



The effect of global mobility on third culture kids: Do early childhood mobility and cultural changes contribute to poorer general mental health in adulthood?

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The effect of global mobility on third culture kids: Do early childhood mobility and cultural changes contribute to poorer general mental health in adulthood?

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A Thesis in the Field of Psychology
for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

The mobility of families is growing continuously, and as the world becomes increasingly multi-cultural, the global mobility of families is becoming a vital factor to consider regarding the development of children that lead their lives moving between multiple cultures. Studies on adults who grew up in a globally mobile family due to their parents' occupations are mostly theoretical in nature; such individuals are referred to as "Adult Third Culture Kids" (ATCKs).

This study is a cross-sectional survey, between-subjects design study that compares the general mental health, levels of anxiety, depression, and stress, and signs of posttraumatic growth of government and business ATCKs, military ATCKs, and a group of mono-cultural adults. It was hypothesized that ATCKs, both military and government & expatriate, show more general mental health problems, signs of depression, anxiety, and stress as well as increased posttraumatic growth than monocultured adults. Secondly, this research hypothesized that ATCKs from government and business families show more general mental health problems, symptoms of depression, anxiety, and stress, but less posttraumatic growth than ATCKs from military families.

To test the hypotheses, I enrolled 217 participants from all three groups, asking them to complete an online survey which contained a questionnaire to measure the presence of common mental health disorders (SRQ-20), a questionnaire to measure symptoms of depression, anxiety, and stress (DASS-21), as well as a questionnaire assessing posttraumatic growth (PTGI-SF).

The data provided preliminary evidence in favor of a part of the first hypothesis of this study. Although the SRQ-20 showed statistically insignificant results overall and in all groups, the DASS-21 showed statistically significant differences between both ATCK groups and the mono-cultural adults. Contrary to the expectations, the second part of the first hypothesis could only be partially supported by the research results. The PTGI-SF provided support for the hypothesis that ATCKs from government and business families show significantly more posttraumatic growth than mono-cultural adults. However, ATCKs from military families did not reach a statistically significant result in comparison to mono-cultural adults.

The general picture emerging from the analysis is that there is a significant difference in symptoms of depression, anxiety, and stress between monocultural adults and ATCKs overall.

Dedication

I want to dedicate this thesis to my father R. Roger Weiss and my mother Reydan Weiss.

My father's passing in September 2016 was ultimately the push I needed to return to Harvard University, and pursue my dream of a Master's Degree in Psychology. He always believed in fulfilling your dreams, working hard for them, and never giving up. I would not have come to Harvard, if it were not for him. And besides all the other things I want to thank him for, this journey at Harvard Extension School has had the greatest impact on my personality and growth.

My mother has supported me through the ups and downs of this process, has traveled to Boston with me to take care of my children while I was in class or studying at the library. She has listened to my fears and built me up when I forgot where I was going, and why I was on this path.

My parents always supported my dreams and decisions, although they might have not always been the easiest or most plausible ones. They gave me love, strength, they taught me to be brave, and stand for what I believe in. They allowed me to become the person I wanted to be, and for that I will be eternally grateful.

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Chapter I

Introduction

The mobility of families is growing continuously, and as the world becomes increasingly multi-cultural, the global mobility of families is becoming a vital factor to consider regarding the development of children who lead lives moving among multiple cultures.

Most relevant research concerns military and missionary Third Culture Kids (TCKs) (Davis et al., 2010; Davis et al., 2013; Gaw, 2000; Millegan et al. 2013). Empirical studies have seldom addressed TCKs from business and government families or the long-term effects of childhood global mobility in TCKs in general. Pollock et al. (2017) theorized that unresolved grief, a missing sense of belonging, and consequent difficulties in identity development can result in severe mental health problems in adult Third Culture Kids (ATCKs). However, they did not offer any empirical support for this hypothesis. Additionally, a number of studies have shown that relocation impacts the mental health of monocultural children (Puskar & Ladely, 1992; Mok et al., 2016). However, important questions regarding the effects of cultural change on relocation remain unanswered.

