

FAMILY VARIABLES IN THE CULTURAL AND PSYCHOLOGICAL ADJUSTMENT
OF THIRD CULTURE KIDS

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Third culture kids are children raised in globally mobile families who have left their culture of origin to reside in a host culture. As this relocation occurs during childhood, the child combines the values, traditions, and norms of both cultures thereby creating a third culture, a unique culture created by the parent's integration of the home culture, the host culture, and the domains of the organizational culture. Emotional Stability was found to mediate the relationship between family of origin Expression and Composite distress. Though this was the only hypothesized model that was supported, other interesting findings include that when participants were categorized by industry, statistically significant differences were found between Military, Missions, and the Other group on all of the scales. These differences are likely due to a cohort effect, given that the military family mean age was as much as twenty years higher than the other groups.

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INTRODUCTION

Drs. John and Ruth Useem originally coined the term Third culture kid (TCK) to describe the children of expatriates whom they observed in India in a variety of capacities (e.g., diplomat, missionary, technology, businessmen, and educators) (2001). Pollock (1989) describes a Third culture kid as one...

who has spent a significant part of his or her developmental years outside the parent's culture. The TCK builds relationships to all of the cultures, while not having full ownership in any. Although elements from each culture are assimilated into the TCK's life experience, the sense of belonging is in relationship to others of similar background (p.19).

John and Ruth Hill Useem coined the term "third culture" to mean

The behavior patterns created, shared, and learned by men [sic] of different societies who are in the process of relating their societies or thereof, to each other (Useem, Useem, & Donoghue, 1963, p. 169).

The construct supersedes specific cultural boundaries as it transcends culture. It is, in fact, a broad term – it differs due to historical periods, nations and the cultural values associated with those nations. Each of these characteristics has a unique role in the formation of the "third culture." In addition, the function of the organization is important; children raised in missionary will likely have qualitative differences from children raised in military families, and also differ from families who moved overseas due to business or diplomats who are serving their countries. Thus, the parents have an agentic in creating this third culture.

Though the Useems worked collectively on the notion of the third culture, Ruth's work exclusively focused on TCKs - children of these internationally mobile families (Useem & Cottrell, 1996). Children in such families experience frequent and/or sudden moves, especially if their parents are employed by organizations or agencies that often require geographical transitions or if the family is located within an unstable or war-torn community (Pollock & Van Reken, 2001). The Useems' work further determined that children and adolescents raised in

these highly mobile families developed a unique culture that did not closely align with either the home country's culture (country of origin) or the host country's culture (country of current residence). This interstitial culture, or third culture, as the Useems came to label it, is the nebulous arena in which the culture created by the parents straddling the two cultures (home and host) with the additional situational factors related to the family environment and the organization's culture with whom the family moved to the host culture. The construct differs from children of immigrants in that families with TCKs make the choice to work abroad with the expectation that they will be returning to their home culture. Although the Useems' work as well as others (see Berryhill, 1984; Gaw, 2000; Gerner & Perry, 2000; Gerner, Perry, Moselle, & Archbold, 1992; Useem, Useem, Cottrell, & Jordan, 2001; Werkman, Farley, Butler, & Quayhagen, 1981; Wickstrom, 1988), has examined characteristics of TCKs and the effects of parents on the psychosocial development of their children, few studies outside of the recent publication of the Missionary Consultation and Research Team/Committee on Research and Endowment) CART/CORE studies (Andrews, 2004a, 2004b; Hawley, 2004; Joy, 2004) have looked at the impact of family environment on this population.

The family environment makes a unique contribution to their psychological adjustment and cultural adaptability, given that the time spent abroad typically occurs during an important developmental period in the child's life (Pollock & Van Reken, 2001). Furthermore, no studies have examined how the family can influence the cultural adaptation of the child to the host culture, or how cultural adaptability affects overall psychological adjustment and how it mediates the relationship between the family environment and psychological adjustment. The purpose of this paper is to understand how family characteristics influence psychological adjustment and the process of cultural adaptation for this understudied population. Family emphasis on intellectual and cultural pursuits would likely facilitate adaptation to cultural

diversity, and research demonstrates that expression, cohesion, and conflict in families are related to later psychological adjustment in childhood through adulthood. Therefore, it is useful to examine how the family environment and cultural adaptability influence psychological adjustment.

LITERATURE REVIEW

Family Environment

Research has demonstrated a clear link between family health and later psychological adjustment in adulthood (Bopaiya & Prasad, 2004; Chen, Liu, & Li, 2000; Dadds & Powell, 1991; Dancy & Handal, 1984; de Ross, Marrinan, Schattner, & Gullone, 1999; Emery, 1982; Gonzales, Pitts, Hill, & Roosa, 2000; Jouriles et al., 1991; Kleinman, Handal, Enos, Searight, & Ross, 1989; Kurdek & Fine, 1994; Lau, Jernewall, Zane, & Myers, 2002; Levy-Shiff, 2001; Pettit & Bates, 1989; Piatt, Ketterson, Skitka, & Searight, 1993; Puig-Antich et al., 1985a; Rapee, 1997; Slee, 1996; Veneziano & Rohner, 1998). African American adolescents who perceived their family as psychologically healthy reported fewer issues with psychological adjustment than adolescents who perceived their families as dysfunctional (Piatt et al., 1993). Furthermore, it has long been recognized that marital conflict is a predictor of later psychological adjustment in adulthood (see Emery, 1982). For example, Bopaiya and Prasad (2004) examined the effects of the family environment on later psychological adjustment. Their study found that in college students' retrospective ratings of their families of origin, conflict was associated with higher levels of anger, while students who rated their families high in the pursuit of intellectual and cultural endeavors reported lower levels of psychological distress. Another study has examined the relationship between adolescent distress and the family environment; *cohesion*, *conflict*, and *active-recreational orientation* within families were related to distress (Kleinman et al., 1989). In a study of preschoolers' problem behavior, parents who rated their families as low in *expression* and *cohesion* reported higher levels of behavioral problems in their preschool-aged children (Halpern, 2004). Regardless of race or culture of origin, family characteristics such as *conflict* and *cohesion*, are predictive of adolescent depression (Dancy & Handal, 1984; de Ross et al., 1999; Greenberger & Chen, 1996) and conduct disorder in school aged children (Slee,

1996).

Family strengths such as warmth (Chen et al., 2000; E. Kim, Cain, & McCubbin, 2006; Pettit & Bates, 1989) and cohesion impact later adjustment in adolescence and adulthood. In addition, high levels of some family characteristics such as control (Gonzales et al., 2000; Kurdek & Fine, 1994; Piatt et al., 1993; Rapee, 1997; Slee, 1996; Veneziano & Rohner, 1998), and conflict (Dadds & Powell, 1991; Dancy & Handal, 1984; Emery, 1982; Jouriles et al., 1991; Lau et al., 2002; Pettit & Bates, 1989; Puig-Antich et al., 1985a; Rapee, 1997; Slater & Haber, 1984) have been demonstrated to contribute to psychological maladjustment across the life-span. Levels of family stress are important to examine as part of the TCK experience because these constructs have been shown to affect not only childhood and adolescent adjustment but adjustment in adulthood (Campbell, 1995; Campbell & Ewing, 1990; Levai, Kaplan, Daly, & McIntosh, 1994).

Family stress and adversity, marital quality, and parenting stress have all been associated with psychological adjustment and behavior problems in children (Benzies, Harrison, & Magill-Evans, 2004; Campbell, 1995; Campbell & Ewing, 1990). Stress and adversity were shown to be a predictor of behavior problems in preschool children (Campbell, 1995) and in a follow-up study at age nine (Campbell, 1995; Campbell & Ewing, 1990). Parent ratings of current marital quality and parenting stress were shown to be predictive of behavior problems in children at age two (Creasey & Jarvis, 1994) and at age seven (Benzies et al., 2004). Thus, stressors within the family and the overall quality of the relationships within the family are predictive of current adjustment.

Warmth has been defined as the parental praise of children through smiles and encouragement, etc. Homes with lower maternal warmth are linked with higher behavioral problems (Pettit & Bates, 1989) and emotional and psychological maladjustment in children

(Chen et al., 2000). Paternal warmth was predictive of social and school achievement (Chen et al., 2000). In Korean American homes, warmth was associated with overall psychological adjustment of Korean American adolescents. Lower levels of parental acceptance as reported by the child were associated with higher levels of depression in a sample of fourth-graders (Gonzales et al., 2000; Rapee, 1997) and psychological maladjustment for both Caucasian and African American children and adolescents (Veneziano & Rohner, 1998).

Family cohesion is defined as a sense of unity within the family that allows each member to keep his or her autonomy (Moos & Moos, 1994). Parents who report high levels of cohesion report fewer overall adjustment difficulties with their children. Studies with adolescents demonstrated similar findings. A study of adolescents and their families in Australia revealed that the combination of low cohesion and high conflict in families was related to high levels of depression in adolescents (de Ross et al., 1999). Another study found that families high in cohesion and an active-recreational orientation and low in conflict are indicative of better adjustment in adolescents (Kleinman et al., 1989). Furthermore, emotional expressiveness for boys was related to the psychological adjustment of adolescents (Kleinman et al., 1989). A study of Swedish adolescents suggests that cohesion is positively related to current psychological adjustment in children ages seven to nine who have been diagnosed with asthma (Reichenberg & Broberg, 2005). In a study of Caucasian and Asian American junior high adolescents, parental warmth and conflict with parents were found to account for 44% of the variance in European Americans and for 51% of the variance in Asian Americans for psychological adjustment (Greenberger & Chen, 1996).

Familial conflict in general appears to have an impact on psychological adjustment (Emery, 1982). African American adolescents who perceived high conflict within their families reported less cohesion and more psychological maladaptation than the low conflict group (Dancy

& Handal, 1984). Puig-Antich (1985a) found that children who were “stuck in the middle” of parental conflict regarding child rearing disagreements were more depressed than their typical peers both while the child was experiencing the depressive episode and after the child was no longer experiencing depressive symptomology (Puig-Antich et al., 1985a, 1985b). Similar to Rapee’s (1997) review, Slater and Haber (1984) found that adolescents in highly conflictual homes reported higher levels of anxiety, while Dadds and Powell (1991) found that homes with low levels of marital adjustment and high levels of parental disagreement reported higher levels of anxiety in boys than girls. In addition, children raised in homes with frequent disagreements about child-rearing practices showed an increase in behavior problems (Dadds & Powell, 1991), while other studies have found this effect for boys but not for girls (Jouriles et al., 1991). Families who reported high levels of conflict between the mother and child when the child was age 2 reported that these children engaged in extreme non-compliant behavior when observed at age 4 (Pettit & Bates, 1989). Asian American adolescents who reported highly conflictual relationships with their mother tended to report higher levels of suicidality (Lau et al., 2002).

Slee’s (1996) study found that families who reported higher levels of control experienced higher levels of conduct disorder, and other findings suggest that higher levels of control and lower levels of acceptance are related to overall adjustment (Kurdek & Fine, 1994). High levels of control were found to be related to anxiety (Rapee, 1997).

Studies of college students and young adults lend further credence to the fact that family functioning impacts later psychological and social development in terms of personality, relationships, and overall satisfaction. Positive family relations as measured by Family Adaptability and Cohesion Scale (FACES) was positively related to adjustment for college students (Holmbeck & Wandrei, 1993). In addition, college students who reported growing up in families with limited emotional expression reported difficulties in expressing emotions in

adulthood as well (Yelsma, Hovestadt, Anderson, & Nilsson, 2000). These studies clearly demonstrate that family environment has a clear impact on later psychological adjustment.

An individual raised in a globally mobile family will likely have experiences that have implications for their later psychological adjustment in ways that may differ from their typical peers. The next section will examine some of the characteristics of children who have been raised with a globally mobile lifestyle.

TCK Characteristics

An individual becomes part of the TCK population after their parents leave their home culture to reside in a host culture most often due to an employment opportunity with some sort of organization (e.g., military, mission agency, government, etc.) and living in a host culture. The host culture, its values, norms, and traditions, may be different than the TCK's home culture, but the TCK will still feel some sort of bond to all the cultures they have experienced or in which they have lived (Useem & Cottrell, 1996). However, a TCK is not likely to feel so attached to any particular culture that he or she starts identifying himself or herself as a native; in fact, a TCK often feels more comfortable and identifies best with other individuals who have had a similar life-experience than with individuals who have only lived within their home country (Pollock & Van Reken, 2001).

TCKs expect to return to their home country even if they do not remember or consider it to be home. The younger the child is during the phase of transcultural adjustment returning to the home culture, the easier adjustment becomes, both in building relationships with their peers and in their educational endeavors (Siebenaler, 1988). But no matter what age or how mature, upon returning home, most TCKs will feel temporarily displaced (Storti, 1997). Furthermore, children may lose important adults (e.g., nannies, househelp, drivers, etc.) in their life in returning to their home culture; many times expatriate families may have household help such as servants or

nannies that serve as secondary attachment figures for the child (Siebenaler, 1988; Storti, 1997). These challenges can leave the TCK feeling alone and confused upon return to their home country. Though they often feel “different,” this does not necessarily mean that they feel isolated in their social networks (Useem & Cottrell, 1996); rather, they recognize their experience of having a globally mobile childhood may result in a different worldview than their peers (Useem & Cottrell, 1996).

Still, there are many benefits that a TCK can experience as a result of an internationally mobile childhood (Pollock & Van Reken, 2001). TCKs are likely to have an expanded worldview, observe political, interpersonal and relational situations from multiple perspectives as compared to their mono-cultural peers, and are more likely to engage all of their senses in experiencing an event (i.e. “living in 3-D”). They develop an appreciation of all cultures, become keen observers of norms of cultures and subcultures, and are more likely to seek out situations that enhance diversity rather than to avoid situations that could make the average American uncomfortable (Pollock & Van Reken, 2001).

Given that the families in which most TCKs are raised value diversity and cultural pursuits, it is not surprising that most TCKs are often bi-lingual at minimum. As TCKs’ entry into the host culture comes at a younger age than the parents, language acquisition is often easier, and TCKs are sometimes more effective communicators in the host country than are the parents (Pollock & Van Reken, 2001). In studies comparing non-TCKs to TCKs, TCKs were found to be more interested in travel and learning languages and more oriented towards having an international lifestyle (Gerner et al., 1992). TCKs’ unique internationally mobile lifestyle facilitates appreciation for cultural diversity and language learning.

Moreover, TCKs might seem more mature than their same-age peers, and develop a certain resilience towards new social settings that might otherwise cause discomfort in other

individuals. Lastly, TCKs often have a notion of being part of something greater than themselves, whether the TCK family is affiliated with a business, religious organization, country, government, or God (Pollock & Van Reken, 2001).

Although these benefits might seem obvious consequences of an internationally mobile upbringing, it is not independent of the family in which the TCK has been raised. The parents' emphasis on diversity, cultural experiences, tolerance of cultures different than their home culture, and appreciation of different worldviews will have a significant impact on the cultural and psychological development of a TCK in comparison to his or her typical peers in their home country.

Some research has examined gender differences among TCKs. Studies have suggested that female TCKs may be more adaptable and have a better attitude about the host culture than men (Foley & Clawson, 1988; Gerner & Perry, 2000). This seems to suggest that women would then have better overall psychological adjustment and less difficulty adjusting to different cultures.

Studies have noted that 93% of teen TCKs do not feel at home upon returning to their home country (Storti, 1997). Useem, Useem, Cottrell and Jordan (2001) found that three-quarters of TCKs feel different from individuals without an overseas experience. Stringham's (1993) survey supported this notion: children of missionaries who had returned to the states often felt different from peers of the same age, resulting in seeking to hide their international experience not only from peers, but from instructors as well. Adult TCKs were found to score lower on a measure of psychosocial development than their typical peers (Wrobbel & Plueddemann, 1990).

As the children are transitioning between the two cultures, they are likely to perceive the norms, traditions, and values of the home and host culture both consciously and unconsciously (Pollock & Van Reken, 2001), and the culture's social norms may be communicated directly or

indirectly. The contradictions in cultural values the child experiences while maturing may lead to confusion and ambivalence regarding the conflict between these two cultural identities, and might impede his or her progress in the development of a cultural identity.

TCKs often report feeling “stuck”, or suspended between the two cultures, while not fully understanding either one. Foster (1986) writes of how a TCK often feels unprepared to re-acclimate to life in their home country. Children may find it difficult to fit in, not knowing how to pronounce the names of individuals in popular culture, or how to understand the inside jokes from movies or television shows. The understanding of popular American sports such as football might be considered a “litmus test” to becoming accepted. A TCK mother illustrates: When returning to the United States from Africa, she made sure her children were clothed in recent American styles. When they exited the plane, she noticed people staring at her children. Upon glancing back, she discovered they were balancing their suitcases on their heads (Anonymous, 1995). While this was likely a common practice for them and their national friends in the host country, it obviously drew attention to them in their home country. Another family was surprised when their son asked, “What are the funny looking boxes outside the houses are?” They realized he could not remember seeing a mailbox while living in the United States before moving to his host country (Skelton, 1987).

Priest (2003) outlined a different model to describe the TCK experience. The model looks at cultural competency as the key in having lower psychological symptoms when re-entering the home culture. The data supported the notion that lack of cultural competence would lead to relational problems, and result in feelings of loneliness of the TCK. As cultural competence is a skill that can be learned, Priest suggested that TCKs who are in a boarding school setting may have an easier transition back to their home country than a TCK who is raised rurally and home-schooled. Priest postulated this difference would be due to the skills acquired

in a boarding school which is typically set-up in a Western fashion, while an individual not raised in a boarding school setting may be completely competent in his host culture, but struggle to adapt to the complexities of his home culture (Priest, 2003).

As previously noted, the highly mobile lifestyle of TCKs has many advantages such as ease in learning new languages, sensitivity to cultural differences, and an appreciation of diversity. However, it is apparent that individuals may experience stress as they leave their culture of origin and transition to their host country's culture. This process of leaving one's culture of origin and acclimating to a host culture has been defined as the experience of culture shock. The crucial transition for the TCK, however, typically is not the entry into the host culture, but rather the re-entry into the home culture, often referred to as reverse culture shock. However, to understand reverse culture shock, we need to understand the presupposition of culture shock.

Culture Shock

Research has explained the phenomenon of culture shock among other internationally mobile groups such as sojourners (e.g., international students and international business people) and immigrants and their children (Berry, 1997; Martin & Harrell, 2004; Phinney & Devich-Navarro, 1997; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Sam, 2000; Ward, Bochner, & Furnham, 2001b; Ward, Leong, & Low, 2004; Wu & Chao, 2005; Zheng & Berry, 1991). In addition, as the experience of culture shock is often defined in terms of psychopathology (i.e., anxiety, depression, overall functioning), lack of social support and loneliness (Stone Feinstein & Ward, 1990), it is important to study how the TCK's ability to transition through the culture shock process affects their overall psychological adjustment

Culture is defined as "shared values, beliefs, language, behavior, and customs," (Dana, 1998). Dana (1998) continues to define values as "human nature, person/nature relationships,

time, social relations, and activities.” Each of the aforementioned characteristics becomes a cultural signpost for individuals. The difficulty for persons with a transcultural lifestyle is that the signposts may be radically different between the home and host culture, and the process of reconciling the differences can lead to a feeling of being lost and confused.

The term culture shock was originally defined by Oberg (1960) as being precipitated “...by the anxiety that results from losing all our familiar signs and symbols of social intercourse.” Adler (1975) expanded this definition by stating

Culture shock is primarily a set of emotional reactions to the loss of perceptual reinforcements from one’s own culture, to new cultural stimuli which have little or no meaning, and to the misunderstanding of new and diverse experiences. It may encompass feelings of helplessness, irritability, and fears of being cheated, contaminated, injured, or disregarded.

Culture shock has been examined in terms of its affective, behavioral, and cognitive (the ABC model) aspects of the individual (Ward, Bochner, & Furnham, 2001a). Different approaches have examined these components and the impact on the individual while transitioning between cultures. The affective conditions of culture shock (Ward et al., 2001a) are described in terms of Folkman and Lazarus’s (1985) stress and coping model (Folkman & Lazarus, 1985; Lazarus, DeLongis, Folkman, & Gruen, 1985), which examines the person’s psychological resources, the costs of the cultural transition, and how the individual can cope with it. Specifically, it examines what is at stake for the person in terms of gain and loss. The influence both the home and host culture have on normal life events is taken into account. In addition, pre/post transition stressors, personality, social support, and acculturation outcomes and overall coping skills are included in the model to explain the ease or difficulty of the cross-cultural transition. Coping and problem solving style along with how the acculturation process occurs can help or hinder the transition throughout the cultures. See Figure 1 for a diagram of this process.

