	4.	5.	6.	7.

9) In your society, there are rules and laws to cover

Almost all situations						Very few situations
1.	2.	3.	4.	5.	6.	7.

Gender Egalitarianism Items:

10) In your society, boys are encouraged more than girls to attain a higher education

Strongly Agree						Strongly Disagree
1.	2.	3.	4.	5.	6.	7.

11) In your society, there is more emphasis on athletic programs for

Boys						Girls
1.	2.	3.	4.	5.	6.	7.

12) In your society, it is worse for a boy to fail in school than for a girl to fail in school

Strongly Agree						Strongly Disagree
1.	2.	3.	4.	5.	6.	7.

13) In your society, people are generally

Physical						Non-physical
1.	2.	3.	4.	5.	6.	7.

14) In your society, who is more likely to serve in a position of high education?

Men						Women
1.	2.	3.	4.	5.	6.	7.

APPENDIX 1e

Social-Structural Influence Items

The following questions are about your parents.

Parent Education Items:

1) How much schooling does your FATHER have? (Check the one that shows the highest level of education he has obtained so far).

___ I don't have a father (figure)
___ No formal education
___ Primary school graduate
___ Middle/junior high school graduate
___ Some high school
___ High school graduate
___ Trade/vocational school
___ Some college
___ College graduate
___ Master's degree
___ Doctor/Lawyer other doctorate

2) How much schooling does your MOTHER have? (Check the one that shows the highest level of education she has obtained so far).

___ I don't have a mother (figure)
___ No formal education
___ Primary school graduate
___ Middle/junior high school graduate
___ Some high school
___ High school graduate
___ Trade/vocational school
___ Some college
___ College graduate
___ Master's degree
___ Doctor/Lawyer other doctorate

Parent Occupation Items:

3) Please choose the best option that fits to your FATHER'S current (last, if retired) occupation.

__ I don't have a father (figure)/ Not Applicable
__ Chief executives, manufacturer or landholder
__Small business owner or craftsman
__Doctor, engineer, lawyer, academician
__Teacher, nurse, officer, technician
__Worker, elementary occupations, such as cleaner, helper
__Forestry worker, farmer, fishermen
__Other

4) In order to give us a more detailed information, please specify your FATHER'S occupation.
_____

5) Please choose the best option that fits to your MOTHER;S current (last, if retired) occupation.

__ I don't have a mother (figure)/ Not Applicable
__ Chief executives, manufacturer or landholder
__Small business owner or craftsman
__Doctor, engineer, lawyer, academician
__Teacher, nurse, officer, technician
__Worker, elementary occupations, such as cleaner, helper
__Forestry worker, farmer, fishermen
__Other

6) In order to give us a more detailed information, please specify your MOTHER'S occupation.
_____

Parent Income Items:

7) Please indicate your FATHER'S annual income. Choose the range fits best.

__Not applicable
__Less than $15,000
__Between $15,000 and $30,000
__Between $30,000 and $50,000
__Between $50,000 and $100,000
__More than $100,000

8) Please indicate your MOTHER'S annual income. Choose the range fits best.

__Not applicable
__Less than $15,000
__Between $15,000 and $30,000
__Between $30,000 and $50,000
__Between $50,000 and $100,000
__More than $100,000

APPENDIX 1f1

Personal Opportunities Items

Next questions ask about your experiences. Think about yourself, and tell us
Compared to an average person in your society,

1) How good a chance do you have to get ahead today, if you work hard?

1. much worse than average
2. a little worse than average
3. neither worse nor better
4. a little better than average
5. much better than average

2) Do you think you have a fair opportunity to make the most of yourself in life?

1. Strongly disagree
2. Disagree
3. Neither disagree nor agree
4. Agree
5. Strongly agree

3) Thinking about your future career, do you expect that over the next 5-10 years you will….

1. loose some ground
2. stay all about the same
3. make steady advances
4. advance rapidly
5. make big jumps

APPENDIX 1f2

Multidimensional Scale of Perceived Social Support (MSPSS) Items

This question is about your experiences with people close to you.
Please rate how much (dis)agree with each statement in a 5-point scale, 1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, and 5= strongly agree.

1) There is a special person who is around when I am in need.
2) There is a special person with whom I can share my joys and sorrows.
3) My family really tries to help me.
4) I get the emotional help and support I need from family.
5) I have a special person who is a real source of comfort to me.
6) My friends really try to help me.
7) I can count on my friends when things go wrong.
8) I can talk about my problems with my family.
9) I have friends with whom I can share my joys and sorrows.
10) There is a special person in my life who cares about my feelings.
11) My family is willing to help me make decisions.
12) I can talk about my problems with my friends.

APPENDIX 1f3

Everyday Discrimination Scale (EDS) Items

Now, think about your experiences in your community, and rate each statement in a six-point scale.
1= never experience; 2= experience seldom; 3=experience occasionally; 4= experience frequently; 5=experience usually; and 6= experience almost everyday.
In your community,

1) You are treated with less courtesy than other people.
2) You are treated with less respect than other people.
3) You receive poorer service than other people in restaurants or stores.
4) People act as if they think you are not smart.
5) People act as if they are afraid of you.
6) People act as if they think you are dishonest.
7) People act as if they are better than you are.
8) You are called names or insulted.
9) You are threatened or harassed.

Think about your above experiences in your community. Tell us the reason(s), you think, causes them (click all that applies).

__Not applicable (if you've never experienced)
__Gender
__Race/Ethnicity
__Religion
__Sexual orientation
__Physical appearance (other than skin color)
Other (please specify) _____

APPENDIX 1g1

Center for Epidemiologic Studies Depression Scale (CES_D) Items

Think back over the last week (7 days). For each item, how often have you felt like the description? Circle the number that best indicates your answer.

1= Rarely (Less than 1 day); 2=A little (1-2 days); 3=Some-times (3-4 days); and 4= Most of the time (5-7 days).

1) I did not feel like eating; my appetite was poor.
2) I felt that everything I did was an effort.
3) I thought my life had been a failure.
4) My sleep was restless.
5) I felt lonely.
6) I felt sad.
7) I could not get "going".

APPENDIX 1g2

A Shortened Version of Rosenberg's Self-Esteem Scale Items

Please answer the next questions to describe your feelings about yourself these days.

1= Strongly disagree; 2=Disagree; 3=Neither disagree nor agree; 4=Agree; and 5=Strongly agree

1) I feel I'm a person of worth, at least on an equal basis with others.
2) I feel I have a number of good qualities.
3) I am able to do things as well as most people.
4) I take a positive attitude toward myself.
5) On the whole, I am satisfied with myself.

APPENDIX 1g4

Trait Subscale of State Trait Anxiety Inventory (STAI - T) Items

There are a number of statements which people have used to describe themselves are given below. Read each statement and indicate how you GENERALLY feel.

1= Almost never; 2= sometimes; 3= often; and 4= almost always

1) I feel pleasant.
2) I feel nervous and restless.
3) I feel satisfied with myself.
4) I wish I could be as happy as others seem to be.
5) I feel like a failure.
6) I feel rested.
7) I am "calm, cool, and collected."
8) I feel that difficulties are piling up so that I cannot overcome them.
9) I worry too much over something that really does not matter.
10) I am happy.
11) I have disturbing thoughts.
12) I lack self-confidence.
13) I feel secure.
14) I make decisions easily.
15) I feel inadequate.
16) I am content.
17) Some unimportant thought runs through my mind and bothers me.
18) I take disappointments so keenly that I can't put them out of my mind.
19) I am a steady person.
20) I get in a state of tension or turmoil as I think over my recent concerns and interests.