This study compared the mental health in ATCKs to monocultural comparison participants. Participants in this survey responded to questions regarding symptoms of depression, anxiety, and stress as well as aspects of posttraumatic growth. There were three groups of participants: ATCKs from military families, ATCKs from business or government families, and a mono-cultural group of adults.

Business and government ATCKs differ from military ATCKs in the daily representation of their passport culture. American military TCKs grow up within a strong American cultural setting, whereas government and business TCKs change their cultural setting with every move to a new host culture. The primary hypothesis in the present study was that ATCKs, both military and government and business, will show more mental health problems and posttraumatic growth than the mono-cultural adults. The second hypothesis was that ATCKs from government and business families will exhibit more mental health problems but fewer signs of posttraumatic growth in comparison to ATCKs from military families.

Learning more about the differences in the general mental health of ATCKs and mono-cultural adults could help to develop a structured support system for expatriate families and their children. Comparing ATCKs from government and business expatriate families to ATCKs from military families may provide insight on whether global mobility and/or the adjustment to new cultures are possible variables to be considered to develop preventative measures to lessen the mental health problems that may be experienced by TCKs.

Family global mobility is increasing. For instance, in 1999 3.7 million US citizens lived abroad, in comparison to 5.2 million in 2009. As of January 2020, the U.S. Department of State's Bureau of Consular Affairs estimated that 9 million U.S. citizens live overseas, representing more than 240% growth since 1999 (<https://travel.state.gov/content/dam/travel/CA-By-the-Number-2020.pdf>, retrieved October 22, 2020).

The growth in numbers shows that the world is becoming more multi-cultural, which can be attributed to many factors. One main factor is that families are accompanying their loved ones in their respective positions in the military, missionary projects, business, and government, which entail global relocations of families due to expatriation. Global relocation changes everyday life, surroundings, culture, and, for the youth, their peer group. Therefore, global mobility may be a vital factor to consider in the development of children who lead their lives between multiple cultures. These children often move many times in their early childhood, which likely affects their social connections and sense of identity (Grimshaw & Sears, 2008). Sears (2011) studied how globally mobile children and young people form and maintain their sense of identity. The data from the semi-structured interviews suggest that these children and young adults sustain a combination of identities, embodying their multiple experiences.

Theoretical Background

The literature on TCKs is mostly theoretical. Pollock and Van Reken (2017) are often cited, and offer insight to the world of TCKs, highlighting advantages and disadvantages of growing up in a globally mobile family.

Although Pollock and Van Reken's (2017) work is not based on empirical evidence, they suggest that multiple transitions due to multiple relocations bring experiences of repeated loss to TCKs as these children leave friends, teachers, and activities behind each time they relocate. Consequently, research found that many TCKs experience unresolved grief. Although their work is not quantitative, they draw their conclusions on analysis of personal stories, books, letters, and songs written by TCKs.

Therefore, without careful sampling and a control group comparison, these descriptions are best seen as hypotheses rather than evidence-based conclusions about TCKs.

Gilbert (2008) provided the only empirical investigation on TCK grief. In a study of 43 ATCKs who had spent at least one year during their childhood abroad due to their parents' overseas employment, it was found that the extent and pervasiveness of loss throughout childhood and adolescence was a notable aspect of the subjects' lives. Gilbert (2008) used a qualitative, naturalistic design, based on interviews and e-mail data collection. The study intended to develop and identify constructs which are shared within the investigated group of TCKs, with the goal of developing a working hypothesis for the ongoing work of others (Gilbert 2008). Participants referred to losses of persons and places, existential losses, and the loss of a sense of belonging and identity as the most impactful. Most grief experienced by the participants was based on a disfranchised experience of loss. Disfranchised losses mean that they are ambiguous, and the ambiguity of these losses makes them socially difficult, confusing, and/or unacceptable to mourn (Gilbert 2008). For example, these losses might not be socially recognized, children may also feel inclined to protect their family by not sharing their true feelings, and/or their peers and family may not understand what or why the child is grieving. Participants in Gilbert's study stated that they often suppressed their grief and tried not to feel anything. Furthermore, the subjects claimed that they had felt misunderstood by peers in their passport country after reentry and also lacked a supportive network that genuinely understood their grief. Gilbert (2008) concludes that, due to the disfranchised nature of the participant's losses, their grief remains unresolved.