The behavioral component of the transition and the experience of culture shock are based

on the culture-learning approach (Ward et al., 2001a). This model highlights the skills and adaptive behavior of the individual within the culture, and how he or she might misperceive the host culture's social cues, thus leading to difficulties with social interaction in the native community. Accordingly, individuals who have the best adaptation to the culture have more culture-specific knowledge, a high fluency in the language, extensive contact with the host nationals, more cultural similarity, and longer residency in the host community.

The last component of Ward's ABC model examines acculturation at the cognitive level and is based upon social identification theory. Social identification theory looks at the degree of acculturation and level of in-group and out-group identification. Ward and Rana-Deuba (1999) found that a two-dimensional model examining host- and home-culture influences is more accurate in explaining the cross-cultural transition than the typical two-dimensional continuum model that makes four categories (assimilation, marginalization, bi-cultural, and integration).

Amer (2006) has noted limitations in the current models of acculturation. The current paradigms do not account for multiple cultural identities or re-acculturation, nor do they incorporate the impact of the host culture on the process of acculturation for the individual. In addition, it often takes an in-group/out-group approach, while neglecting the phenomenological experience of the bi-directional process that is occurring. As these individuals may be globally mobile, they may experience more feelings of cultural homelessness (Amer, 2006).

The quality of time of inter-cultural contact with both the host and members of one's home culture is predictive of the level of perceived culture shock (Ward & Rana-Deuba, 1999); other studies have noted that the quantity of time in the host culture impacted the psychological adjustment of the expatriate worker (Gregersen & Stroh, 1997). Individuals who have spent more time in their host culture than their home culture are most satisfied in their relationships with their host culture (Ward & Kennedy, 1993).

The amount of agency the individual had in choosing to leave their home culture and moving to their host culture are both related to assimilation and adjustment (Phinney et al., 2001; Ward et al., 2001a). Higher levels of education and training about the host culture predict better identification (i.e. incorporating more of the norms, values, traditions into self) with the host culture (J. S. Black & Mendenhall, 1990). However, an individual who lives in a compound or ethnic enclave and experiences less contact with the host culture will experience more culture shock. The higher the use of the home-culture language, the more difficulty the individual has assimilating (Ward et al., 2001a). So, the more the individual becomes like the host culture, the easier the transition is. Inevitably, individuals who live internationally mobile lifestyles are likely to experience culture shock, though how each individual experiences it might be drastically different (Zapf, 1991).

After working through the experience of culture shock, individuals continue with the process of deculturation (disengaging from the home culture) and enculturation (i.e., acclimating to the new culture; Y. Y. Kim, 2001). As the individual becomes more acclimated to the majority culture's norms, individuals often begin to incorporate more of these norms into their cultural identity. This process is known as acculturation.

Acculturation

Acculturation is defined as “changes occurring due to first hand contact between individuals of different cultural origins” (Ward et al., 2001a). Internationally-mobile families often have contact with a variety of cultures. The following models specifically and uniquely examine the changes in individuals in cross-cultural settings. These models were designed to explain the experience of immigrants and sojourners. Though TCKs differ from immigrants in that TCKs expect to return to their home culture, and differ from sojourners in that they are still in childhood or adolescence, the models are useful in understanding how individuals develop a

cultural identity.

Hammer, Gudykunst, and Wiseman (1978) suggest that an individual who successfully manages crossing cultures has a good ability to handle psychological stress, will be able to communicate effectively, and can establish interpersonal relationships with the natives in the host culture. Ward and colleagues (Searle & Ward, 1990; Ward & Kennedy, 1992) define adaptation in terms of psychological tenets, such as emotional resources and overall well-being and satisfaction, as well as sociocultural components such as one's ability to fit into the majority group and the effectiveness of their interactions with the host culture. Dana (1998) looks at the uniqueness of the individual as a psychological phenomenon which occurs inconsistently across time.

Individuals who have lived cross-culturally might have developed a unique cultural identity that does not neatly fit with one particular ethnic or cultural group. Dana's (1998) model provides information on the process of developing a cultural identity, specifically how the transcultural individual begins relating to the majority group and which of the majority group values, beliefs, language, behavior, and customs he or she will internalize. See Figure 2 for a visual representation of Dana's model of identity formation.

Although Dana (1998) views cultural identity as something that occurs through relating to the majority group, Y. Y. Kim (2001) examines how communication processes and cross-cultural adaptation influence identity development. Y. Y. Kim (2001) defines a cultural identity as an internalized cultural pattern that includes definitions of self and others and serves as a system of knowledge and meaning whereby individuals differentiate between groups. Y. Y. Kim's (2001) theory suggests that through the process of communication we internalize the values, norms and traditions of home and host culture which helps identify similar individuals and a sense of belonging. Therefore, to Kim the key to cultural identity is the communication

occurring between the individuals of the home and host culture, while for Dana the key is more about internalizing the traditions and values of the majority group.

Y. Y. Kim (2001) builds upon his definition of cultural identity with the definition of intercultural identity, an identity that is developed “after integration in the milieu of the host culture.” An individual begins to incorporate the values of the host culture and may either become ambivalent or loyal to it, similar to Dana’s model. Y. Y. Kim believes that an individual who has a successful adaptation will resolve “...inner stress that promotes qualitative transformation towards growth – greater maturity and psychic integration as well as an increased capacity to cope with varied environmental challenges.” Y. Y. Kim’s model of intercultural transformation examines how functional fitness (the ability of the individual to meet the demands of the environment), psychological health (amount of sadness, depression, mental and physical health problems related to overall functioning), and intercultural identity (e.g., the development of a new cultural identity after a period of enculturation) are results of communication processes. His model makes a valuable contribution by examining how the host culture facilitates or inhibits the communication process and, thus the identity, fitness, and psychological adjustment of the individual. However, it leaves no room for other factors such as family relationships that may impact cultural adaptability and psychological adjustment in sojourners and immigrants.

Ward (1996) postulated a model of the acculturation process for immigrants and sojourners. The theory suggests that there are variables at both the societal level (i.e., social factors, political factors, economic factors, and cultural factors) and the individual level (characteristics of the individual and the situation). Her model further suggests that the psychological adjustment of the individual is likely to be influenced not only by stress and coping responses but by how the situational and individual characteristics affect these

components. However, her model does not take into account how family variables impact later psychological adjustment.

Each of these models makes an interesting contribution in thinking about culture shock. However, each model holds an implicit assumption that individuals have a cultural home. TCKs are no different than sojourners in that the majority of sojourners return to the home culture, but the experience of reverse culture shock during a crucial developmental period without the support of the family in the host culture is unique to TCKs. And after returning “home” to a place one no longer knows, many individuals, children in particular, align more clearly with the construct of Cultural Homelessness.

Reverse Culture Shock

The additional challenge a TCK has in cross-cultural transitions over that of immigrants is the experience of reverse culture shock. In fact, an individual who lives cross-culturally finds it more difficult to adapt upon their return home (e.g., reverse culture shock) than upon arrival in the host country (Storti, 1997). Gaw (2000) notes that reverse culture shock is similar to the definition of culture shock. However, the emphasis is on the individual experience of returning to the country of origin and the re-acculturation that occurs after having lived abroad. This re-entry process manifests itself differently in each individual (Gaw, 2000). In fact, the routines, people and places may have evolved dramatically since the individual departed (Storti, 1997). An individual who experienced high reverse culture shock was more likely to have personal problems in their relationships and adjusting to the norms of their home country than an individual who had experienced lower levels of reverse culture shock (Gaw, 2000). Moreover, studies of sojourners suggest that many feel lonely, particularly women (Stone Feinstein & Ward, 1990), and report higher levels of anxiety and depression upon their return home than upon their arrival in their host country (Sahin, 1990). The “new” environment that has developed

in the culture of origin may be experienced as frustrating and confusing because the social cues he or she was accustomed to in the host culture are not the same as cues in the home culture, leading to anxiety and feelings of homelessness in both the culture of origin and the host culture (Storti, 1997).

Cultural Homelessness

Most parents in globally mobile families would likely define “home” as either the country of origin or the locale in which their immediate family lives. Often for the children of these families, the frequent moves and the disparity of straddling two cultures can lead to feelings of confusion regarding their identity and how they fit into society as a whole. Vivero and Jenkins (1999) described this notion as Cultural Homelessness.

Cultural Homelessness (CH) is defined as

Certain individuals of mixed ...cultural background living within a framework of experiences, feelings, and thoughts that do not belong to any single ...cultural reference group. They often share a sense of not being accepted as members of any existing group, and though they have a strong desire to go home, do not have a home base to which they can return (p.11).

The contrast between the different cultures’ values and traditions generally make it more difficult for the individual to feel accepted by, acclimated to, or included in any one particular culture (Vivero & Jenkins, 1999). Pollock (1989) cites characteristics that closely align with Vivero and Jenkins’s (1999) definition above. The construct of CH does not assume that an individual will return to the country or culture of origin, but rather that the individual was never fully rooted in one home culture from which to acculturate to a host culture (Vivero & Jenkins, 1999). Although individuals, especially transcultural children, may experience CH, TCKs are still part of a family system, and the norms, values, and traditions of these families will have an impact on future TCK development.

Family Factors in TCKs' Psychological Adjustment

Research demonstrates that the family of origin has profound impact for psychological development in childhood and adolescence. Though some studies suggest that families do not have a significant impact on psychological adjustment (Ketsetzis, Ryan, & Adams, 1998) unless abuse is present (Kamsner & McCabe, 2000), family health has been shown to be a significant predictor of later adjustment regardless of country or cultural home or generational status of immigrant families (Bopaiya & Prasad, 2004; Campbell, 1995; Campbell & Ewing, 1990; Chen et al., 2000; Dadds & Powell, 1991; Dancy & Handal, 1984; de Ross et al., 1999; Dmitrieva, Chen, Greenberger, & Gil-Rivas, 2004; Feinberg, Howe, Reiss, & Hetherington, 2000; Greenberger & Chen, 1996; Greenberger, Chen, Tally, & Dong, 2000; Halpern, 2004; Heras & Revilla, 1994; Jouriles et al., 1991; Kamsner & McCabe, 2000; Lau et al., 2002; Pettit & Bates, 1989; Piatt et al., 1993; Slee, 1996).

TCKs who reported experiencing acceptance from their parents, had understanding as to the why of family expectations, and psychological autonomy reported higher levels of subjective well-being than those who reported lower levels of subjective well-being (Joy, 2004). In addition, the closer and warmer children of missionary families felt their parents were across the life span (Grades K-6, Grades 7-12, college, and present time), the greater their sense of well-being (Andrews, 2004a). Father's warmth and closeness was found to be a significant predictor of overall well-being (Joy, 2004). In addition, family warmth is also associated with higher levels of self-esteem for this population (Wickstrom & Fleck, 1983). In addition, personality characteristics measured by the Cross-Cultural Adaptability Inventory were also found to be predictors of well-being. These predictors are Flexibility/Openness, Emotional Resilience and Personal Autonomy, Perceptual Acuity and Positive Regard for others (Joy, 2004). Though the majority of missionary kids reported it was easy to have fun with their families of origin, 55%

found it difficult to share personal feelings. Ninety-seven percent of this same sample reported they would still choose to be born an MK.

As TCKs are often migrating with their family, familial roles, expectations, characteristics, and relationships have implications for the TCK's psychological and cultural adjustment. Though some literature has examined the effects of culture shock and reverse culture shock on the TCK population (Berryhill, 1984; Bretsch, 1954; Clyde & Jones, 1987; Fray, 1988; Gaw, 2000; Gerner et al., 1992; Huff, 2001; Mays, 1990), the majority of the research has not examined the role of the family in the psychological adjustment and cultural adaptability of TCKs, save Mays's (1990), Huff's (2001), and Fray's (1988) studies. As TCKs are part of a family system, how the family approaches challenges, cultural adaptation, and the transition home may impact the TCKs overall ability to adapt transculturally and their psychological adjustment. The purpose of this section is to examine the effects of family functioning for TCKs.

The literature clearly demonstrates that family stress and family characteristics have an impact on the psychological functioning of the child through adulthood. As TCKs are raised in globally mobile families, they are likely to have unique stressors in comparison to their typical peers. Though children of military families are included in the definition of TCKs, not all children of parents who have served in the armed forces have lived internationally. In addition, members of the armed forces often live on military bases, even in international communities, potentially resulting in less exposure to the host culture. Previous research indicated that the stresses of military life (e.g., frequent moves, deployment of parents, etc.) for TCKs indicated a higher prevalence rate of psychopathology within children (McCubbin, Dahl, & Hunter, 1976); a more recent study's results suggest that parents reported minimal difficulties in overall functioning of their children and no differences between their children and children who were not part of the military system (Jensen et al., 1995). Other research on military families suggests

that the psychological adjustment of TCKs in military families was related to family cohesion and their self-report of how close the TCKs felt to their mothers (Kelley, Finkel, Kelley, & Ashby, 2003) and the parents' ability to handle the stress brought about by relocation (Pedersen & Sullivan, 1964).

In a study of U.S. Navy families, high levels of stress as measured by the Life Experiences Scale was negatively associated with the *FES* subscales of cohesiveness, expressiveness, and organization, and was positively related to familial conflict (Eastman, Archer, & Ball, 1990). In addition, the stress military families experience immediately after the deployment of a parent can have an impact on the TCKs current level of functioning, bringing on behavior problems such as anxiety, sleep disturbances, phobias, or an increase in physical ailments (W. Black, 1993; Hobfoll et al., 1991; Jensen, Grogan, Xenakis, & Bain, 1989). TCK boys whose fathers were deployed during the Persian Gulf Crisis were more likely to be labeled Dysthymic, but only immediately after the parent had left (Levai et al., 1994). Though the findings in the literature about the implications for TCKs in military families are somewhat inconsistent, it does appear that the stresses are somewhat unique to this population. Other children in globally mobile families were found to be more depressed than their peers, but the depressive symptoms lessened the longer they had been settled in one location (Orthner, Giddings, & Quinn, 1989).

However, studies with other globally mobile families have examined the characteristics that enable expatriate families to weather cross-cultural transitions successfully. Though less research has been conducted on how family variables affect cultural adjustment, the literature does clearly note that family adjustment is important in the longevity of the expatriate worker (J. S. Black & Mendenhall, 1990; Caligiuri, Hyland, Joshi, & Bross, 1998; Gregersen & Stroh, 1997; Palthe, 2004).

Family and Cultural Adjustment for Globally Mobile Families and Implications for TCKs

Family adjustment has been found to be highly correlated with the general adjustment of the expatriate worker (J. S. Black, 1990); if the family is well adjusted, the expatriate worker will be well adjusted too (Palthe, 2004). A study by Caligiuri, Hyland, Joshi, and Bross (1998) of globally mobile employees and their families on their ability to adapt cross-culturally found that family characteristics were related to cultural adaptability. Longitudinal data acquired utilized a pre-departure assessment and then collected data again six to nine months after the family had completed their cross-cultural transition. The study examined how family characteristics such as family communication, family adaptability, and family support as well as overall family adjustment affected the adjustment of the employee in the expatriate environment. Cross-cultural adjustment was related to the aforementioned family characteristics. In addition, families who had a positive perception of the family move had an easier adjustment than families who had a negative perception. Family adjustment mediates the relationship between family characteristics and expatriate employee adjustment (Caligiuri et al., 1998).

Other factors can also contribute to the child's experience. Kelley, Finkel and Ashby (2003) found that the longer children lived in the host country, the better friendships were reported to be. Furthermore, children whose mothers fostered warm relationships reported less loneliness. In expatriate families working in another culture, the employee's adjustment is predicted by his or her partner's adjustment to the host culture (J. S. Black & Gregersen, 1991; J. S. Black & Stephens, 1989; Caligiuri et al., 1998; Stroh, Dennis, & Cramer, 1994).

The family environment is likely to play a significant role in how the child relates to others. It appears that the effects of mobility can be tempered by overall family functioning. The mother's ability to prepare her children may buffer the effects of the cultural transition. Simon,

Cook, and Fritz (1990) have found that the more preparation the mother completed in coming to the United States, the less culture shock the child experienced. In a study of college-age TCKs ($N = 49$), there was no relationship between quality of parental attachment and reverse culture shock, but parental attachment was related to overall college adjustment (Huff, 2001). The researcher noted, however, that the limited sample size might have limited the power of the study, as the findings contradicted Fray's 1988 study which found that family cohesiveness and adaptability were related to reverse culture shock.

As TCKs are often not included as active participants in the decision making process concerning a transcultural move or in the choice of the vocation of their parents, the level of overall family cohesion, adaptability, and communication about the cross-cultural transition whether to or from the host culture, has a significant effect on the TCK's ability to adapt (Fray, 1988; Mays, 1990). Fray's study examined family health by utilizing the FACES III. Families' flexibility was measured by the family adaptation subscale, while cohesiveness was measured by the family cohesion scale. TCKs who reported their families as highly adaptable and with appropriate levels of cohesion experienced less reverse culture shock than TCKs who reported lower levels of familial health. Not surprisingly, flexibility has been acknowledged as one of the important variables for individuals who are transitioning cross-culturally (Van der Zee & Van Oudenhoven, 2000). Using the same measure, Mays found a small correlation ($r = -.27, p < .05$) between cohesion and reverse culture shock, but in contrast to Fray, did not find a statistically significant relationship between family adaptability and reverse culture shock. Mays further found that low levels of family communication were associated with higher levels of reverse culture shock.

Harvey (1985) theorized that because children often have a more passive role in expatriate families, they may develop resentment toward their parents, resulting in higher levels

of familial conflict. His work further suggests that communication is the key in minimizing the perceived consequences of the loss of home culture and significant people, and other challenges related to the cross-cultural transition.

Though families have an impact on future psychological functioning, for TCKs, factors such as culture shock and reverse culture shock must be examined in terms of overall functioning. Early theories of culture shock emphasized the psychological phenomenon the individual experienced when transitioning across cultures (Adler, 1975; Oberg, 1960). Culture shock is often measured currently by assessing levels of depression, anxiety, somatization, and loneliness (Searle & Ward, 1990; Stone Feinstein & Ward, 1990; Ward & Kennedy, 1992, 1993; Ward & Rana-Deuba, 1999). However, few studies have examined how family variables impact cultural adaptability and psychological adjustment, particularly for the TCK population.

Cultural and Psychological Adjustment of TCKs

Studies on TCKs have noted how transitioning across cultures can affect psychological development. TCKs' exposure to diversity, knowledge, and the demand placed on many TCKs to be independent at an early age (particularly if the parents choose to send them to boarding school) can often give the impression that they are "little adults." As a result, parents, teachers, and other caregivers may unintentionally neglect some of the child's basic needs as he or she moves into adolescence (Pollock & Van Reken, 2001). A study conducted in New Zealand found that TCKs reported having more social difficulties than national peers of the same age (Ward & Kennedy, 1993). Other studies have highlighted some of the challenges a TCK may experience such as lower self-esteem, greater fear about the future, less likely to be interdependent on their peers and experience increased levels of anxiety and depression (Gaw, 2000; Gerner et al., 1992; Pollock & Van Reken, 2001; Werkman et al., 1981; Wickstrom, 1978, 1988). Studies on international samples of TCKs have noted other difficulties. Japanese adolescents whose families

moved to a foreign culture for employment reported less positive feelings towards life in Japan, towards the people, the culture, and their own life upon return (Tamura & Furnham, 1993).

Turkish adolescents whose families left their home country to pursue work in Germany reported higher levels of depression and anxiety and lower levels of academic achievement than their peers who had resided in Turkey their whole lives (Sahin, 1990).

With little or no input in the family decision-making process, TCKs are taken to a host country, where they experience culture shock, proceed through acculturation, may experience reverse culture shock, and are likely to experience feeling culturally homeless. The purpose of this study is to examine how family factors influence the cultural adaptability and psychological adjustment of TCKs. It is expected that families who value communication, flexibility, and an appreciation of diverse cultures will ease the cultural transition, thus improving overall psychological functioning for the adult TCK.

The Present Study

As family of origin variables affect later psychological adjustment, the present study will explore how adult TCKs' family of origin psychological health influences current cultural adaptability and psychological functioning. Adult TCKs will rate their family of origin on levels of cohesion, conflict, control, expressiveness, interest in intellectual and cultural pursuits, and the moral and religious emphases within their families. Secondly, cultural adaptability will be measured in terms of empathy, flexibility, open-mindedness, emotional stability, and social initiative. Thirdly, the participants will rate themselves on their current level of psychological symptomology. Next, the relationship between family of origin psychological health and cultural adaptation will be examined; the association between family of origin psychological health and current level of psychological symptomology will also be examined. Mays (1990) and Fray (1988) both found that cohesion within the family influenced the ease of the cross-cultural

transitions for TCKs. Thus, the relationship between cultural adaptability and psychological symptomology will be examined. Lastly, a mediation model will be tested to ascertain if cross-cultural adaptation mediates the relationship between family of origin psychological health and current psychological adjustment.

The hypotheses are as follows:

For adults who spent at least 6 months of their childhood abroad between the ages of 5 and 18 (adult TCKs)

1. Family of Origin variables will be associated with better current cross-cultural adaptability.
 - i. High interest in intellectual and cultural pursuits in the family of origin will be associated with better current cross-cultural adaptation for adult TCKs.
 - ii. Cohesion in the family of origin will be related to better cross-cultural adaptation.
 - iii. High levels of Expressiveness will be associated with better cross-cultural adaptation in adult TCKs.
 - iv. Low levels of Conflict will be associated with better cross-cultural adaptation in adult TCKs.
 - v. Low levels of Control will be associated with better cross-cultural adaptation in adult TCKs.
2. Family variables will be associated with the Composite distress scores.
 - i. Low levels of Cohesion in the family of origin will be associated with higher levels of Composite distress in adult TCKs.
 - ii. High levels of Conflict in the family of origin will be associated with

- higher levels of Composite distress in adult TCKs.
 - iii. High levels of Control in the family of origin will be associated with higher levels of Composite distress in adult TCKs.
 - iv. Low levels of emotional Expression in the family of origin will be associated with higher levels of Composite distress in adult TCKs.
3. Higher levels of cross-cultural adaptation will be associated with lower levels of Composite distress.
- i. Empathy will be related to Composite distress.
 - ii. Open-Mindedness will be related to Composite distress.
 - iii. Flexibility will be related to Composite distress.
 - iv. Emotional Stability will be related to Composite distress.
 - v. Social Initiative will be related to Composite distress.
4. Family of origin psychological variables and current cross-cultural adaptation will predict the Composite score of distress in adult TCKs.
5. Cross-cultural adaptation will mediate the relationship between family of origin health variables and Composite distress in adult TCKs.

METHOD

Participants

An overall sample of 528 participants was recruited. However, two participants were dropped for being less than the age of 18, and 14 others were dropped due to incomplete data on one or more of the measures. The final sample consisted of 512 individuals ranging in age from 18 to 78 ($M = 42.87$; $SD = 14.80$), consisting of 316 women (61.71%) and 196 men (38.77%). Participants who reported that their parents worked for a Mission organization which took them overseas ($n = 151$, mean age = 31) comprised the smallest group, while adult children from Military families composed the largest ($n = 197$, mean age = 51). The rest of the sample ($n = 164$; mean age = 41) reported some other reason their family had an expatriate experience (e.g., international business, non-government organizations, etc.). The majority of the sample is married ($n = 305$; 57.4%) while 27.8% ($n = 147$) of the sample is single; the remaining 15% of the sample fell into other categories such as engaged, living with partner, separated, divorced, or widowed. Eighty-two percent of the population reported their race to be white ($n = 429$), 38 were Asian-American (7.3%), 10 reported their race to be black (1.9%), 26 reported their race to be Latin American (5%), one participant reported their race to be Pacific Islander (.02%), one reported their race as unknown (.02%), and seven reported their race as other (1.3%). All non-Caucasian participants were re-coded into one group coded as non-white ($n = 105$). Most of the participants had completed at least some college ($n = 367$; 90%) with 26.1% having completed less than a bachelor's degree ($n = 138$), 33.5% having completed a bachelor's degree ($n = 178$), 23.5% having completed a master's degree ($n = 124$), and 6.4% having completed their doctorate ($n = 34$); the remaining participants had a high school education or equivalent or less. For purpose of data analyses, participants were split into two categories: those who had some college education, high school education, GED, or did not complete high school, and those who had

completed a bachelor's degree or beyond. Participants averaged eight-and-a-half years abroad, and had moved four times on average. While abroad, participants resided in diverse parts of the world, such as Africa, Eastern and Western Europe, Asia (including Indonesia) and Latin America.

Measures

Demographic questionnaire.

In addition to the normal questions asked when trying to find out the basic characteristics of a sample such as age, gender, and marital status, this questionnaire also asked questions about countries where citizenship was held, parents' occupation, language spoken, number of moves, countries in which individual resided and levels of multicultural experience. Open-ended questions were coded thematically, while categorical variables were used in descriptive analyses.

The *Family Environment Scale* (FES; Moos & Moos, 1994), a 90-item measure, has 10 subscales that examine relationship dimensions within the family of origin (see Table 1 for alpha levels). Participants were asked to answer the questions retrospectively about the family of origin. Five of the subscales were used in the current analysis:

Cohesion, the extent to which family members are concerned and committed to the family and the degree to which they are helpful and supportive to each other. For the present study, $\alpha = .80$, $M = 6.70$, $SD = 2.39$. The mean for this sample differed significantly from the means in previous samples, $t(512) = 4.12$, $p \leq .001$. Example question: Family members really help and support one another.

Expressiveness, the extent to which family members are allowed and encouraged to act openly and to express their feelings directly ($\alpha = .73$), $M = 4.35$, $SD = 2.46$, $t(512) = 10.70$, $p \leq .05$. Example question: Family members usually keep feelings to themselves.

Conflict, the extent to which the open expression of anger and aggression and generally

conflictual interactions are characteristic of the family ($\alpha = .82$), $M = 2.90$, $SD = 2.58$, $t(512) = -11.48$, $p \leq .001$. Example question: We fight a lot in our family.

Intellectual-cultural orientation, the extent to which the family is concerned about political, social, intellectual and cultural activities ($\alpha = .48$), $M = 6.21$, $SD = 1.62$, $t(512) = 15.17$, $p \leq .000$. This scale was dropped due to its low reliability. Example question: We rarely go to lectures, plays, and concerts.

Control, how much set rules and procedures are used to run family life (e.g., how much family members are ordered around and how rules are followed in the family ($\alpha = .75$), $M = 6.21$, $SD = 1.62$, $t(511) = 8.77$, $p \leq .000$. Example question: family members are rarely ordered around.

Many researchers have found that reliability ($\alpha = .61 - .78$) for the scale constructs are adequate (Boyd, Gullone, Needleman, & Burt, 1997; Keung & Leung, 1990; Moos, 1990; Moos & Moos, 1994; Munet-Vilaro & Egan, 1990; Parnicky, Williams, & Silva, 1985; Waldron, Sabatelli, & Anderson, 1990), though studies with a smaller sample size (Loveland-Cherry, 1989), younger participants (Boyd et al., 1997), and more ethnic diversity within their sample (Roosa & Beals, 1990) have found lower reliabilities. Other researchers have suggested the inconsistent reliabilities may be due to the forced-choice true/false format (Sawin & Harrigan, 1995).

These scales have been shown to have adequate validity among both U.S. and international samples (Perosa & Perosa, 1990; Sawin & Harrigan, 1995); however, caution must be used in interpretation of some of the scales when assessing an international population, as cultural values vary. Thus, some of the scales developed in the United States may have little validity in other cultures (Ma & Leung, 1990; Saito, Nomura, Noguchi, & Tezuka, 1996).

However, this may be due to difficulties in translation, cultural differences in values, the use of

colloquial expressions in the United States that may not translate readily into other languages, or due to questions that are worded in the reverse direction which may be atypical in other languages (Munet-Vilaro & Egan, 1990).

The *Multicultural Personality Questionnaire* (MPQ) is a 91-item measure based on the NEO (Van der Zee & Van Oudenhoven, 2000, 2001). The NEO assesses the big 5 Factors of personality: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Though some questions might resemble or seem related to the NEO, the utility of this measure is the measurement of aspects of personality related to one's ability to transition, understand, and appreciate various cultures as it focuses on the adaptive end of the subscales first formulated in the MPQ. The MPQ was originally designed to measure cross-cultural adaptability of expatriate workers and was normed on a Dutch sample (Van der Zee & Van Oudenhoven, 2000). The MPQ's subscales provide information regarding the overall adjustment and adaptation as the individual transitions between cultures. In addition, it has been shown to assess some intercultural personality dimensions not tapped by conventional personality measures. Van der Zee, Van Oudenhoven and de Grijis (2004) found that individuals who scored highly on the MPQ appraised stressful intercultural situations more positively than did individuals who scored lower on the MPQ. Another benefit of the MPQ over the NEO is that it examines with more specificity those aspects of personality that are related to the ability to transition cross-culturally, and the effectiveness of those subscales. The measure was translated into English and is at a 6th grade reading level.

Similar to the NEO, the MPQ has 5 domains it examines in determining cross-cultural adaptability of workers (see Table 1 for Alphas): *Cultural Empathy*, the ability to empathize with the feelings, thoughts, and behaviors of individuals from a different cultural background versus an inability to do so (Example question - pay attention to the emotions of others), ($\alpha = .87$), $M =$

4.08, $SD = .47$, $t(512) = 10.70$, $p \leq .000$; *Open-mindedness*, an open and non-discriminatory attitude toward groups different than your own (Example question – I like to get involved in other cultures), ($\alpha = .87$), $M = 4.01$, $SD = .49$, $t(512) = 4.80$, $p \leq .000$; *Emotional Stability*, ability to control emotions when in anxiety-provoking situations (Example question - I worry easily), ($\alpha = .86$), $M = 3.35$, $SD = .53$, $t(512) = -5.44$, $p \leq .001$; *Social Initiative*, approach new social settings in action-oriented ways (Example question - I find it easy to make contact with other people) , ($\alpha = .90$), $M = 3.68$, $SD = .51$, $t(512) = -3.22$, $p \leq .01$; *Flexibility* ($\alpha = .84$), a tendency to view novel situations as a challenge and ability to adapt in an effective way to new experiences (Example question - I enjoy unfamiliar experiences), $M = 3.36$, $SD = .51$, $t(512) = 3.26$, $p \leq .01$. Previous research on the MPQ has noted reliabilities that range from .60 as the lowest for *Open-mindedness* with .91 as the highest for *Social Initiative* and *Emotional Stability* (Leone, Van der Zee, Van Oudenhoven, Perugini, & Ercolani, 2005; Van der Zee & Van Oudenhoven, 2000, 2001; Van Oudenhoven, Mol, & Van der Zee, 2003; Van Oudenhoven & Van der Zee, 2002). See Table 1 for alphas for the present study, which ranged from .80 - .90.

Four subscales of the *SCL-90* (Derogatis, Lipman, & Covi, 1973 – see article for scale items) were used to measure Composite distress (See Table 1 for Alphas): *Anxiety* ($\alpha = .91$), $M = 1.69$, $SD = .61$, $t(510) = 45.40$, $p \leq .001$, *Depression* ($\alpha = .91$), $M = 1.83$, $SD = .62$, $t(510) = 36.55$, $p \leq .001$. *Somatization* ($\alpha = .91$), $M = 1.67$, $SD = .59$, $t(510) = 44.66$, $p \leq .001$, and *Interpersonal Sensitivity* ($\alpha = .88$), $M = 1.67$, $SD = .59$, $t(510) = 42.25$, $p \leq .001$ (Scale definitions from: Derogatis, Lipman, & Covi, 1973; Derogatis, Lipman, Rickels, Uhlenhuth, & Cori, 1974; Lipman, Covi, & Shapiro, 1979). These subscales have demonstrated adequate reliability across cultures and ethnic groups with alphas ranging from .77 – .90. (Bonicatto, Dew, Soria, & Seghezso, 1997; Hoffman et al., 2006; Martinez, Stillerman, & Waldo, 2005; Noh & Avison, 1992). These dimensions were used to assess participants overall Composite distress in

adulthood. As the four SCL-90 subscales (*Anxiety, Depression, Somatization, and Interpersonal Sensitivity*) used were highly correlated with one another, a total measure titled composite symptoms was computed and used in final analyses.

Procedure

The present data were collected as part of a larger survey on family mobility. A computer program entitled Zope was used as the platform for Q-survey – the program which was used to collect data. Adults who lived in a culture different from their country or culture of origin between the ages of twelve and eighteen for a period greater than 6 months were recruited through flyers, word of mouth, alumni of religious organizations who have served overseas, and alumni or retirees of organizations affiliated with transcultural individuals (e.g., military families, diplomat families, etc.) as well as through online communities (e.g., Facebook, Military Brats Online, etc.). The advertisement was as follows:

Have you lived part of your childhood or adolescence in a foreign country?

If you lived 2 years outside the home culture of your parents before reaching the age of 18, please consider participating in a study addressing the complexities of being raised cross-culturally. You will have the opportunity to win one of eight \$50 dollar gift certificates from Amazon.com.

To complete the online survey, please go to

<https://web2survey.unt.edu/users/rch0067/ACCE/>

User name: user1

Password: user1

NOTE: Login and password are case-sensitive.

Feel free to forward this email to others who have lived overseas during

their childhood or adolescence.

If you would like to receive a copy of the results of this study, please contact either myself or Raquel at the e-mail below.

Participants completed an online web-survey lasting approximately one hour. Participants were given a secure log-in to access the web-survey. Participants were asked to certify that they were over the age of 18 and had spent at least 2 years during the ages of six to eighteen in a country other than their parents home country (see Appendix A). The survey included an extensive background questionnaire examining demographic characteristics of both the individual and the family. Upon completion of the survey, participants were entered in a lottery to win \$50 gift certificates to Amazon.com. Interestingly, only 39% of the individuals who completed the survey entered the drawing for the gift certificates. Though this could be a survey design artifact in that participants were asked to log-in to their own e-mail accounts in order to enter their name in the drawing for the gift certificate, it may also indicate that participants are more enthusiastic about the uniqueness of their life story being heard and understood than they are concerned with remuneration for completing the survey.

Data Analysis Plan

Descriptive Analyses

First, descriptive statistics (range of values, mean, standard deviation, standard error of measurement, skewness, kurtosis) on all continuous variables were examined. The following variables were used as categorizations in exploratory analyses with the outcome measure of Composite distress: gender, marital status; *ANOVAs* were executed to determine if there are significant gender differences or differences in family occupation on the *Family Environment Scale*, the *Multicultural Personality Questionnaire*, or the *SCL-90*. Next, correlations were run on age, and the relationships among the subscales of each measure (i.e., FES, MPQ, and SCL-

90) were examined using the Pearson's product moment correlation coefficient. Correlations across subscales were run to determine if any of the measures were confounded.

Hypotheses Tests. The following hypotheses will be tested.

1. Family of Origin variables will be associated with better current cross-cultural adaptability. These hypotheses will be tested using the Pearson's product moment correlation coefficient.
 - a. High interest in intellectual and cultural pursuits in the family of origin will be associated with better current cross-cultural adaptation for adult TCKs.
 - b. Cohesion in the family of origin will be related to better cross-cultural adaptation.
 - c. High levels of expressiveness will be associated with better cross-cultural adaptation in adult TCKs.
 - d. Low levels of conflict will be associated with better cross-cultural adaptation in adult TCKs.
 - e. Low levels of control will be associated with better cross-cultural adaptation in adult TCKs.
2. Family variables will be associated with the Composite distress scores. These hypotheses will be tested using the Pearson's product moment correlation coefficient.
 - a. Low levels of *Cohesion* in the family of origin will be associated with higher levels of *Composite* distress in adult TCKs.
 - b. High levels of *Conflict* in the family of origin will be associated with higher levels of *Composite* distress in adult TCKs.
 - c. High levels of *Control* in the family of origin will be associated with higher levels of *Composite* distress in adult TCKs.
 - d. Low levels of emotional *Expression* in the family of origin will be associated with

higher levels of *Composite* distress in adult TCKs.

3. Higher levels of cross-cultural adaptation will be associated with lower levels of *Composite* distress. These hypotheses will be tested using the Pearson's product moment correlation coefficient.
 - a. *Empathy* will be related to *Composite* distress.
 - b. *Open-mindedness* will be related to *Composite* distress.
 - c. *Flexibility* will be related to *Composite* distress.
 - d. *Emotional Stability* will be related to *Composite* distress.
 - e. *Social Initiative* will be related to *Composite* distress.
4. Family of origin psychological variables and current cross-cultural adaptation will predict levels of *Composite* distress in adult TCKs. Multiple regression will be used to test this model.
5. Cross-cultural adaptation will mediate the relationship between family of origin health variables and *Composite* distress in adult TCKs. Mediation will be tested following Baron & Kenny's 1986 model. The association between family of origin health and later *Composite* distress will be mediated by cross-cultural in adult TCKs. It is predicted that current cross-cultural adaptation will mediate the relationship between the family of origin environment and *Composite* distress in adulthood. First, the relationship between family of origin variables and psychological symptomology will be examined. If there is a correlation, then I will proceed to step 2 which is examining whether family of origin variables is correlated with cross-cultural adaptation. Next, the relationship between cross-cultural adaptation and current *Composite* scores will be examined. Lastly, the regressions between family of origin variables and cross-cultural adaptation jointly on the current *Composite* score will be examined. If there is no predictive value in these

regressions per Baron & Kenny's conditions, the test for mediation will not be completed.

RESULTS

Preliminary Analyses

Preliminary analyses were conducted to assess the relationships between the demographic variables (see Table 2). Caucasian participants in this study were older than non-Caucasian, $r = -.11$, $p \leq .05$, but were more likely to be married, $r = .44$, $p \leq .01$, and have completed higher levels of education, $r = .27$, $p \leq .01$. Race had a small negative association with marital status, $r = -.15$, $p \leq .01$. Women had lower levels of education than their male counterparts, $r = -.09$, $p \leq .05$, and were less likely to be married, $r = -.11$, $p \leq .01$. Married individuals were more likely to have higher levels of education, $r = .21$, $p \leq .01$.

Preliminary analyses were also conducted to determine the construct validity of each of the subscales within the larger measures (see Table 3). For the *Family Environment Scale* (FES), *Cohesion* had a large association with *Expression*, $r = .53$, $p \leq .01$, a large negative relationship with *Conflict*, $r = -.50$, $p \leq .01$, and a small negative association with *Control*, $r = -.26$, $p \leq .01$. *Expression* was negatively related to *Conflict*, $r = -.23$, $p \leq .01$ at a moderate level, had a medium, positive relationship with *Intellectual-Cultural Orientation*, $r = .33$, $p \leq .01$, and a large, negative association with *Control*, $r = -.51$, $p \leq .01$. *Conflict* had a small, negative association with *Intellectual-Cultural Orientation*, $r = -.15$, $p \leq .01$, but a positive, moderate relationship with *Control*, $r = .29$, $p \leq .01$. *Intellectual-Cultural Orientation* was negatively related to *Control*, $r = -.13$, $p \leq .01$.

For the *Multicultural Personality Questionnaire* (MPQ), *Empathy* had a large, positive relationship with *Open-Mindedness*, $r = .66$, $p \leq .01$, a moderate relationship with *Social Initiative*, $r = .41$, $p \leq .01$, and *Flexibility*, $r = .31$, $p \leq .01$, and was positively associated with *Emotional Stability*, $r = .13$, $p \leq .01$. *Open-mindedness* was found to have a moderate correlation with *Social Initiative*, $r = .46$, $p \leq .01$, a large association with *Flexibility*, $r = .52$, $p \leq .01$, and a

small association with *Emotional Stability*, $r = .22, p \leq .01$. *Social Initiative* was positively related to both *Flexibility*, $r = .44, p \leq .01$, and *Emotional Stability*, $r = .53, p \leq .01$, and *Flexibility* was positively associated with *Emotional Stability*, $r = .37, p \leq .01$.