However, without psychometric measures of mood or grief symptoms, one cannot know whether these self-reported emotional reactions really differentiate adult TCKs from similar-aged peers who may be “grieving” other childhood experiences or losses.

Existential losses formed another challenge for ATCKs in Gilbert’s (2008) study. Existential losses are those related to a sense of personal identity and concern questions such as ‘who am I?’, ‘who can I trust?’, ‘where am I from?’, and ‘where do I belong?’ (Gilbert, 2008). These existential losses that participants reported were connected to what Gilbert refers to as *losing a place they call home*. Growing up in a globally mobile family, the concept of a physical home is absent from their lives, yet they feel a strong desire to belong somewhere (Gilbert, 2008). The participants reported that problems often arose for them when they returned to their passport country, hoping to find a place to call home, but finding and experiencing that they did not fit in (Gilbert, 2008).

Gilbert (2008) emphasizes that children crave predictability and constancy in their lives, but that for TCKs, the only constants in their life are the lack of constancy and the feeling of disenfranchised grief (Gilbert, 2008). Gilbert raises some important issues; however, the work is methodologically weak. Absent any comparison group, the concepts of ambiguous loss and disenfranchised grief to explain adjustment in youth who grew up moving around internationally require further investigation. Gilbert suggested that these experiences may lead to disruptions in the social development of TCKs. Although Gilbert created a working hypothesis for further investigations, unfortunately, no further empirical work has been done on TCK grief.

Along with unresolved grief, Pollock et al.’s (2017) theoretical work puts strong emphasis on proposed difficulties in identity formation. Pollock et al. (2017) explains

children's identity formation by presenting it as an interplay between anchors and mirrors. The family, community, and location that children grow up in ultimately form these anchors and mirrors. Children form their own identity through a reflection of the place and culture they grow up in as well as through the reflection of their own family. Simultaneously, each of these mirrors provides an anchor, which together create the 'sense of belonging' (Pollock et al., 2017). Due to the global mobile lifestyle of TCKs, two of the three mirrors and anchors change more often than a monocultural child would experience. Not only does the community that TCKs grow up in change significantly each time they relocate, but so do the cultural customs, norms, and language. Therefore, Pollock et al. (2017) assume that the formation of identity and a sense of belonging is a challenging undertaking for TCKs.

Based on Pollock et al.'s (2017) identity construction model, Van Schalkwyk and Lijadi (2017) focused their research on place identity construction of TCKs. They hypothesized that a highly global mobile lifestyle might lead to an inadequate amount of time needed for TCKs to become familiar with their passport country, or with any other countries they have lived in. Accordingly, it can be challenging for the TCK to identify with any particular culture and, therefore, more likely to experience a missing sense of belonging (Lijadi & Van Schalkwyk, 2017). The study's 27 participants were 7–16 years old and had lived in at least three different countries due to their parent's employment. For data collection, they used a semi-structured interview technique and a collage-making and story-telling technique developed by Van Schalkwyk (2014). The participants were asked to create a collage from a minimum of ten images cut out of print media and online sources. The collage-making was guided by the question: "How does this

picture/image/drawing/ represent the place(s) you call home?” After creating the collage, the participants were asked to tell a story related to each part of the collage. The researchers used three questions to guide the stories of the participants: (1) “how does the image/picture represent a place you call home?”, (2) “why did you choose the image/picture to represent a place called home?”, and (3) “why is this picture/image important to you?”

The analysis results show that pre-adolescent TCKs created a sense of belonging to their father’s workplace (the stable element in their lives) in their collages instead of the places they lived in, which had changed due to their mobility (Lijadi & Van Schalkwyk, 2017). Similar to monocultural adolescents, TCK adolescents found their sense of stability in friendships, which provided them with a sense of belonging (Lijadi & Van Schalkwyk, 2017). In an earlier paper, Lijadi and Van Schalkwyk (2014) discussed harmful effects such as feelings of isolation and loneliness in TCK’s, who often lack long-term friendships or have difficulties developing and maintaining them. Lijadi and Van Schalkwyk hypothesize that a TCK’s lack of long-term friendships or difficulties in developing and maintaining them is the result of multiple relocations during youth.