The last set of subscales comes from the SCL-90. As noted below, the subscales were so highly related to one another that they were collapsed into one scale entitled the Composite score. Correlations between the subscales are as follows. *Somatization* was positively related to all of the other subscales at $p \leq .01$: *Interpersonal Sensitivity* ($r = .65$), *Anxiety* ($r = .82$), *Depression* ($r = .72$), and the *Composite Score* ($r = .88$). *Interpersonal Sensitivity* was positively related to the following subscales at $p \leq .01$: *Anxiety* ($r = .78$), *Depression* ($r = .87$), and the *Composite* score at ($r = .89$). *Anxiety* was positively associated with *Depression* ($r = .83$) and *Composite Symptoms* ($r = .93$) at $p \leq .01$, and *Depression* had a large, positive association with overall *Composite Symptoms* at $r = .94, p \leq .01$.

MANOVAS were conducted to determine if there were demographic group differences on the categorical variables. Due to the large sample size which increases power, it is likely that significant differences will be found, and may impact power. When examining gender differences on the Family Environment Subscales (see Table 4), the overall *MANOVA* was non-significant, $\Lambda = .99, F(5, 506) = 1.43, p = .21$, thus, the individual *ANOVAs* will not be reported in the text.

For the *Multicultural Personality Questionnaire*, the overall *MANOVA* was significant for gender at $\Lambda = .84, F(5, 506) = 20.08, p \leq .001, \eta^2 = .17$. Women scored higher than men on *Empathy*, $F(1, 511) = 28.48, p \leq .001, \eta^2 = .05$, but men's scores were higher on *Emotional Stability* than women's scores, $F(1, 511) = 37.61, p \leq .001, \eta^2 = .07$. There were no gender differences on *Open-mindedness*, $F(1, 511) = .02, p = .90, \eta^2 = .00$, *Social Initiative*, $F(1, 511) = 1.35, p = .25, \eta^2 = .00$, and *Flexibility*, $F(1, 511) = 2.46, p = .12, \eta^2 = .01$.

Gender differences examined using a *MANOVA* for the *SCL-90* and the composite scores were also statistically significant, $\Lambda = .94$, $F(5, 505) = 6.04$, $p \leq .001$, $\eta^2 = .06$. Men (coded as 1's) scored lower than women (coded as 2's) on each of the subscales and the collapsed score of level of symptoms reported: *Somatization*, $F(1, 509) = 16.74$, $p \leq .001$, $\eta^2 = .03$, *Interpersonal Sensitivity*, $F(1, 509) = 15.45$, $p \leq .001$, $\eta^2 = .03$, *Anxiety*, $F(1, 509) = 15.09$, $p \leq .001$, $\eta^2 = .03$, *Depression*, $F(1, 509) = 26.23$, $p \leq .001$, $\eta^2 = .05$, and *Composite Symptoms*, $F(1, 509) = 21.96$, $p \leq .001$, $\eta^2 = .04$.

Race differences were examined on the different measures next (see Table 5). As the ratio of Caucasians (coded as 1's) to non-Caucasians (coded as 2's) is more than four to one, the discrepancies in the populations may bias the significance test. *MANOVA* results indicated that Caucasians did not differ from Non-Caucasians on the *FES*, $\Lambda = 1.00$, $F(5, 506) = .38$, $p = .87$, thus the *ANOVAS* will not be reported in the text. However, on the *MPQ*, the *MANOVA* was significant for race at $\Lambda = .98$, $F(5, 507) = 2.24$, $p \leq .05$, $\eta^2 = .02$, with Caucasians scoring higher than Non-Caucasians on *Flexibility*, $F(1, 511) = 6.53$, $p \leq .01$, $\eta^2 = .01$, and *Emotional Stability*, $F(1, 511) = 4.61$, $p \leq .03$, $\eta^2 = .01$. Scores did not differ by race on the remaining scales of *Empathy*, *Open-Mindedness*, and *Social Initiative*. Caucasians scored lower than Non-Caucasians on the *SCL-90*, $\Lambda = .97$, $F(5, 505) = 2.72$, $p \leq .01$, $\eta^2 = .03$. The subscale differences are as follows: *Somatization*, $F(1, 509) = 9.97$, $p \leq .01$, $\eta^2 = .02$, *Interpersonal Sensitivity*, $F(1, 509) = 5.17$, $p \leq .05$, $\eta^2 = .01$, *Anxiety*, $F(1, 509) = 12.62$, $p \leq .001$, $\eta^2 = .02$, *Depression*, $F(1, 509) = 6.23$, $p \leq .01$, $\eta^2 = .01$, and the *Composite Score*, $F(1, 509) = 9.78$, $p \leq .01$, $\eta^2 = .02$.

Next, differences in marital status were assessed with a *MANOVA* for each measure (See Table 6 for Means and Standard Deviations). Participants were divided into two categories, non-married (coded as 1's) or married (coded as 2's). Results of the *MANOVA* indicated that married individuals scored significantly differently than non-married individuals on the *FES*

scales, $\Lambda = .96$, $F(5, 506) = 3.93$, $p \leq .01$, $\eta^2 = .04$. Non-married individuals scored higher than married individuals on *Conflict*, $F(1, 510) = 5.92$, $p \leq .05$, $\eta^2 = .01$, and *Control*, $F(1, 510) = 6.36$, $p \leq .01$, $\eta^2 = .01$. No differences were found on marital status on the other *Family Environment Scales: Cohesion, Expression, and Intellectual-Cultural Orientation*.

Another MANOVA found that married versus non-married individuals also differed on the MPQ scales, $\Lambda = .91$, $F(5, 507) = 10.22$, $p \leq .001$, $\eta^2 = .09$. Non-married individuals scored higher than married individuals on *Empathy* $F(1, 511) = 4.27$, $p \leq .05$, $\eta^2 = .00$, *Open-Mindedness* $F(1, 511) = 11.35$, $p \leq .01$, $\eta^2 = .02$, and *Flexibility* $F(1, 511) = 6.32$, $p \leq .01$, $\eta^2 = .01$. Married individuals scored higher than non-married individuals on *Social Initiative* $F(1, 511) = 8.59$, $p \leq .01$, $\eta^2 = .02$ and *Emotional Stability* $F(1, 511) = 11.06$, $p \leq .01$, $\eta^2 = .02$.

In the third MANOVA for marital status, married individuals scored lower on each subscale of the SCL-90 and the overall Composite score than non-married individuals, $\Lambda = .91$, $F(5, 507) = 9.87$, $p \leq .001$: *Somatization* $F(1, 511) = 11.82$, $p \leq .01$, *Interpersonal Sensitivity* $F(1, 511) = 39.34$, $p \leq .001$, *Anxiety* $F(1, 511) = 32.73$, $p \leq .01$, *Depression* $F(1, 511) = 33.47$, $p \leq .01$, and the *Composite* score $F(1, 511) = 34.00$, $p \leq .01$.

The last sets of *MANOVAs* were conducted to determine differences between types of industry that took the adult child's family overseas on each measure's subscales (See Table 7). Tukey's HSD was used as the post-hoc test to determine group differences. Statistically significant differences were found on the FES subscales, $\Lambda = .83$, $F(10, 1010) = 9.95$, $p \leq .001$, $\eta^2 = .09$. Missionary families scored higher than both military families and other families on *Expression*; Military families scored significantly lower than both Missionary families and Other families on *Expression*, $F(2, 509) = 5.46$, $p \leq .01$, $\eta^2 = .02$. Furthermore, military families scored significantly higher on *Control* than did both missionary families and families in the other category, $F(2, 509) = 42.76$, $p \leq .001$, $\eta^2 = .14$. No differences were found on *Cohesion*,

Conflict, and Intellectual-Cultural Orientation.

In the second MANOVA of this set, statistically significant differences were also found on the MPQ by type of industry, $\Lambda = .87$, $F(10, 1012) = 7.23$, $p \leq .001$, $\eta^2 = .07$. Tukey's HSD was used as the post-hoc test to determine group differences. All groups differed significantly from each other on *Social Initiative*, $F(2, 510) = 13.18$, $p \leq .001$, $\eta^2 = .05$, and *Emotional Stability*, $F(2, 510) = 9.20$, $p \leq .001$, $\eta^2 = .04$. No group differences were found on *Empathy*, *Open-Mindedness*, and *Flexibility*.

Lastly, group differences were examined by industry on the subscales of the SCL-90 as well as the composite score; the MANOVA equation is as follows: $\Lambda = .87$, $F(10, 1012) = 2.88$, $p \leq .001$, $\eta^2 = .03$. Tukey's HSD was used as the post-hoc test to determine group differences. On *Interpersonal Sensitivity*, all groups scored significantly differently from each other with the Missions group scoring highest, and the Military group scoring lowest, $F(2, 508) = 8.39$, $p \leq .01$, $\eta^2 = .03$. A similar pattern was found on both the *Depression* $F(2, 508) = 6.85$, $p \leq .01$, $\eta^2 = .03$, and *Composite Scales*, $F(2, 508) = 4.74$, $p \leq .01$, $\eta^2 = .02$ as well as *Anxiety* at $F(2, 508) = 3.25$, $p \leq .05$, $\eta^2 = .01$.

Associations of Demographics with Scales

Pearson and point biserial correlations were run to see the relationships between the demographic variables (i.e., age, gender, race, marital status, and educational level) and the subscales of the three measures beginning with the FES (See Table 8). Race, marital status, and educational level were dichotomized as mentioned previously in the method. Although these associations were previously presented as *t* – tests, translation into correlation form allows more direct interpretation and comparison of explained variance. Older adults reported less freedom to use *Emotional* expression in their families of origin ($r = -.20$, $p \leq .001$) and reported higher levels of *Control* ($r = .25$, $p \leq .001$). Gender and race were not related to any of the sub-scales of

the FES, but trending occurred as unmarried individuals reported higher levels of *Conflict* in their families of origin ($r = -.11, p \leq .05$), and higher levels of *Control* ($r = .11, p \leq .05$).

Educational level was not associated with any subscales on the FES.

For the MPQ, age was trending with two of the subscales with older adults reporting lower levels of *Empathy* ($r = -.09, p \leq .05$), and *Open-Mindedness* ($r = -.09, p \leq .05$), reporting higher levels of *Social Initiative* ($r = .19, p \leq .001$), lower levels of *Flexibility* ($r = -.15, p \leq .001$), and higher levels of *Emotional Stability* ($r = .29, p \leq .001$). Women scored higher than men on *Empathy* ($r = .23, p \leq .001$) while men scored higher on *Emotional Stability* than women ($r = -.26, p \leq .001$). Married individuals reported lower levels of *Open-Mindedness* ($r = -.15, p \leq .001$), and higher levels of *Emotional Stability* ($r = .15, p \leq .001$). Educational level was not associated with any of the MPQ subscales. All of the demographic variables were significantly related to each subscale of the SCL-90, as well as the overall *Composite* score. Women scored higher than men on each of the SCL-90 subscales, *Somatization* ($r = .18, p \leq .001$), *Interpersonal Sensitivity* ($r = .17, p \leq .001$), *Anxiety* ($r = .17, p \leq .001$), *Depression* ($r = .22, p \leq .001$), and *Composite* score ($r = .20, p \leq .001$). Furthermore, Non-Caucasians scored higher on Caucasians on a measure of *Anxiety* ($r = .16, p \leq .001$). Nonmarried individuals scored higher than married individuals on all measures of the SCL-90: *Somatization* ($r = -.15, p \leq .001$), *Interpersonal Sensitivity* ($r = -.27, p \leq .001$), *Anxiety* ($r = -.25, p \leq .001$), *Depression* ($r = -.25, p \leq .001$), and *Composite* score ($r = -.25, p \leq .001$).

Preliminary Steps for Testing Mediation

Pearson's product moment correlations were run among the FES, MPQ, and SCL-90 to determine relationships among each of the subscales (See Table 9). *Cohesion* was found to be negatively associated with all the sub-scales of the SCL-90: *Somatization* ($r = -.19, p \leq .001$), *Interpersonal Sensitivity* ($r = -.28, p \leq .001$), *Anxiety* ($r = -.22, p \leq .001$), *Depression* ($r = -.27, p$

$\leq .001$), and overall *Composite Score* ($r = -.27, p \leq .001$). *Expression* had no relationship with *Somatization* ($r = -.08, p = .06$), but was negatively correlated with *Interpersonal Sensitivity* ($r = -.19, p \leq .001$), *Anxiety* ($r = -.14, p \leq .001$), *Depression* ($r = -.16, p \leq .001$), and the *Composite Score* ($r = -.15, p \leq .001$). *Conflict* was positively associated with all the SCL-90 subscales, *Somatization* ($r = .20, p \leq .001$), *Interpersonal Sensitivity* ($r = .23, p \leq .001$), *Anxiety* ($r = .21, p \leq .001$), *Depression* ($r = .24, p \leq .001$), and the *Composite Score* ($r = .24, p \leq .001$). *Control* was not associated with any of the subscales of the SCL-90.

For the MPQ, *Empathy* had a negative relationship with *Interpersonal Sensitivity* ($r = -.10, p \leq .05$). *Social Initiative* was found to be negatively related to all the subscales of the SCL-90, *Somatization* ($r = -.27, p \leq .001$), *Interpersonal Sensitivity* ($r = -.48, p \leq .001$), *Anxiety* ($r = -.29, p \leq .001$), *Depression* ($r = -.38, p \leq .001$), and the *Composite Score* ($r = -.39, p \leq .001$). *Flexibility* was also found to be negatively related to all the sub-scales of the SCL-90, *Somatization* ($r = -.21, p \leq .001$), *Interpersonal Sensitivity* ($r = -.26, p \leq .001$), *Anxiety* ($r = -.13, p \leq .01$), *Depression* ($r = -.20, p \leq .001$), and the *Composite Score* ($r = -.22, p \leq .001$). *Emotional Stability* was also found to be negatively associated with each of the SCL-90 subscales: *Somatization* ($r = -.46, p \leq .001$), *Interpersonal Sensitivity* ($r = -.67, p \leq .001$), *Anxiety* ($r = -.58, p \leq .001$), *Depression* ($r = -.69, p \leq .001$), and the *Composite Score* ($r = -.66, p \leq .001$). *Open-Mindedness* was negatively related to *Interpersonal Sensitivity* ($r = -.09, p \leq .01$). The FES scales were then correlated with the MPQ. *Cohesion* was positively related to most of the subscales of the MPQ, *Social Initiative* ($r = .14, p \leq .001$), *Flexibility* ($r = .15, p \leq .001$), *Emotional Stability* ($r = .27, p \leq .001$), and *Open-Mindedness* ($r = .11, p \leq .001$). *Expression* was also found to have positive associations with each of the MPQ subscales, *Empathy* ($r = .15, p \leq .001$), *Social Initiative* ($r = .10, p \leq .05$), *Flexibility* ($r = .19, p \leq .001$), *Emotional Stability* ($r = .17, p \leq .001$), and *Open-Mindedness* ($r = .17, p \leq .001$). *Conflict* was negatively associated with

Emotional Stability ($r = -.22, p \leq .001$). *Control* was found to be negatively associated with *Flexibility* ($r = -.19, p \leq .01$).

Hypotheses Tests

The following hypotheses were tested.

1. Family of Origin variables will be associated with better current cross-cultural adaptability. These hypotheses were tested using the Pearson's product moment correlation coefficient. In order to be statistically significant, the significance level must be $p = .003$ or less.
 - a. High interest in intellectual and cultural pursuits in the family of origin will be associated with better current cross-cultural adaptation for adult TCKs. This hypothesis was dropped due to low reliability of the subscale.
 - b. *Cohesion* in the family of origin was related to better cross-cultural adaptation.

Cohesion with

Social Initiative ($r = .14, p \leq .001$)

Flexibility ($r = .15, p \leq .001$)

Emotional Stability ($r = .27, p \leq .001$)

- c. High levels of *Expressiveness* were associated with better cross-cultural adaptation in adult TCKs.

Expression

Empathy ($r = .15, p \leq .001$)

Flexibility ($r = .19, p \leq .001$)

Emotional Stability ($r = .17, p \leq .001$)

Open-mindedness ($r = .17, p \leq .001$)

- d. Low levels of *Conflict* were associated with better cross-cultural adaptation in

adult TCKs for just one of the subscales, *Emotional Stability*.

Conflict

Emotional Stability ($r = -.22, p \leq .001$)

- e. Low levels of *Control* were associated with better cross-cultural adaptation in adult TCKs only for *Flexibility*.

Control

Flexibility ($r = -.19, p \leq .001$)

- 2. Family variables were associated with the *Composite* distress score. These hypotheses were tested using the Pearson's product moment correlation coefficient. In order to be statistically significant, the significance level must be $p = .003$ or less.
 - a. Low levels of *Cohesion* in the family of origin were associated with higher levels of *Composite* distress in adult TCKs. Hypothesis was supported; *Cohesion* was found to have a moderate negative correlation with the *Composite* Score from the SCL-90 as predicted ($r = -.27, p < .001$).
 - b. High levels of *Conflict* in the family of origin were associated with higher levels of *Composite* distress in adult TCKs. This hypothesis was supported. *Conflict* and the *Composite* score on the SCL-90 were significantly associated ($r = .24, p < .001$).
 - c. High levels of *Control* in the family of origin were not associated with higher levels of *Composite* distress in adult TCKs. This hypothesis was not supported as *Control* and *Composite* distress from the compilation of the subscales on the SCL-90 were not associated with each other ($r = .03, p = .69$).
 - d. Low levels of emotional *Expression* in the family of origin were associated with higher levels of *Composite* distress in adult TCKs. This hypothesis was supported

with a small, but statistically significant correlation ($r = -.15, p < .001$).

3. Higher levels of cross-cultural adaptation were associated with lower levels of *Composite* distress. These hypotheses were tested using the Pearson's product moment correlation coefficient. In order to be statistically significant, the significance level must be $p = .003$ or less.
 - a. *Empathy* was not related to *Composite* distress, ($r = -.02, p = .64$).
 - b. *Open-Mindedness* was not related to *Composite* distress, ($r = -.03, p = .44$).
 - c. *Flexibility* was related to *Composite* distress, ($r = -.22, p \leq .001$).
 - d. *Emotional Stability* was related to *Composite* distress, ($r = -.66, p \leq .001$).
 - e. *Social Initiative* was related to *Composite* distress ($r = -.39, p \leq .01$).
4. Family of origin variables and current cross-cultural adaptation will predict levels of the *Composite* distress score in adult TCKs. Multiple regression will be used to test this model. An omnibus regression test supported this hypothesis, $F(14, 493) = 35.61, Adj. R^2 = .49, p \leq .001$. (See Table 10).
5. Cross-cultural adaptation will mediate the relationship between family of origin health variables and the *Composite* distress score in adult TCKs. Mediation was tested following Baron and Kenny's 1986 model. The predictive relationship between family of origin health and the *Composite* score was to be mediated by cross-cultural adaptation in adult TCKs. It was predicted that current cross-cultural adaptation will mediate the relationship between the family of origin environment and the *Composite* distress score in adulthood. First, the predictive value family of origin variables of cross-cultural adaptability was examined. See Table 11. The equations are as follows:

The *Family Environment Scale* is predictive of

$$Empathy, F(9, 500) = 6.06, p \leq .001$$

Open-mindedness, $F(9, 500) = 3.84, p \leq .001$

Social Initiative, $F(9, 500) = 6.15, p \leq .001$

Flexibility, $F(9, 500) = 6.12, p \leq .001$

Emotional Stability, $F(9, 500) = 17.54, p \leq .001$

As this regression was statistically significant, I proceeded to step 2 which is examining whether family of origin variables predicted the *Composite* score derived from the SCL-90. The FES scales of *Cohesion* and *Conflict* were predictive of the overall *Composite* score from the SCL-90 at $F(4, 298) = 14.64, p \leq .001$.

Lastly, the third condition as stated by Baron and Kenny was addressed. A multiple regression will be run to determine the predictive value of cross-cultural adaptation on the Composite score of the SCL-90. See Tables 13. *Open-Mindedness*, *Social Initiative*, and *Emotional Stability* of the MPQ subscales were predictive of the overall *Composite* score, $F(10, 498) = 47.19, p \leq .001$. Please see text to follow for further explanation for regressions that were run.

Multiple Regression

An omnibus regression was computed to determine if family variables and variables associated with good cross-cultural adaptation were predictive of the *Composite* score of psychological symptoms (See Table 10). The test would provide more distinct information about which variables have the strongest contribution before testing the overall mediation models. First, the demographic variables were entered as covariates in Step 1 (i.e., age, gender, race, education, and marital status), $F(5, 502) = 14.75, Adj. R^2 = .12, p \leq .001$. In Step 2, the *Family Environment Scales* of *Cohesion*, *Expression*, *Conflict*, and *Control* were entered, $F(9, 498) = 14.64, Adj. R^2 = .20, p \leq .01$. The *Multicultural Personality Questionnaire* subscales were then entered as the final step in the equation, *Empathy*, *Social Initiative*, *Flexibility*, *Emotional*

Stability, and *Open-Mindedness*, $F(14, 493) = 35.61$, $Adj. R^2 = .49$, $p \leq .001$. Each step in the model accounted for additional variance in the criterion variable – *Composite* distress score, with *Emotional Stability* having the largest contribution as an additional 25% of the variance with a final β of $-.57$, $p \leq .001$.

The mediation model presented in Baron and Kenny (1986) was used to test mediation. The next set of regression equations was designed to test the conditions specified in Baron and Kenny's model, namely that the independent variable (subscales of the FES) must be related to the mediator (subscales of the MPQ), the independent variable must be related to the dependent variable (Composite distress score), and the mediator (the MPQ subscales) must affect the dependent variable (Composite distress score). The FES subscales and the MPQ subscales were entered as blocks in the hierarchical regression, while using adjusted R^2 to explain the variance accounted for by the next block of subscales (in this case, the MPQ) entered in the equation. This allows the researcher to see the big picture if predicting the use of this as a predictive model. However, as some of the subscales are highly related to each other, including a high correlation between the *Emotional Stability* scale and the *Composite* Score of the SCL-90, some of the uniqueness of the individual predictors might have been lost. Since the block design was used, significant β 's describe the most powerful predictors in the block. In the following sections, the regression analyses will be presented, then a checklist for mediation as presented in Frazier, Tix, and Barron (2004) will be addressed in terms of this model before presenting the mediation equations.

After entering age, gender, race, marital status, and education as covariates in Step 1 because they were related to the *Composite* Score (as they were entered for all subsequent equations in this section – see Tables 11-14), equations testing the predictive validity of the FES subscales as a group on the individual MPQ subscales were as follows: FES subscales were

predictive of *Cultural Empathy*: $F(9, 500) = 6.06$, R^2 change = .03, $p \leq .001$, *Open-mindedness*, $F(9, 500) = 3.84$, R^2 change = .03, $p \leq .001$, *Social Initiative*, $F(9, 500) = 6.15$, R^2 change = .05, $p \leq .001$, *Flexibility*, $F(9, 500) = 6.12$, R^2 change = .03, $p \leq .001$, and *Emotional Stability*, $F(9, 500) = 17.54$, R^2 change = .08, $p \leq .001$.

Next the FES scales were found to be significantly predictive of the *Composite* score, $F(5, 502) = 14.64$, R^2 change = .08, $p \leq .001$ as required by the second equation. The last condition for mediation also held true as the MPQ subscales must be predictive of the *Composite* score, $F(10, 498) = 47.19$, R^2 change = .36, $p \leq .001$.

The checklist offered in the appendix of Frazier, Tix, and Barron's (2004) article will now be addressed to see if the tests of mediation should be continued.

1. Was the predictor significantly related to the outcome? If not, was there a convincing rationale for examining mediation?

Two of the FES subscales were found to influence the *Composite* score, while two were not (*Expression* and *Control*). However, when looking at Shrout and Bulger's (2002) article, they suggest that if the predictor is distal to the outcome, it is acceptable to include a predictor that is not significantly related to the outcome. As participants in this study were asked to report on family of origin variables, but then were asked to report on current levels of mental health distress, the time span between these experiences for some participants was as large as 30 years or more; therefore, it is acceptable to include all of the *Family Environment Subscales* in these analyses.

2. Was there a theoretical rationale for the hypothesis that the predictor causes the mediator? Was the mediator something that can be changed?

Family environment is known to affect later development, particularly personality

(Holmbeck & Wandrei, 1993; Yelsma, Hovestadt, Anderson, & Nilsson, 2000; see literature review for further references).

3. What is the “effective sample size” given the correlation between the predictor and mediator? That is, was the relation between the predictor and mediator so high as to compromise power?

According to MacKinnon, Lockwood, Hoffman, West, and Sheets (2002), with a sample size of 500, a large effect size would be .0366 to examine the change in the standard error in the intervening variable effects. Though some of the equations are slightly higher than this, they do not appear to be much larger, therefore, it should be an appropriate measure.

4. Was the relation between the predictor and the outcome (Path b) greater than or equal to the relation between the predictor and the mediator (Path a)?

Many of the correlations were similar, but some of the correlations between the predictor and the mediator were smaller.

5. Were the mediators adequately reliable? (e.g., $\alpha = .90$).

The alphas for the mediators ranged from .84-.90.

6. Was unreliability in the mediators addressed through tests that estimate the effects of unreliability or by the use of SEM?

As all mediators were above .70, this concern was not addressed.

7. To what extent did the design of the study enable causal inferences?

Limited, as the TCK literature is largely anecdotal.

8. Was power mentioned either as an a priori consideration or as a limitation?

According to Fritz and MacKinnon (2007), adequate power at .8 for detection of medium effect sizes could be reached for this sample size at 445 (Table 3, p. 237).

Though it was not addressed as an a priori consideration, it is not a concern at this time.

The remainder of the steps will be addressed after the statistical analysis for mediation are mentioned.

Mediation Models

For the following tests, the demographic variables of age, gender, race, marital status and education were entered in the first step for the Composite score of psychological distress as covariates to control for possible spurious correlations. As the preliminary requirements for mediation were met as shown by the checklist provided above from Frazier, Tix, and Barron (2004), the next few pages will give the individual equations. Each equation was done individually to test the individual predictors of the *Family Environment Scales* and the individual mediators of the *Multicultural Personality Questionnaire*. As a result, 20 models were run, resulting in a significance level of .003 after computing the Bonferroni correction calculating by taking $.05/20 = .003$.

See Table 14 for the list of Mediation Models. *Emotional Stability* mediated the relationship between *Expression* and the *Composite* score, $F(7, 501) = 64.33, p \leq .001, R^2$ change = .31, *Expression* β step 1 = -.19, $p \leq .001$, *Expression* β step 2 = -.06, β change = .13 (Test 10; See Figure 4). The other 19 models of mediation did not hold as the betas from the *Family Environment Subscales* did not initially explain variance in the dependent variable, or when they were initially statistically significant, these variables remained statistically significant after adding the mediators from the *Multicultural Personality Questionnaire*. See Table 14 for the other models.

Thus, to return to the checklist provided by Frazier, Tix, and Barron's (2004),

9. Were all four steps in establishing mediation addressed in the statistical

analyses?

Yes, all four steps were addressed.

10. Was the significance of the mediation effect formally tested?

Yes.

11. Were alternative equivalent models acknowledged or tested?

Alternative models will be acknowledged in the discussion.

12. Were variables that seem likely to cause both the mediator and the outcome included in analyses, or were multiple measurement methods used?

Yes, they were included.

13. Did the study design allow for the type of causal language used in the interpretation of results?

Yes, though as will be demonstrated shortly, mediation holds only for two of the models.

DISCUSSION

The purpose of this study was to ascertain the impact of cultural adjustment on later psychological symptoms as predicted by family environment variables. Though the majority of the hypotheses were supported, most of the hypothesized mediation models did not hold true, as one test showed the impact of mediation. In this section, the individual hypotheses will be discussed as well as the one model of mediation. The other findings, which in fact might be more useful findings to the TCK literature overall, will be discussed. Lastly, an overview of the strengths, limitations, implications, and ideas for future research will be given.

Findings about Families

The first set of hypotheses looked at the relationship between family of origin variables and cross-cultural adaptability. *Cohesion* was associated with overall levels of individual *Flexibility*, which is consistent with Fray's (1998) finding that overall family *Flexibility* is one of the more crucial components in helping TCKs transition cross-culturally. Therefore, it seems that families who are better able to be flexible in cross-cultural transitions are more likely to have children who have internalized those same traits. In addition, as the family is appropriately *Cohesive*, it probably provides a buffer against the outside stressors and helps the family to function flexibly together. In addition, the positive relationships between *Social Initiative* and *Emotional Stability* and *Cohesion* suggest that families who are more cohesive will likely provide children with the tools needed to survive the cross-cultural transitions. Individuals whose scores were high on *Cohesion* scored high on all the subscales on the MPQ. Thus, families who were cohesive seem to produce children who are more willing to take risks in diverse situations and are better able to handle the transitions that might come through culture shock (Bopaiya & Prasad, 2004; Campbell, 1995; Campbell & Ewing, 1990; Chen et al., 2000; Dmitrieva, Chen, Greenberger, & Gil-Rivas, 2004; Feinberg, Howe, Reiss, & Hetherington, 2000; Greenberger &

Chen, 1996; Greenberger, Chen, Tally, & Dong, 2000; Halpern, 2004; Heras & Revilla, 1994; Jouriles et al., 1991; Kamsner & McCabe, 2000; Lau et al., 2002; Pettit & Bates, 1989; Piatt et al., 1993).

Furthermore, *Expression* was found to be related to most of the subscales. The freedom for expression within the family helps the child's ability to develop skills that will help them transition cross-culturally. Harvey's (1985) work theorized that because children in expatriate families may have less of a role in the decision-making process, they may experience more feelings of bitterness toward their parents. In contrast, it seems likely where expressiveness was encouraged in families, children of these families would score higher on these adaptive subscales. The findings of this study are consistent with Harvey's theory and May's (1990) finding that higher levels of communication and expression result in lower levels of reported culture shock. In addition, for this study, the freedom for the child to express needs, wants, and desires within the family of origin was related to their ability to empathize with people who are different from them, to be flexible, and to develop more emotional stability and open-mindedness to others who are different. Though these seem to be more global constructs in terms of individuals who are skilled at transitioning cross-culturally, the more important piece may be that these individuals who were freer to express themselves may be more likely to be able to appreciate differences in global transitions. Individuals will then be free to talk about their experiences and are more likely to be able to transition to new experiences.

Reported levels of conflict were negatively associated with emotional stability within this population. This finding is not surprising. Harvey's (1985) work suggested again that children who grew up in expatriate families may be less likely to feel like they could express their feelings. He thought this might result in higher levels of perceived conflict. For this study, individuals coming from families with lower levels of conflict reported higher levels of

emotional stability. Therefore, the freedom to express likely helps the individual in managing the different forms of culture shock (e.g., anxiety, depression, and culture shock) that may occur during cross-cultural transitions.

Participants who reported lower levels of *Control* within their families of origin reported higher levels of current *Flexibility* in transitioning cultures. Therefore, it seems that individuals who were raised in families where rules were appropriate to the conditions and locales in which the families found themselves are better able to transition with the cultural nuances and other stressful experiences that may occur. Individuals who are raised in families with high *Control* may be more likely to be uncomfortable in new settings, and are likely to feel uncomfortable in parameters that are different than their own.

Consistent with previous literature (Dancy & Handal, 1984; de Ross et al., 1999; Greenberger & Chen, 1996; Reichenberg & Broberg, 2005), participants who grew up in families with lower levels of *Cohesion* were found to report higher levels of distress. Therefore, it is not surprising with this sample that individuals who were raised in families that provided help and support to each other were likely to report lower levels of overall distress in adulthood.

Furthermore, TCKs raised in families with higher levels of *Conflict* reported higher levels of distress. Previous studies have found similar findings. Bopaiya and Prasad (2004) found that conflict was associated with higher levels of anger, while other researchers have found it to be predictive of adolescent depression (Dancy & Handal, 1984; de Ross et al., 1999; Greenberger & Chen, 1996). Other studies have found that adolescents reporting higher levels of conflict within their families of origin report higher levels of psychological maladjustment (Dancy & Handal, 1984) and higher levels of anxiety (Slater & Haber, 1984). Therefore, it seems that higher levels of conflict will be predictive of later psychological distress. In this sample, this held true as well. It may be that the additional stressors of language learning, cultural nuances, and the challenge

of finding helpful resources in the area may increase stress and thus levels of conflict these families experience while transitioning globally and may likely impact their child's overall adjustment later. While levels of family conflict were predictive of later distress, no correlates were found for *Control*.

Expression was negatively associated with the composite score of psychological symptoms on the SCL-90. Similarly, research on boys found that boys raised in families with higher levels of emotional expressiveness reported better levels of psychological adjustment (Kleinman et al., 1989). It follows that adult children of TCK families who were able to express their feelings directly about the transitions they were experiencing, whether to their home or host culture, would experience lower levels of distress later in life. It is likely that the parents' ability to transition through these cultures and to express their worries, feelings, and concerns about the impending changes and other changes that are being experienced currently create a safe environment for the child to do that as well. It may also be that as parents are able to model appropriate behavior during these transitions, the children are then able to internalize appropriate models of coping as well.

Cross-cultural Variables and Distress

Flexibility was found to be associated with lower levels of Composite distress. Fray's (1988) and Mays's (1990) work found the importance of family flexibility (as measured by the FACES subscales of Adaptability) impacts overall ability to transition cultures successfully; other studies of expatriate families have noted the importance of flexibility in cross-cultural transitions for the expatriate worker and their families (Van der Zee & Van Oudenhoven, 2000). It seems then the key might be for individuals to be adaptable, to adjust to the many changes with a positive outlook, and to be willing to try new solutions or new ways of coping, rather than only relying on the mannerisms and customs of their home culture. The way that the family is

then able to manage challenges of the cross-cultural transition may be incorporated as a strategy for the child to carry with him into adulthood when encountering new situations.

Emotional Stability was found to be highly related to *Composite* distress. This association is not surprising given the similarity between the test questions. It would be likely that individuals who are more emotionally stable would experience fewer symptoms related to *Anxiety, Depression, Somatization*, or other like factors on the SCL-90. The MPQ scale of *Emotional Stability* seems to be closer to a trait measure, while the SCL-90 is more of a state measure.

Social Initiative was found to be negatively related to composite distress. It seems that individuals who feel more socially competent might be less likely to have higher levels of symptomology. This information is consistent with a study conducted in New Zealand that TCKs may experience higher levels of social difficulties than their national peers. However, individuals who do feel socially competent and who are willing to take risks in new social situations may be less likely to experience discomfort (Ward & Kennedy, 1993).

Predictive Models

The omnibus regression that was conducted was consistent with the above findings; family of origin variables and cross-cultural adaptation were predictive of the *Composite* distress score. This model accounted for 46% of the variance. It seems then, that the constructs the MPQ assesses might best be described as a skill set to employ when encountering new situations to best overcome the challenges of cross-cultural transitions.

Gender, age, race, marital status, and educational level were all related to each of the SCL-90 subscales as well as the composite score. Furthermore, individuals with higher levels of education reported lower levels of symptomology. Therefore, when the models of mediation were tested, the demographic variables above were used as controls.

Mediation Testing

When looking at Baron and Kenny's (1986) conditions to test mediation, the *Family Environment Scales* and the subscales of the *Multicultural Personality Questionnaire* were in fact predictive of later psychological symptoms. The scales from the *Multicultural Personality Questionnaire* were more predictive of the *Composite* Score of distress than the FES subscales, with *Open-Mindedness* and *Social Initiative* accounting for a small amount of the variance, while *Emotional Stability* was accounting for most of the variance. Perhaps though these individuals might be more open to experiencing new situations, their excitement does not minimize the related stress, anxiety, and other psychological symptoms that may accompany it. Individuals who are emotionally stable are less likely to experience the effects of culture shock (Stone Feinstein & Ward, 1990). Thus, this model is in fact consistent with previous literature which suggests that *Emotional Stability* is one of the most important factors in lower distress reported later in life by people who have had numerous cross-cultural transitions. It might be useful in the future to look at what exact construct domains are measured by the *Emotional Stability* scale, and what preventative measures might be taken in order to increase scores on *Emotional Stability* while decreasing the distress associated with cross-cultural transitions. In addition, as *Open-Mindedness* and *Social Initiative* were the other two scales that added predictive value to the model, it might be interesting to determine how much of this variance is related to personality characteristics such as extraversion or risk-taking, versus them being unique factors to those who enjoy the opportunity to transition across cultures.

As the requirements to test the mediation model were met according to Bulgar and Shroat (2002), 20 equations of mediation models were tested. *Emotional Stability* as a mediator of *Expression* in the composite score of psychological distress was the only model which held true. This is consistent with what was demonstrated in the omnibus regression test. Therefore, it

seems that overall *Emotional Stability* is the most important factor in predicting the ability to successfully transition across cultures with the lowest amount of psychological distress (See Figure 4). Looking at the original way the construct was defined in van der Zee and van Oudenhoven (2000), it is presented as a model of how to handle stressful situations. It seems to be more of a manner of handling things, while the physical and psychological manifestation of symptoms may become more apparent on the SCL-90. Therefore, per this study, it seems one's ability to express oneself and thus manage stress successfully by the trait as measured by the *Emotional Stability* measure of the MPQ, is the most predictive factor in transitioning cross-culturally. Furthermore, individuals who are able to express feelings, wants, and needs during their transitions are more likely to develop the skillset to handle the transitions in an emotionally stable way. The freedom to talk about, experiment, and then to see what parts of the host culture are to be incorporated into their own worldview may lessen later psychological distress. It seems it might be important, then for future studies, to look at parent functioning and their ability to help build those skillsets with their children.

Demographic Findings

Though no gender differences were found on the *Family Environment Scale* for gender or three of the MPQ scales, consistent with previous research on empathy as a general construct, women scored higher on *Cultural Empathy* than men (see Eisenberg & Lennon, 1983 for review; Schieman & Van Gundy, 2000, Toussaint & Webb, 2005). Eisenberg and Lennon in their review of empathy suggest this might be due to the fact that it is more socially acceptable for women to engage in socially appropriate behaviors. They further suggest that as men tend to be not outwardly expressive with their feelings and women tend to be more verbal in expressing their emotions (based on Buck's work, 1981; Buck et al., 1972 & 1974), that what in fact may be measured is the demonstrative behavior that women exhibit, rather than the feeling of empathy,

as men may be equal to them on the feeling.

Men scored higher than women on *Emotional Stability*. This finding is consistent with the initial presentation of the MPQ scale, where men scored higher than women on this construct (van der Zee & van Oudenhoven, 2000). The questions on this scale might be classified as consistent with feminine gender stereotypes (e.g., “has ups and downs”, “responds to emotional setbacks easily”). As such, there is a possibility this subscale could be gender biased more than it is measuring the construct of *Emotional Stability* itself.

Participants in the sample held to the gender stereotype pattern with women reporting greater psychological distress than did their male counterparts on each subscale of the SCL-90 and on the overall *Composite* score. A study conducted by Todd, Deane, and McKenna (1997) provided a survey of previous studies’ findings on the SCL-90 and then conducted their own study of gender differences for this measure. In all of the studies where the gender difference was reported, women scored higher than men on this subscale. Men scored consistently lower than women on expressed symptomology as well in a study conducted in Argentina on both patients and non-patients (Bonicatto, Dew, Soria, & Seghezso, 1997).

Caucasians scored higher than non-Caucasians on *Flexibility* and *Emotional Stability*. The MPQ was normed predominantly in Europe on college student samples in the Netherlands, and did not note race differences. In fact, no race distributions or differences are given on any of the literature on the MPQ. Therefore, it is unclear if these differences were taken into account for the validating of the measure. However, it seems likely that the overall literature that is related to the SCL-90 would apply to the race differences that were noted here, in that Caucasians tend to score lower than non-Caucasian groups of measures of symptoms and characteristics. This may indicate that it is a better measure of health among Caucasians than non-Caucasians similar to the SCL-90 research (Todd, Deane, & McKenna, 1997; Lipman, 1979).