Unfortunately, Lijadi and Van Schalkwyk’s (2017) small sample size limits the ability to generalize, and their methods provide little empirical evidence to support their conclusions. Besides the small number of participants, the lack of a comparison group of monocultural children and adolescents leaves the question of whether TCKs and monocultural children actually differ from each other. The researchers do not provide any evidence that their results are solely due to the relocations the participants went through,

or if there were other contributing factors which played a role in the participants identity formation.

Gilbert (2008) and Lijadi and Van Schalkwyk (2017) provide little evidence to support Pollok et al.'s (2017) assumptions about grief and difficulties in identity formation of TCKs. The impact of relocation itself on mental health has received more empirical research attention. Moreover, data on monocultural children provides evidence for possible challenges due to relocation.

Impact of relocation on mental health

Puskar and Ladely (1992) found that relocation stress impacts monocultural children. They investigated 17 adolescent girls who had experienced a move of at least 100 miles within the past 3-18 months. Participants completed a Relocation Survey (Puskar, 1981) and completed standardized measures of mood such as the Multiple Affect Adjective Checklist (MAACL) (Zuckerman & Lubin, 1965), the Mooney Problem Checklist (Mooney & Gordon, 1951), the Ways of Coping Questionnaire (Folkman & Lazarus, 1980;1985), the Reynolds Adolescents Depression Scale (RADS) (Reynolds, 1984), and the Life Event Record (Senior High Version) (Coddington, 1972). In this sample, 18% scored above 77 on the RADS, which indicates clinical depression. The lifetime prevalence in America for mood disorders is estimated at 20.8% of the population, with a major depressive disorder as the most prevalent, at 16.6% (Kessler et al., 2005). The MAACL resulted in an indication of 18% of the adolescents scoring in moderate levels of anxiety (Puskar & Ladely, 1992). Unfortunately, the sample size is very small. It is possible that the mood symptoms experienced by the 17 adolescent girls

are unrelated to the relocation, but to a common distribution of mood problems experienced in typical adolescent girls.

Mok et al. (2016) investigated all 1,439,363 people born in Denmark during 1971–1997. They investigated nationals with cross-municipality moves from their first year of life to 14 years of age. They examined the relationship between moving and any diagnosis with mental health disorders from mid-adolescence to early middle age. The research examined substance misuse disorders, personality disorders, schizophrenia and related mental disorders, mood disorders, any anxiety disorders, and eating disorders. Mental illness histories were obtained from the Psychiatric Research Register, which contains data on all admissions to psychiatric inpatient facilities since 1969. They found that childhood residential mobility was associated with elevated risks of developing most psychiatric disorders. The risk of developing these disorders tended to rise with age at the time of the move, from nine years of age and upwards (Mok et al., 2016). They conclude that mobility at any age during development is linked with increased risks for anxiety disorders in adulthood, and they interpret their results with the risk of onset of mental disorders in adolescence. However, these mental health difficulties could be a consequence of family difficulties. Recurrent relocation could be a result of family dysfunction, mental health problems in the family, or prior problematic behaviors of the children (Mok et al., 20016). Their study does not provide causal evidence of the relationship between residential mobility and the development of psychiatric disorders, but they point out that moving homes is a source of stress for the whole family. Since residential moves most likely involve school transfers and the change of neighborhood,

the researchers considered these changes and disruption of the daily routines of families as possible factors which can contribute to the development of psychiatric disorders.

The impact of relocation on monocultural children presented provides supporting evidence for possible challenges TCKs may face due to their globally mobile lifestyle. This raises the question whether the globally mobile lifestyle is related to increased mental health challenges for TCKs.