On the SCL-90, though journal articles often list in the demographic section the percentages of participants by racial group, little research has addressed the differences between Caucasians and non-Caucasians directly. For this study, non-Caucasians scored higher than Caucasians on the composite score of symptomology. As all of the validation studies (whether looking at the SCL-90, or the related measures of the SCL-90R, or the HSCL-90) seem to indicate, this measure was normed on a predominantly white population (Derogatis & Cleary, 1997; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974; Todd, Deane, & McKenna, 1997; Lipman, 1979); thus the findings may be more indicative of what is considered to be health among the Caucasian community than in examining health overall.

Next, differences by marital status were examined. Non-married individuals scored higher than married individuals on *Conflict* and *Control* on the FES. As participants were asked to report on their families of origin, these reports may reflect a difference in time from the age they were asked to report on versus their present age and current state and symptoms for answering questions on the MPQ and SCL-90. If the individuals carried these conflictual patterns into their adult lives, it could be that it is difficult for them to connect with others. Furthermore, they may be more attracted to relationships where there is higher conflict and higher levels of control. Often, individuals who are raised overseas belong to what is considered high control families as these families might feel like they must retain high control in order to protect their children from the “outside culture.” Therefore, individuals who report high control may be using the family as a protective factor; they want to keep their family “safe” from the perceived dangers of the new culture; thus, they may employ more rules and structure than families who are residing in their home culture. It might also be that individuals are answering these items in comparison to their current families, and thus may see their families of origin as better than they in fact were.

On the MPQ, non-married individuals scored higher than married individuals on *Empathy, Open-Mindedness* and *Flexibility*. To date, there is not any research on the differences between married and non-married individuals on the MPQ. As much of the research has been conducted on college students, it may be that the samples did not have enough participants to allow for looking at group differences. It might be that non-married individuals have freedom to be empathic, open-minded and flexible as often they do not have the responsibilities of individuals who are married. Individuals who are not in committed relationships may have more time, energy, and emotional space to travel, experience new things, and entertain ideas or experiences that an individual who is married might not be able to do. It seems, therefore, that the unmarried individual may exist in a state that is more conducive to continued cross-cultural transitions in adult life.

On the SCL-90 subscales and composite score, married individuals endorsed fewer symptoms than non-married individuals. As marriage provides a unique mechanism whereby individuals can receive social support, research shows that individuals who are married and report they are satisfied with the quality of their relationship report lower levels of distress than non-married individuals (see overview by Ross, Mirowky, & Goldsteen; Gove, 1972; Williams, Takeuchi, & Adair, 1992). Thus, it seems that marriage seems to provide a buffer for individuals experiencing psychological distress. Another possibility might be that these individuals are less prone to report distress, given the family and industry's systems within which they grew up. For instance, it may be more likely that individuals who grew up in conservative missionary industries would be less likely to have freedom to express their thoughts, while maybe more freedom of expression would be encouraged among families who have involved in the international business community. The freedom to talk about these unique experiences may then lessen the effects of culture shock. These individuals may be less likely to express discomfort

and discord as it may not have been conducive to accomplishing the overall goal of the company, institutions, religious entities, or military branches.

The last MANOVA was conducted to determine differences between types of family industry that took people overseas. Adult children of Missionary families reported retrospectively that their childhood families had allowed more *Expression* than the other groups, while military families allowed significantly less *Expression*. As families who have a parent who serves in the military may have less freedom to express their individuality or their feelings about particular circumstances, it could be that these patterns carry over into family life as well (Wertsch, 1991). Here, adult children of military families reported higher levels of control within their families of origin than did all other groups. As military families often reside on base, the military community may act as their host culture, and the children are more likely to feel less freedom to express feelings as the family is affiliated with the military unit. Secondly, military families may be more likely than the other groups to see the control within the family system as adaptive. The behaviors of the children can often reflect negatively on the parents. As such, it seems that these families may exert higher levels of control so as to minimize the capacity for the children to reflect negatively on the family. From anecdotal evidence, children from military families often felt restricted in their abilities to communicate their true feelings and often felt like there was a high sense of control from both their families and the branch of the military in which their parents served (Wertsch, 1991).

On the MPQ, Military families scored higher than both Missionary families and the Other category on *Social Initiative* and *Emotional Stability*. There is not previous data on the MPQ as it relates to people's experience of the military. However, it is not surprising that adult children of military families would score higher in these areas than all other groups. In fact, children in military families may have learned more skills for social interaction through military gatherings,

thus showing more *Social Initiative* in the varying situations in which they might find themselves. In addition, as the military community often has mechanisms for social support within the base and within the community, it may be that these individuals had a better platform from which to develop socially, emotionally, and mentally than did the other branches of TCKs in this study which then helped them in their later development.

On the SCL-90 subscales and *Composite* score, *Missionary* families reported higher levels of symptomology, while *Military* families reported the lowest levels. This is somewhat surprising as the *Military* family group had an older mean age. You would expect that a number of these individuals would in fact report higher levels of distress as many of the items on the SCL-90 are related to physical symptomology due to the aging of a cohort effect. While this may suggest that adult children of military families have higher levels of functioning, it may also suggest that this population has a tendency to deny their symptoms. As the SCL-90 is a face valid measure, it is difficult to determine which of these might be the case.

When looking at the relationships between the FES scales and the SCL-90, *Cohesion* was negatively related to all the SCL-90 subscales used. Given that family *Cohesion* assists in child development related to lower levels of later psychopathology and is thought to help with positive adjustment, this is congruent with previous research findings (Amerikaner, Monks, Wolfe, & Thomas, 1994; Buboltz, Johnson, & Woller, 2003; Clay, Ellis, Griffin, Amodeo, & Fassler, 2007; de Ross et al., 1999; Holmbeck & Wandrei, 1993; Oliver & Paul, 1995). In addition, *Expression* was negatively related to all the subscales except *Somatization*; thus, individuals who grew up in homes where more *Expression* was allowed reported lower levels of later psychological symptoms. This finding was consistent with previous work (Kleinman et al., 1989). *Conflict* was positively associated with each subscale of the SCL-90 as would be expected (Dadds & Powell, 1991; Emery, 1982; Jouriles et al., 1991; Slater and Haber, 1984).

As one would expect, MPQ subscales, *Social Initiative*, *Flexibility*, and *Emotional Stability* were all found to be negatively related to most of the SCL-90 scales. Thus, the more adaptive behaviors one exhibits in these scales, the more likely one is to express lower levels of symptomology. This is consistent with the idea that individuals who are best able to transition through different cultures are better able to manage their psychological symptoms or experience lower rates of distress, and thus, in turn, report lower levels of distress (Stone Feinstein & Ward, 1990). Another consideration may be that individuals who are scored higher on Open-Mindedness may in fact end up encountering higher levels of distress as the stress from trying new ideas or experiences may in fact increase levels of stress.

As is noted in the results section, all of the demographic variables were associated with the outcome variable. Age was correlated to many of the subscales on the SCL-90. One of the more interesting things about this finding is the likely cohort effect that is happening in this sample. The mean age for the military group was 51, for the other group it was 41, and for the missionary group it was 31. Therefore, it is likely that some of the results we are seeing in this study might in fact be due to a cohort effect. As the military sample was larger than any other group, it could in fact be that these individuals' scores skewed the data and biased the findings. In addition to that, it is likely that a select group of older adults completed this online survey. These individuals are likely to be more computer and internet savvy than their age-peers; thus, it is likely that a unique subsample of this population was recruited.

Implications

The findings in this study suggest a number of unique things. First of all, there do seem to be differences between children who were raised cross-culturally by parents in different industries. When thinking about helping with cross-cultural transitions, this is useful information in that it might help others as they begin to train and help individuals as they start to move cross-

culturally. For instance, as military communities seem to have many resources to help with the logistics of the move, it might be more helpful for them to start a program to talk about the grief cycle that may occur when a parent is deployed. For missions companies, it might be more useful for them to spend time working on the parent's toolbox to not only assure the health of the family unit, but to make sure that the parents indeed have the skillset to help the child learn how to best handle the transitions. Lastly, international business companies may want to spend time educating their employees about the importance of family life in overall job satisfaction.

Secondly, it seems that it would be important to think about the fact that industries may need either to use their resources differently in helping individuals as they get ready to go overseas or to begin to pool their resources together to provide the best training possible for the transition. It might be useful for the different branches of the TCK community to begin talking about how to work together, communicating about successes and failures within their different industries, and how to best use their resources together. In addition, it is likely that there are differences not only between types of TCKs, but also age differences, as can be seen by the cohort effect in this sample. Therefore, it might be helpful to begin having conversations about how to provide resources to this unique population as it continues to age, where people might go for those resources, and how to take the cultural, cohort, and transnational factors into account. Lastly, it might be useful to see how much people identify with the particular label of TCK, thereby associating them with a group and providing a cultural home, and whether this could help in their ability to transition across cultures and in later psychological development.

Limitations

There were a number of limitations in this study. First of all, the participants were recruited through a social-network based snowball-type sampling using a strategy of referrals. Therefore, it may be that other viable candidates for participation could have been missed if they

were not in contact with the initial circles of the researchers.

Secondly, though many of the participants from the missionary industries were recruited through Facebook, the majority of the military participants came from Department of Defense Overseas Schools Alumni Organizations. This population had a higher mean age, and a select subsample may have been recruited from among individuals who are more computer savvy than other individuals in their same cohort. Therefore, this study may include more individuals who enjoy learning new technology than others, and may have missed other TCKs who would have preferred a paper and pencil or interview method.

Thirdly, a number of participants might have been missed who do not participate in Facebook or who have limited access to the computer or internet. Another consideration might be the large age range in this sample, with participants ranging in age from 18 to 78. Therefore, some of the effects might have been hidden by the differences between the generations. For instance, individuals whose families worked for the military who had to abruptly return to the United States during World War II might report significantly different answers than a child who grew up in a family that worked in central Asia on irrigation, engineering, and housing issues.

Another weakness may be that individuals were asked to report retrospectively on characteristics from their families of origin, but were asked to report on current levels of composite distress as well as current beliefs about personal characteristics that might help them transition cross-culturally. This time lapse in asking them to report past family functioning with current psychological experience may not have been ideal in looking at this data set. In addition, as many of the individuals were asked to report on family issues from more than five decades ago, the effects of current family functioning may be missed. It might also be that as older individuals may remember events from their childhood selectively, this may be reflected in their reporting.

It might be useful to look at the constructs provided in the MPQ compared to more of the comprehensive constructs presented in the psychological literature. For instance, there is a large literature on empathy in general. It might be more useful to consider the constructs of Empathy, Flexibility, Open-Mindedness, Emotional Stability, and Social Initiative as characteristics of people, and not necessarily as characteristics related to cross-cultural mobility. Very few of the questions were directly related to cross-cultural mobility, and were more related to how one might approach a new situation. This may in fact help better describe the characteristics that help people transition better cross-culturally.

Another consideration might be that only parts of the SCL-90 subscale were used. Therefore, the composite score might not be the best reflection of global distress, and may have missed some useful information because not all the subscales were used. The SCL-90 also is a state measure, so if an individual was currently undergoing physical or psychological distress, this might be more reflected in their scores. In addition to that, though the SCL-90 looks at current levels of distress, it really does not allow for a measure of resilience. As the MPQ looks more at positive constructs, this study's design may have been somewhat lacking in that the SCL-90 looks more for negative symptomology.

Strengths and Future Research

One of the most notable strengths about this particular study was the number of participants who were recruited in a very short time. This particular population wants to tell their story, and is happy to share their experiences with an interested researcher. Secondly, we were able to recruit from a wide range of TCKs; though many were from missionary or military backgrounds, many of the others were from differing organizations that took their parents traveling globally. Lastly, many of the participants chose to e-mail the researchers after the fact to provide information about their experiences. Though this information was not used for data

analysis purposes, it does allow us to catch a glimpse into some of the triumphs and blessings of this particular population.

Future studies could benefit from limiting the sample size to a particular age range, preferably one of young adults, especially if requesting participants to report on their families of origin. It might also be useful to conduct a study of the entire family unit in terms of family process functioning during the cross-cultural transitions, both of the parents and children. Useful data might also be obtained through providing assessments to children before and after the cross-cultural transition. It would likely be more beneficial to the literature for this particular group if current families who are working in a third-culture environment were studied. Therefore, more appropriate prevention strategies might better be used to help individuals through their transitions. Specific suggestions might include not only having re-entry seminars (e.g., Barnabas seminars, International Business re-entry seminars, Missionary Training Resources) for the TCK community, but providing parent training to help families as they seek to help their children through the transition. It might also be useful to train parents to run a support group or resource room for the other families that might be close within their locale. In fact, it would likely be wise to make that one individual's full time job. Another useful idea might be to get data from siblings and compare their experiences in their families to see what might influence later adaptation.

It might be useful to conceptualize cross-cultural transition in a different way. For instance, it may actually help to think about the unique concepts that may help individuals transition cross-culturally rather than trying to find a particular measure to ascertain those traits. It could be useful to think about other ways to conceptualize health for this particular population – is it more about current stress level with cultural transitions, or about minimizing the culture shock in and of itself?

Furthermore, it might be useful to look at how families affiliated with different types of organizations (even within the larger subgroups of missions, military, business) have different experiences. Few studies have looked at coping resources within different families, and how that may impact resilience and later development in children.

Lastly, it would be helpful to include a measure of attachment when examining these constructs. An individual who has a secure attachment style with another individual would likely experience less trauma related to their culture shock than would other individuals. Integrating a measure of attachment with the current findings would be useful in explaining more of the unique experiences of these individuals as well as their ability to transition cross-culturally.

Table 1

Means, Standard Deviations, t-tests and Alphas of Scales

	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t-tests</i>	Alphas	
	Current Sample		Past Studies			Current Sample	Past Studies ^a
FES Subscales							
Cohesion	6.70	2.39	6.26	2.41	4.12***	0.80	0.62-0.77
Expression	4.35	2.46	4.60	2.45	- 2.30*	0.73	0.39-0.63
Conflict	2.90	2.58	4.21	2.44	-11.48***	0.82	0.71-0.74
Intellectual-Cultural Orientation	6.21	1.62	5.13	2.51	15.17***	0.48	0.41-0.75
Control	5.88	2.42	4.91	2.73	8.77***	0.75	0.47-0.66
MPQ Subscales							
	Current Sample		Past Studies		<i>t-tests</i>	Current Sample	Past Studies ^a
Cultural Empathy	4.80	0.47	3.86	0.44	10.70***	0.87	0.70-0.83
Open-Mindedness	4.01	0.49	3.91	0.46	4.80***	0.87	0.60-0.86
Social Initiative	3.68	0.61	3.77	0.53	- 3.21**	0.90	0.70-0.91
Flexibility	3.36	0.51	3.29	0.40	3.26**	0.84	0.64-0.80
Emotional Stability	3.35	0.53	3.48	0.44	- 5.44***	0.86	0.70-0.91
SCL Subscales							
	Current Sample		Past Studies		<i>t-tests</i>	Current Sample	Past Studies ^a
Somatization	1.67	0.59	0.51	0.45	44.66***	0.91	0.87-0.88
Interpersonal Sensitivity	1.92	0.68	0.73	0.64	42.25***	0.88	0.77-0.90
Anxiety	1.69	0.61	0.47	0.46	45.40***	0.91	0.86-0.90
Depression	1.83	0.62	0.36	0.44	36.55***	0.91	0.84-0.87
Global Distress	1.77	0.56				0.97	

$p < .05$. ** $p < .01$. *** $p < .001$.

^a See manuals for norms basis and method section and reference list for validity studies.

Table 2

Point Biserial Correlations of Demographic Variables

	Age	Race	Gender	Marital Status	Educational Level
Age	1.00				
Race ^a	-0.11*	1.00			
Gender ^b	-0.08	-0.04	1.00		
Marital Status ^c	0.44**	-0.15**	-0.11*	1.00	
Educational Level ^d	0.27**	-0.07	-0.09*	0.21**	1.00

* $p < .05$. ** $p < .01$. *** $p < .001$.

^aRace coded 1 = White, 2 = Non-white.

^bGender coded 1 = men; 2 = women.

^cMarital Status 1 = non-married; 2 = married.

^dEducational Level 1 = High School equivalent or less; 2 = Some college through graduate work.

Table 3

Pearson's Product Moment Correlations Across Scale Sets

	1	2	3	4	5
Family Environment Scale					
1. Cohesion	1.00				
2. Expression	0.53***	1.00			
3. Conflict	-0.50***	-0.23***	1.00		
4. Intellectual-Cultural Orientation	0.36***	0.33***	-0.15***	1.00	
5. Control	-0.26***	-0.51***	0.29***	-0.13***	1.00
Multicultural Personality Questionnaire	1	2	3	4	5
1. Empathy	1.00				
2. Open-Mindedness	0.66***	1.00			
3. Social Initiative	0.41***	0.46***	1.00		
4. Flexibility	0.31***	0.52***	0.41***	1.00	
5. Emotional Stability	0.13***	0.22***	0.53***	0.37***	1.00
SCL-90	1	2	3	4	5
1. Somatization	1.00				
2. Interpersonal Sensitivity	0.65***	1.00			
3. Anxiety	0.82***	0.78***	1.00		
4. Depression	0.72***	0.87***	0.83***	1.00	
5. Composite Score	0.88***	0.89***	0.93***	0.94***	1.00

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

MANOVA Examining Gender Differences Across Scales

Scale Sets	Total <i>n</i> = 512		Men <i>n</i> = 196		Women <i>n</i> = 316		<i>F</i> Value	η^2	<i>Power</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
FES MANOVA							1.43	.01	.27
Cohesion	6.71	2.38	6.97	2.25	6.56	2.45	3.64	.01	.25
Expression	4.36	2.45	4.51	2.44	4.26	2.46	1.23	.00	.07
Conflict	2.90	2.58	2.75	2.45	3.00	2.66	1.16	.00	.07
Intellectual- Cultural Orientation	6.21	1.61	6.17	1.72	6.24	1.55	0.24	.00	.02
Control	5.88	2.42	5.64	2.47	6.02	2.37	2.99	.01	.20
	<i>n</i> = 513		<i>n</i> = 197		<i>n</i> = 316				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
MPQ MANOVA							20.08***	.17	1.00
Empathy	4.08	0.47	3.94	0.50	4.17	0.43	28.48***	.05	1.00
Open- Mindedness	4.01	0.49	4.02	0.52	4.01	0.47	0.02	.00	.01
Social Initiative	3.68	0.61	3.72	0.64	3.66	0.60	1.35	.00	.08
Flexibility	3.36	0.51	3.40	0.51	3.34	0.51	2.46	.01	.16
Emotional Stability	3.35	0.53	3.53	0.47	3.24	0.53	37.61***	.07	1.00
	<i>n</i> = 511		<i>n</i> = 196		<i>n</i> = 315				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SCL-90 MANOVA							6.04***	.06	.98
Somatization	1.67	0.59	1.53	0.51	1.75	0.62	16.74***	.03	.93
Interpersonal Sensitivity	1.92	0.64	1.78	0.57	2.01	0.66	15.45***	.03	.91
Anxiety	1.69	0.61	1.56	0.49	1.77	0.57	15.09***	.03	.90
Depression	1.83	0.62	1.66	0.52	1.94	0.65	26.23***	.05	.99
Composite Score	1.77	0.56	1.62	0.47	1.86	0.59	21.96***	.04	.98

p* < .05. ** *p* < .01. **p* < .001.

Table 5

MANOVA Examining Race Differences Across Scales

Scale Sets	Total <i>n</i> = 512		Caucasians <i>n</i> = 428		Non-Caucasians <i>n</i> = 84		<i>F</i> Value	η^2	<i>Power</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
FES MANOVA							0.38	.00	.05
Cohesion	6.71	2.38	6.74	2.37	6.56	2.46	0.43	.00	.03
Expression	4.36	2.45	4.39	2.46	4.18	2.43	0.53	.00	.03
Conflict	2.91	2.58	2.84	2.56	3.20	2.68	1.32	.00	.08
Intellectual-Cultural Orientation	6.22	1.62	6.21	1.65	6.25	1.46	0.05	.00	.01
Control	5.88	2.42	5.85	2.43	6.00	2.35	0.26	.00	.02
	<i>n</i> = 513		<i>n</i> = 429		<i>n</i> = 84				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
MPQ MANOVA							2.24*	.02	.50
Empathy	4.08	0.47	4.09	0.47	4.08	0.48	0.01	.00	.01
Open-Mindedness	4.01	0.49	4.01	0.49	4.01	0.51	0.01	.00	.01
Social Initiative	3.68	0.61	3.70	0.60	3.61	0.69	1.60	.00	.10
Flexibility	3.36	0.51	3.38	0.51	3.23	0.49	6.53**	.01	.49
Emotional Stability	3.36	0.53	3.38	0.52	3.24	0.56	4.61*	.01	.33
	<i>n</i> = 511		<i>n</i> = 428		<i>n</i> = 83				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SCL-90 MANOVA							2.72*	.03	.62
Somatization	1.67	0.59	1.63	0.57	1.85	0.62	9.97**	.02	.72
Interpersonal Sensitivity	1.92	0.64	1.89	0.63	2.07	0.66	5.17*	.01	.38
Anxiety	1.69	0.61	1.65	0.59	1.90	0.64	12.62***	.02	.83
Depression	1.83	0.62	1.80	0.61	1.99	0.65	6.23*	.01	.47
Composite Score	1.77	0.56	1.73	0.54	1.94	0.59	9.78**	.02	.71

* $p < .05$. ** $p < .01$. *** $p < .001$ *Note.* Coded into 1 = Caucasian; 2 = Non-Caucasian

Table 6

MANOVA Examining Marital Status Differences Across Scales

Scale Sets	Total		Non-married		Married		<i>F</i> Value	η^2	Power
	<i>n</i> = 512		<i>n</i> = 208		<i>n</i> = 304				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
FES MANOVA							3.93**	.04	0.95
Cohesion	6.71	2.38	6.60	2.35	6.79	2.40	0.80	.00	.15
Expression	4.36	2.45	4.47	2.36	4.28	2.52	0.75	.00	.14
Conflict	2.91	2.58	3.24	2.61	2.68	2.55	5.92*	.01	.68
Intellectual-Cultural Orientation	6.21	1.62	6.32	1.52	6.14	1.67	1.47	.00	.23
Control	5.87	2.42	5.55	2.47	6.10	2.36	6.36**	.01	.71
	<i>n</i> = 513		<i>n</i> = 208		<i>n</i> = 305				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
MPQ MANOVA							10.22***	.09	1.00
Empathy	4.08	0.47	4.14	0.45	4.05	0.49	4.27*	.00	.54
Open-Mindedness	4.01	0.49	4.10	0.42	3.95	0.53	11.35**	.02	.92
Social Initiative	3.68	0.61	3.59	0.62	3.75	0.60	8.59**	.02	.83
Flexibility	3.36	0.51	3.43	0.50	3.32	0.52	6.32**	.01	.71
Emotional Stability	3.35	0.53	3.26	0.52	3.42	0.54	11.06**	.02	.91
	<i>n</i> = 511		<i>n</i> = 206		<i>n</i> = 305				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SCL-90 MANOVA							9.87***	.09	1.00
Somatization	1.67	0.59	1.78	0.58	1.60	0.58	11.82**	.02	1.00
Interpersonal Sensitivity	1.92	0.64	2.13	0.62	1.78	0.61	39.34***	.07	1.00
Anxiety	1.70	0.61	1.87	0.63	1.57	0.56	32.73***	.06	1.00
Depression	1.83	0.62	2.02	0.63	1.71	0.58	33.47***	.06	1.00
SCL-Total	1.77	0.56	1.94	0.55	1.66	0.53	34.00***	.06	1.00

* $p < .05$. ** $p < .01$. *** $p < .001$.

Note: 1 = non-married; 2 = married

Table 7

MANOVA Examining Family Occupational Differences Across Scales

Scale Sets	Total		Missions		Military		Other		F Values	η^2	Power
	<i>n</i> = 512		<i>n</i> = 151		<i>n</i> = 197		<i>n</i> = 164				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
FES MANOVA									9.95***	.09	1.00
Cohesion	6.71	2.38	7.06	2.08	6.70	2.42	6.42	2.56	2.86	.01	.32
Expression	4.36	2.45	4.80 ^a	2.13	3.94 ^b	2.62	4.45	2.46	5.46**	.02	.66
Conflict	2.91	2.58	2.64	2.41	3.19	2.72	2.80	2.54	2.14	.01	.22
Intellectual-Cultural Orientation	6.21	1.61	6.37	1.34	6.11	1.79	6.19	1.62	1.13	.00	.10
Control	5.88	2.42	5.36 ^c	2.19	7.02 ^d	1.94	4.99	2.61	42.76***	.14	1.00
	<i>n</i> = 513		<i>n</i> = 151		<i>n</i> = 198		<i>n</i> = 164				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
MPQ MANOVA									7.23***	.07	1.00
Empathy	4.08	0.47	4.16	0.43	4.07	0.49	4.03	0.49	2.81	.01	.32
Open-Mindedness	4.01	0.49	4.04	0.44	4.01	0.54	4.00	0.48	0.37	.00	.03
Social Initiative	3.68	0.61	3.52	0.60	3.84 ^b	0.59	3.62	0.60	13.18***	.05	.99
Flexibility	3.36	0.51	3.43	0.51	3.31	0.49	3.36	0.53	2.73	.01	.30
Emotional Stability	3.35	0.53	3.23	0.54	3.47 ^b	0.50	3.30	0.52	9.20**	.04	.92
	<i>n</i> = 511		<i>n</i> = 151		<i>n</i> = 198		<i>n</i> = 162				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SCL-90 MANOVA									2.88**	.03	.92
Somatization	1.67	0.59	1.71	0.62	1.65	0.61	1.65	0.53	0.61	.00	.05
Interpersonal Sensitivity	1.92	0.64	2.07 ^a	0.64	1.80 ^b	0.66	1.93	0.58	8.39***	.03	.88
Anxiety	1.69	0.61	1.78	0.65	1.62	0.61	1.70	0.56	3.25*	.01	.38
Depression	1.83	0.62	1.95 ^a	0.65	1.71 ^b	0.60	1.87	0.59	6.85**	.03	.79
Composite Score	1.78	0.56	1.87 ^a	0.58	1.68 ^b	0.57	1.78	0.51	4.74**	.02	.58

* $p < .05$ – in order to be statistically significant for group differences, Bonferroni correction = $p < .01$. ** Statistically significant at $p < .01$. *** $p < .001$.

^aMissionary family group differs from both the Military and Other groups, Tukey's HSD as test statistic.

^bMilitary group differs from both the Missionary and Other groups, Tukey's HSD as test statistic.

^cMissionary group differs from the Other group, Tukey's HSD as test statistic.

^dMilitary group differs from the Missionary and Other group, Tukey's HSD as test statistic.

Table 8

Pearson and Point Biserial Correlations Among Demographic Variables and Scales

	Age	Gender ^a	Race ^b	Marital Status ^c	Educational Level ^d
Family Environment Scale					
Cohesion	-0.06	-0.08	-0.02	0.04	-0.05
Expression	-0.20***	-0.05	-0.03	-0.04	-0.08
Conflict	-0.07	0.05	0.05	-0.11*	-0.03
Intellectual-Cultural	-0.05	0.02	0.01	-0.05	0.06
Orientation					
Control	0.25***	0.08	0.02	0.11*	0.05
Multicultural Personality Questionnaire					
Empathy	-0.09*		-0.00	-0.09*	-0.03
		0.23***			
Open-Mindedness	-0.09*	-0.01	0.00	-0.15***	-0.02
Social Initiative	0.19***	-0.05	-0.06	0.13**	0.05
Flexibility	-0.15**	-0.07	-0.11*	-0.11*	-0.03
Emotional Stability	0.29***	-0.26***	-0.10*	0.15***	-0.02
SCL-90					
Somatization	-0.12**	0.18***	0.14**	-0.15***	-0.13**
Interpersonal Sensitivity	-0.30**	0.17***	0.10*	-0.27***	-0.10*
Anxiety	-0.24**	0.17***	0.16***	-0.25***	-0.11*
Depression	-0.28**	0.22***	0.11*	-0.25***	-0.10*
Global Score	-0.26**	0.20***	0.14**	-0.25***	-0.12**

* $p < .05$. ** $p < .01$. *** $p < .001$.

Notes: ^a Gender coded as 1 = men, 2 = women.

^b Race coded into 1 = Caucasian; 2 = non-Caucasian.

^c Marital Status coded into 1 = non-married; 2 = married.

^d Educational Level coded into 1 = High School education or lower; 2 = some college or above.

Table 9

Pearson's Product Moment Correlations of the FES and MPQ with the SCL

Scale Sets	Somatization	Interpersonal Sensitivity	Anxiety	Depression	Composite Score
Family Environment Scales					
Cohesion	-0.19***	-0.28***	-0.22***	-0.27***	-0.27***
Expression	-0.08	-0.19***	-0.14***	-0.16***	-0.15***
Conflict	0.20***	0.23***	0.21***	0.24***	0.24***
Control	0.03	0.05	0.03	0.01	0.03
Multicultural Personality Questionnaires					
Empathy	0.00	-0.10*	0.01	-0.01	-0.02
Social Initiative	-0.27***	-0.48***	-0.29***	-0.38***	-0.39***
Flexibility	-0.21***	-0.26***	-0.13**	-0.20***	-0.22***
Emotional Stability	-0.46***	-0.67***	-0.58***	-0.69***	-0.66***
Open-Mindedness	-0.02	-0.09*	0.02	-0.03	-0.03

Pearson's Product Moment Correlations between the FES and the MPQ

	Empathy	Social Initiative	Flexibility	Emotional Stability	Open-Mindedness
Family Environment Scales					
Cohesion	0.11*	0.14***	0.15***	0.27***	0.11*
Expression	0.15***	0.10*	0.19***	0.17***	0.17***
Conflict	-0.01	0.05	-0.06	-0.22***	0.04
Control	-0.01	0.04	-0.19***	-0.03	-0.05

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Note. In order to be considered statistically significant, the alpha level was corrected using the Bonferonni correction; thus $p = .003$

Table 10

Omnibus Regression relating FES and MPQ to Composite Score

Criterion	Predictors	<i>df</i>	Adjusted R^2	<i>F</i>	Step 1 β	Step 2 β	Step 3 β
Omnibus Regression Test							
Psychological Symptoms	Step 1 - Controls	(5, 502)	0.12	14.75***			
	Age				-0.17***	-0.19***	0.02
	Gender				0.17***	0.15***	0.01
	Race				0.11**	0.09*	0.05
	Education				-0.03	-0.04	-0.11***
	Marital Status				-0.13**	-0.11*	-0.09**
	Step 2 – FES subscales	(9, 498)	0.20	14.64***			
	Cohesion					-0.18***	-0.07
	Expression					-0.10	-0.04
	Conflict					0.10*	0.06
	Control					-0.05	-0.03
	Step 3 – MPQ subscales	(14, 493)	0.49	35.61**			
	Empathy						0.03
	Open-Mindedness						0.15**
	Flexibility						-0.03
	Emotional Stability						-0.57***
	Social Initiative						-0.12**

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 11

Preliminary Conditions for Testing Mediation – Independent Variable to Mediator

Criterion	Predictors	<i>df</i>	<i>F</i>	<i>Adjusted R²</i>	Zero-order <i>r</i>	<i>Step 1 β</i>	<i>Step 2 β</i>
Empathy	Step 1 – Demographic Controls	(5, 504)	6.82***	0.05			
	Age				-0.09*	-0.06	-0.03
	Gender				0.24***	0.23***	0.24***
	Race				-0.00	-0.01	-0.01
	Marital Status				-0.09*	-0.05	-0.06
	Education				-0.04*	0.01	0.02
	Step 2 – FES Scales	(9, 500)	6.06***	0.08			
	Cohesion					0.12**	0.09
	Expression					0.15**	0.16**
	Conflict Control					-0.01	0.03
Open-mindedness	Step 1 – Demographic Controls	(5, 504)	2.59*	0.02			
	Age				-0.09*	-0.04	-0.00
	Gender				-0.00	-0.02	-0.01
	Race				-0.01	-0.02	-0.12
	Marital Status				-0.15***	-0.14**	-0.15**
	Education				-0.03	0.01	0.03
	Step 2 – FES Scales	(9, 500)	3.84***	0.05			
	Cohesion					0.11**	0.10
	Expression					0.17***	0.16**
	Conflict Control					0.05	0.11*
Social Initiative	Step 1 – Demographic Controls	(5, 504)	4.29***	0.03			
	Age					-0.09	
	Gender				0.19***	0.17***	0.20***
	Race				-0.05	-0.03	-0.02
	Race				-0.06	-0.03	-0.03
	Marital Status				0.13**	0.05	0.04
	Education				0.04	-0.02	0.00
	Step 2 – FES Scales	(9, 500)	6.15***	0.08			
	Cohesion					0.15***	0.21***
	Expression					0.11**	0.10
Conflict Control					0.05	0.19***	
					0.04	0.03	

Table 11 (continued).

Criterion	Predictors	<i>df</i>	<i>F</i>	<i>Adjusted R²</i>	Zero-order <i>r</i>	<i>Step 1 β</i>	<i>Step 2 β</i>
Flexibility	Step 1 – Demographic Controls	(5, 504)	5.50***	0.04			
	Age				-0.15***	-0.14**	-0.09
	Gender				-0.07	-0.10*	-0.08
	Race				-0.11**	-0.14***	-0.13**
	Marital Status				-0.11	-0.08	-0.09
	Education				-0.03	0.01	0.01
	Step 2 – FES Scales	(9, 500)	6.12***	0.07			
	Cohesion					0.15***	0.10
	Expression					0.19***	0.07
	Conflict Control					-0.06	0.03
					-0.19***	-0.09	
Emotional Stability	Step 1 – Demographic Controls	(5, 504)	19.24***	0.15			
	Age				0.29***	0.29***	0.32***
	Gender				-0.26***	-0.25***	-0.23***
	Race				-0.09*	-0.08*	-0.07
	Marital Status				0.15***	0.00	-0.02
	Education				-0.02	-0.13**	-0.11**
	Step 2 – FES Scales	(9, 500)	17.54***	0.23			
	Cohesion					0.27***	0.17**
	Expression					0.17***	0.13*
	Conflict					-0.21***	-0.09
Control					-0.03	0.05	

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 12

Preliminary Conditions – Regressions Mediation Testing – Independent Variable to Dependent Variable

Criterion	Predictors	<i>df</i>	<i>F</i>	<i>Adjusted R²</i>	Zero-order <i>r</i>	<i>Step 1 β</i>	<i>Step 2 β</i>
Composite Score	Step 1 – Demographic Controls	(5, 502)	14.76***	0.12			
	Age				-0.26***	-0.17***	-0.19***
	Gender				0.20***	0.17***	0.15***
	Race				0.14***	0.11**	0.09*
	Marital Status				-0.25***	-0.13**	-0.11*
	Education				-0.12***	-0.03	-0.04*
	Step 2 – FES Scales	(9, 498)	14.64***	0.20			
	Cohesion						-0.18***
	Expression						-0.10
	Conflict Control					0.24***	0.10*

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 13

Preliminary Conditions – Regressions for Mediation Testing – Mediator to Dependent Variable

Criterion	Predictors	<i>df</i>	<i>F</i>	<i>Adjusted R²</i>	Zero-order <i>r</i>	<i>Step 1 β</i>	<i>Step 2 β</i>
Composite Score	Step 1 – Demographic Controls	(5, 503)	15.00***	0.12			
	Age				-0.26***	-0.16**	0.03
	Gender				0.20***		0.01
	Race					0.18***	
	Marital Status				0.14***	0.11*	0.05
	Education				0.25***	-0.14**	-0.10
	Step 2 – MPQ Scales	(10, 498)	47.19***	0.48			
	Empathy						0.00
	Open-Mindedness					-0.02	0.15**
	Social Initiative					-0.39***	-0.11**

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 14

Mediation Table for Predicting Composite Score

Criterion	Predictors	Adjusted R^2	F	Step 1 β	Step 2 β	Step 3 β
Mediation Models	Step 1 = Demographic controls for all mediation tests					
Controls for all tests	1 – Age	0.12	15.00***	-0.16**		
	Gender			0.18***		
	Race			0.11**		
	Marital			-0.14**		
	Education			-0.03		
Test 1	Step 2 - Cohesion	0.19	20.43***		-0.26***	-0.25***
	Step 3 – Empathy	0.19	17.82***			-0.06
Test 2	Step 2 - Cohesion	0.19	20.43***		-0.26***	-0.26***
	Step 3 – Open-Mindedness	0.19	17.65***			-0.04
Test 3	Step 2- Cohesion	0.19	20.43***		-0.26***	-0.22***
	Step 3 – Social Initiative	0.27	28.09***			-0.30***
Test 4	Step 2 - Cohesion	0.19	20.43***		-0.26***	-0.23***
	Step 3 – Flexibility	0.23	22.61***			-0.22***
Test 5	Step 2 - Cohesion	0.18	20.43***		-0.26***	-0.10***
	Step 3 – Emotional Stability	0.23	65.92***			-0.61***
Test 6	Step 2 - Expression	0.16	16.47***		-0.19***	-0.18***
	Step 3 – Empathy	0.16	14.47***			-0.06
Test 7	Step 2 - Expression	0.16	16.47***		-0.19***	-0.19***
	Step 3 – Open-Mindedness	0.15	14.24***			-0.04
Test 8	Step 2 - Expression	0.16	16.47***		-0.19***	-0.15***
	Step 3 – Social Initiative	0.25	24.81***			-0.32***
Test 9	Step 2 - Expression	0.16	16.47***		-0.19***	-0.16***
	Step 3 – Flexibility	0.20	19.19***			-0.23***
Test 10	Step 2 - Expression	0.16	16.47***		-0.19***	-0.06
	Step 3 – Emotional Stability	0.47	64.33***			-0.62***

(table continues).

Table 14 (table continued).

Criterion	Predictors	Adjusted R^2	F	Step 1 β	Step 2 β	Step 3 β
Mediation Models	Step 1 = Demographic controls for all mediation tests					
Test 11	1 – Age	0.12	15.00***	-0.16**		
	Gender			0.18***		
	Race			0.11**		
	Marital			-0.14**		
	Education			-.03		
	Step 2 - Conflict	0.16	17.05***		0.20***	0.20***
	Step 3 – Empathy	0.16	15.29***			-0.08*
Test 12	Step 2 - Conflict	0.16	17.05***		0.20***	0.20***
	Step 3 – Open-Mindedness	0.16	15.15***			-0.07
Test 13	Step 2- Conflict	0.16	17.05***		0.20***	0.23***
	Step 3 – Social Initiative	0.28	28.90***			-0.35***
Test 14	Step 2 - Conflict	0.16	17.05***		0.20***	0.19***
	Step 3 – Flexibility	0.21	20.46***			-0.24***
Test 15	Step 2 - Conflict	0.16	17.05***		0.20***	0.09**
	Step 3 – Emotional Stability	0.47	65.40***			-0.62***
Test 16	Step 2 - Control	0.12	12.83***		0.07	0.07
	Step 3 – Empathy	0.13	11.67***			-0.09*
Test 17	Step 2 - Control	0.12	12.83***		0.07	0.07
	Step 3 – Open-Mindedness	0.13	11.36***			-0.06
Test 18	Step 2 - Control	0.12	12.83***		0.07	0.07
	Step 3 – Social Initiative	0.23	22.57			-0.33***
Test 19	Step 2 - Control	0.12	12.83***		0.07	0.04
	Step 3 – Flexibility	0.18	16.59***			-0.24***
Test 20	Step 2 - Control	0.12	12.83***		0.07	0.02
	Step 3 – Emotional Stability	0.46	63.80***			-0.64***

Note. $df = (5, 503)$ for Step 1, $(6, 503)$ for Step 2, and $(7, 501)$ for Step 3.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

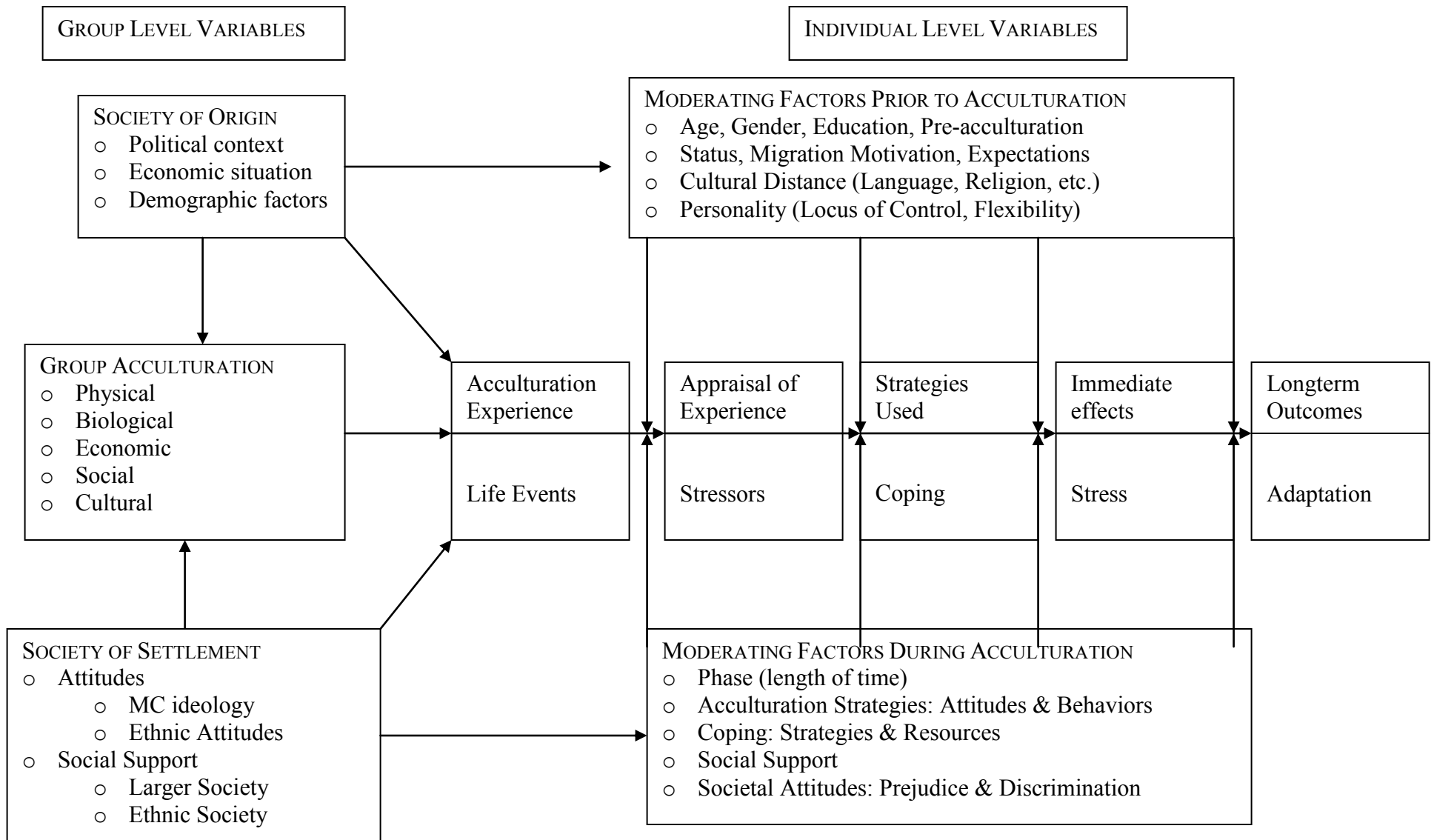


Figure 1. Stress and coping framework for acculturation research. Berry (1997).

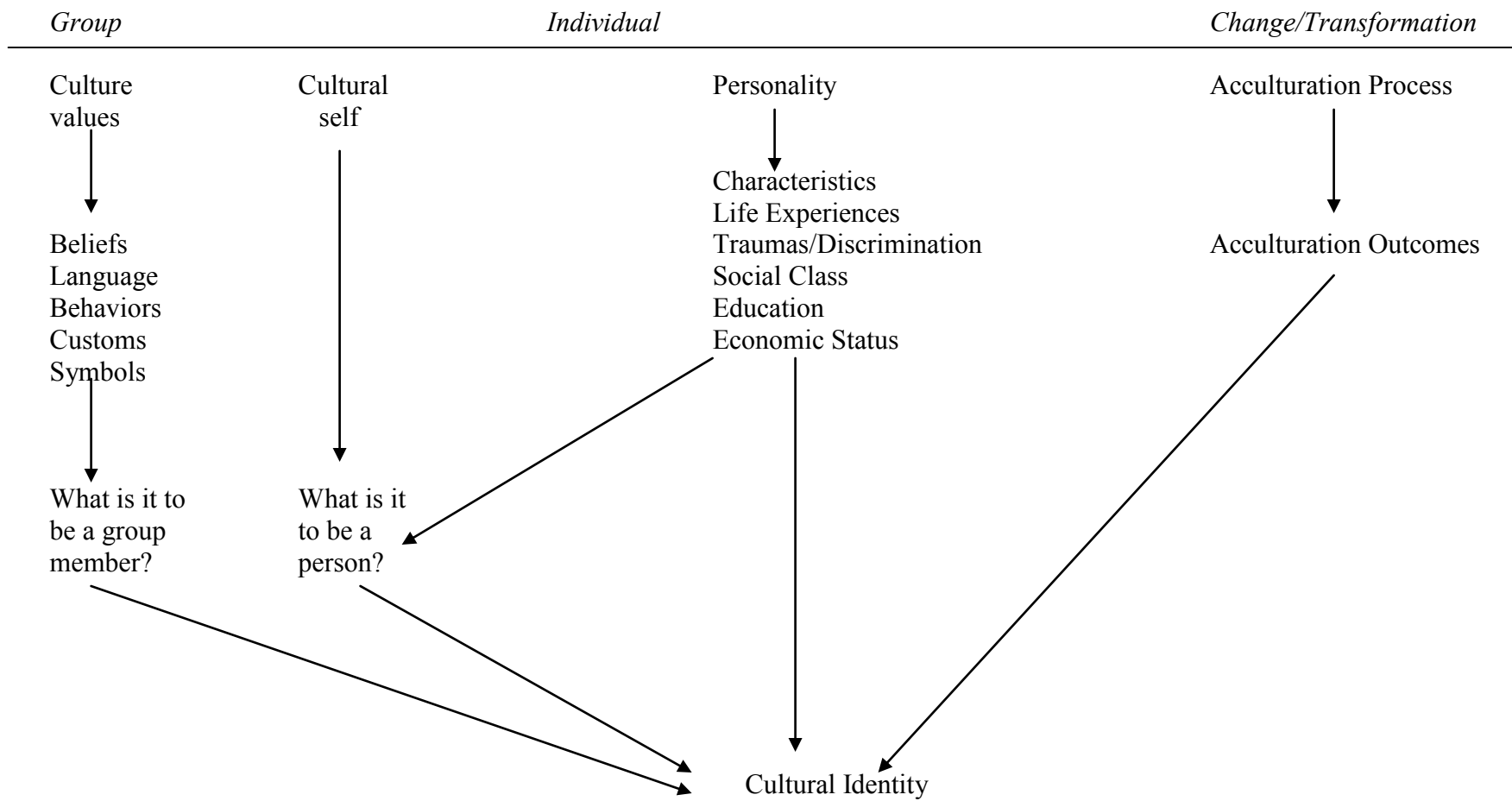


Figure 2. Adapted from Dana's (1998) racial cultural identity model

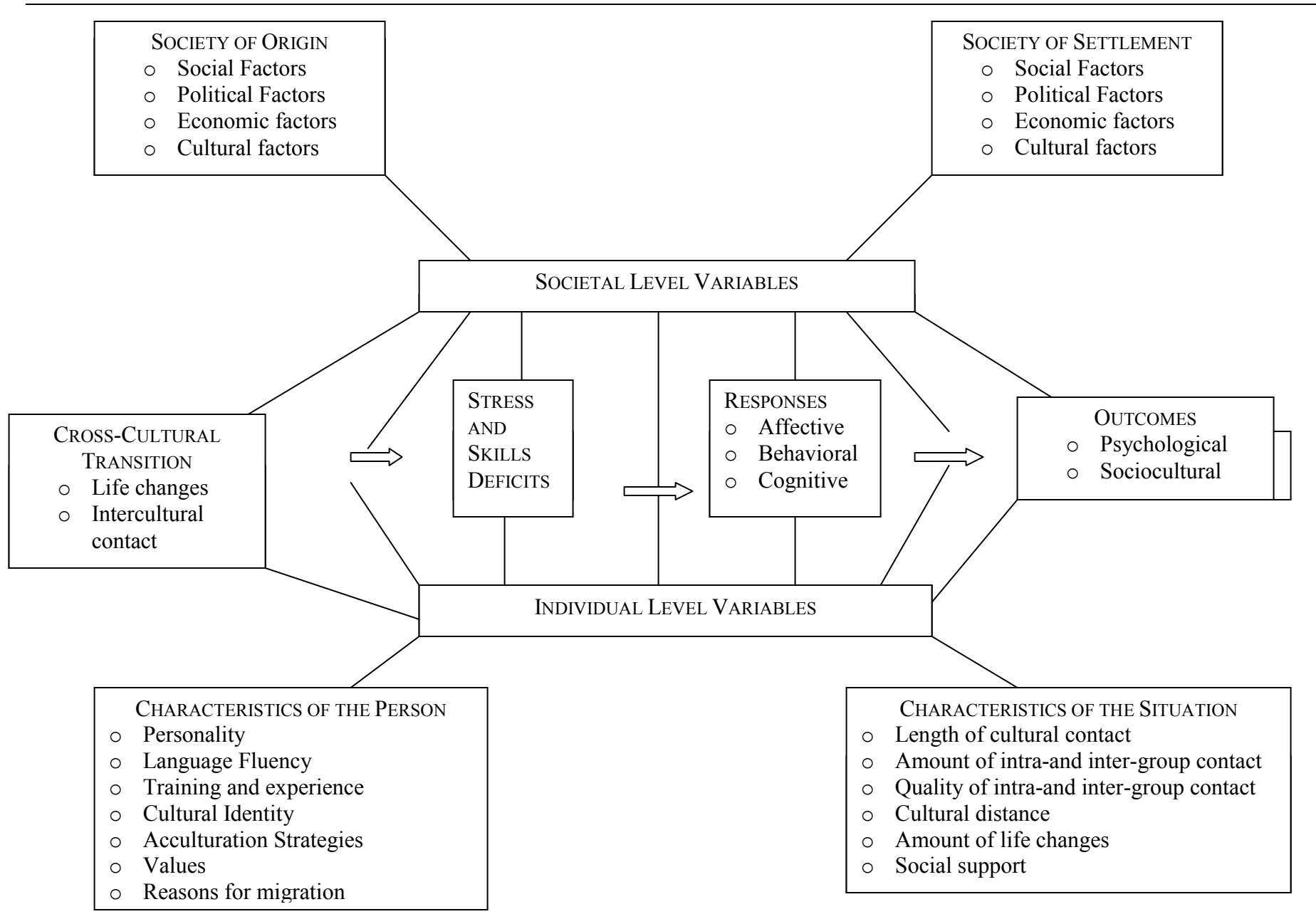


Figure 3. Variables affecting acculturation. Adapted from Ward (1996)

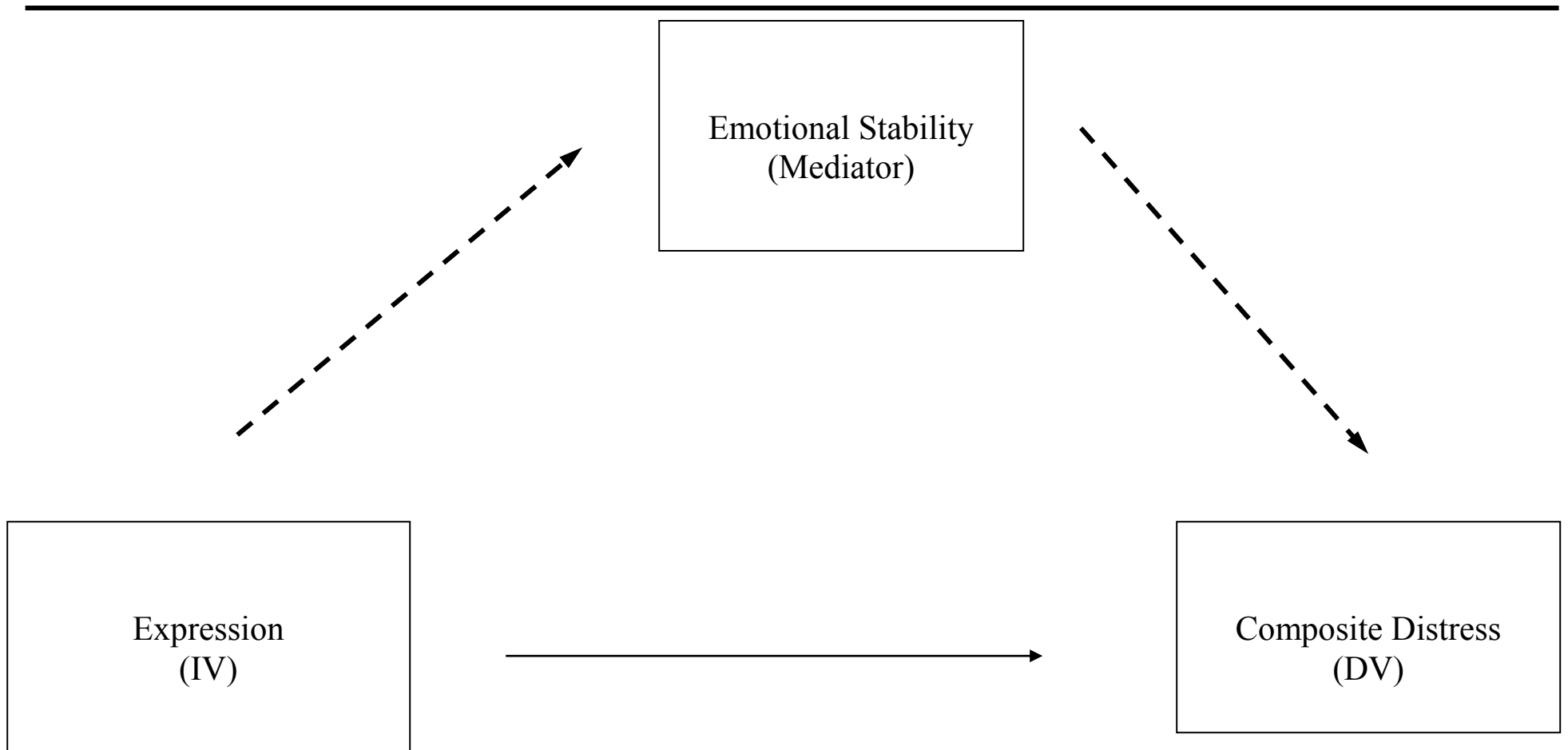


Figure 4. Mediation model supported

APPENDIX A
QUESTIONNAIRE

1. Age _____
2. Gender: _____ Male _____ Female
3. Current Marital Status :
 - _____ Single
 - _____ Engaged
 - _____ Married
 - _____ Living with partner
 - _____ Widowed
 - _____ Divorced
 - _____ Separated
4. Highest Level of Schooling
 - _____ Less than secondary school (high school or equivalent)
 - _____ Secondary school graduate (high school or equivalent)
 - _____ By exam (GED or similar qualifying exams)
 - _____ Some university (post-secondary education, college, associate degree, technical degree)
 - _____ University graduate (College or equivalent)
 - _____ Masters degree or equivalent
 - _____ Doctorate (PhD, EdD., MD, JD)
 - _____ Other _____
1. In which countries do you hold citizenship? _____
2. What were your parents' occupation growing up? Mother _____ Father _____ (please notate type of organization (e.g., Missionary, Military, Government, International corporation, don't know etc.):
3. How many language(s) did you speak before age 18 and in what situations (e.g., one language at home or with different family members, another at school)?
4. In which country were you born?
5. How old were you when you first went overseas: _____

6. In how many different countries have you lived? Please list use the following template:

Moved to: _____

Lived there how long: _____

What type of education did you receive while living at this location? (list all that apply:

- _____ National private school
- _____ National public school (include U.S. American public school
- _____ Correspondence/Home Taught
- _____ International School
- _____ Mission School
- _____ Boarding School
- _____ Department of Defense School
- _____ Other. Please specify:

Do you currently live there? _____

(if yes to currently live there, stop; if no, continue) *survey will repeat— if-then condition until last question is yes.*

Do you currently live there? _____

(if yes to currently live there, stop; if no, continue)

7. During the time you spent abroad, did you return to your parent's home country?

8. How would you describe your time spent in the home country?

5 – very positive

4 – positive

3 – neutral

2 – negative

1 – very negative

We would like to know some information about your and your biological parents' race, ethnicity, and cultural orientation. *Race* refers to a general, more inclusive category based on genetics such as Asian, Black, Native American, Hispanic, Caucasian, etc. *Ethnicity* is more specific. It refers to family's cultural heritage such as Jewish, Cherokee, Navajo, Mexican, Puerto Rican, South Korean, Japanese, Kenyan, African-American, Italian, Irish, etc. Since people can have more than one race and/or ethnicity, list all that apply. If you do not have this information, please answer "Don't Know".

21- My race is:

(1) Asian or Asian American, including Chinese, Japanese, and others

(2) Black or African American

(3) Hispanic or Latino, including Mexican American, Central American, and others

(4) White, Caucasian, Anglo, European American; not Hispanic

(5) American Indian/Native American

(6) Mixed; Parents are from two different groups

(7) Other (write in): _____

22- How would you describe yourself *Ethnically*? (List all)

23- My father's race is (use numbers above)

24- My father's ethnicity is _____

25- My mother's race is (use numbers above)

26- My mother's ethnicity is _____

APPENDIX B
CONTACT ORGANIZATIONS FOR RECRUITMENT

Facebook Third-Culture Kid Groups
Among Worlds Website, Margie Ulsh
TckKid Project
Overseas Military Brats Website
Military Brats Website
TCK Research Network
Department of Defense Overseas School Alumni Organizations (via e-mail)
Glenn Greenwood - American Overseas Schools Archives
Snowball recruiting through personal contacts
Contacts made at the Families in Global Transition Conference

APPENDIX C
INFORMED CONSENT FORM

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Title of Study: Adult assessment of childhood cross-cultural experiences.

Principal Investigator: Jennifer L. Wilson

Co-investigator: Raquel C. Hoersting

Purpose of the Study: We are collecting information about well-being and cross-cultural childhood experiences.

Study Procedures: You will be asked to complete a web based survey that has both closed and open-ended questions. It should take about one to one and a half hours of your time.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: The study is designed to gather information that will be useful in helping organizations who work with individuals who are globally mobile.

Compensation for Participants: Once you have completed this survey, if you wish, you may enter your name for a \$50 gift certificate on Amazon.com. There will be 8 gift certificates awarded for the first 200 people to complete the survey.

Procedures for Maintaining Confidentiality of Research Records: Your answers to the survey will be kept anonymous, thus, any information given will not be linked to you personally. After answering all the questions for the survey, the final page will provide an e-mail address to which you may e-mail your contact information should you wish to enter the drawing for the \$50 gift certificate. Your privacy will be respected and the information provided (i.e. name and email) will only be accessed by the principal investigator and co-investigator, and will not be given or sold to anyone else.

Questions about the Study: If you have any questions about the study, you may contact Jennifer Wilson (Principal Investigator) or Raquel Hoersting (Co-investigator) at jlw0042@unt.edu or raquel@unt.edu; telephone number 940-565-2671 or the faculty advisor, Dr. Sharon R. Jenkins, UNT Department of Psychology, at telephone number 940-565-2671.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

In order to complete the study, you must agree to the following statements:

-You have read the possible benefits and the potential risks and/or discomforts of the study.

-You are over 18 years of age.

-You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits.

-You understand why the study is being conducted and how it will be performed.

-You understand your rights as a research participant and you voluntarily consent to participate in this study.

You may print this page for your records.

Button which states Agree/Disagree

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