Mental health of TCKs

Davis et al. (2010) studied 35 recent high school graduates who attended missionary children's reentry programs in the United States. All participants had graduated from high school abroad, where their parents had been employed as missionaries, and returned to the United States either for work or college. They used the Depression and Anxiety Scales-21 (DASS-21) (Henry & Crawford, 2005) and the Psychological General Well-being Index (PGWB) (Dupuy, 1990) to evaluate their participants' mental well-being. The pretest data showed that, before attending the reentry seminars, 43% of the participants reported moderate or severe distress in general psychological well-being. The DASS-21 results indicated that 43% of the participants had elevated levels of both depression and anxiety while 66% experienced elevated levels of stress. The researchers conclude that this supports earlier theoretical research that missionary kids reentering to the United States experienced increased levels of depression, anxiety, and stress by Koteskey (2008). Davis et al.'s (2010) findings support Cockburn's (2002) suggestions that stress, anxiety, and depression are often experienced during global mobility. Due to the recent relocation back to the United States of the participants when Davis et al. (2010) collected their data, it is difficult to assess whether

the results provide proof for long-term mental health problems caused by the participants' missionary childhoods.

In a later study, Davis et al. (2013) offered further support for their earlier findings. The study of 186 missionary children, who were beginning their repatriation process with the aforementioned missionary children's reentry program, showed that the participants scored significantly higher on all three subscales of the DASS-21 in comparison to the general population: 22.5% scored in the moderate to extremely severe levels of depression, 32.2% scored between moderate and extremely severe level for anxiety, and 20.4% scored in the moderate to extremely severe level on stress (Davis et al., 2013). They concluded that the repeated loss of those children is multiplied (rather than alleviated) upon reentry to their passport culture. Davis et al. (2013) attribute their findings of increased mood symptoms after repatriation, to the children's ultimately failed hopes that they would feel more at home than when they lived abroad. They attribute these responses to the children not feeling as if they belong due to unresolved identity issues and unresolved grief (Davis et al., 2013). However, their data only show what the children are reporting; there is no evidence to support the conclusions about identity or unresolved grief.

Davis et al. (2000; 2013) focus on the timeframe of the initial repatriation and not the long-term effects of a global mobile lifestyle during childhood. Therefore, further research is needed in this area. Additionally, there are no monocultural comparison groups, which would be important because the transition to adulthood is in itself a time of great stress for everyone (Turner and Avison, 2003).

Habeeb and Hamid (2021) studied 250 ATCKs living in the United Arab Emirates. Their main objective was to explore the prevalence of depression in relation to identity orientation among college students with a TCK background. The results of the Beck Depression Inventory BDI-II (Beck et al., 1996) indicated that 27.2% of the participants of the study reported moderate (12.4%) to severe depression (14.8%) whereas 72.8% of participants reported minimal to mild symptoms of depression. The BDI-II is 21-item questionnaire, scored on a 4-point Likert scale which assesses depressive symptoms in the last two weeks. The alpha coefficient for the BDI-II I in this study was 0.92 (Habeeb and Hamid, 2021). The researchers conclude that depression is common among their sample of ATCK university students.

Unfortunately, the participants were mainly from Eastern origin, which may skew the data, because these cultures value conformity to social and cultural norms. This might increase pressure on the individuals in a different way than it would on an ATCK from Western cultures. (Habeeb and Hamid, 2021) Additionally, the study did not incorporate a comparison group of non-ATCK students. It is possible that the current events in the world, such as COVID-19, had an impact on the mental health of the students. We do not know if the fact that the students are ATCKs is the reason for their symptoms of depression.

Gaw (2000) studied 66 American college students who attained their high school degrees overseas. The investigation employed the reentry survey, which contains a personal problems subscale, which is an adapted form of the Personal Problems Inventory PPI (Johnson and Holland, 1986). The PPI focusses on problems relevant to the general college student population and assesses their concerns. Gaw (2000) assessed

the 23-item form of the PPI and found reliability coefficients of 0.85 and 0.89. Findings showed that 51.6% of the participants had mild-significant general anxiety. Depression was represented more frequently with 63.6% of participants reporting mild to severe symptoms. Unfortunately, the research failed to include a group of monocultural students for comparison. Although the study provides evidence that TCKs report mood and anxiety symptoms, due to lack of a comparison group of non-reentry undergraduates, we do not know if the results are due to the students' relocation and/or the adjustment to college life itself.

Millegan et al. (2013) conducted the first military population-based study looking at the effects of geographic moves on mental health utilization. In a retrospective cohort study, Millegan et al. (2013) compared all children of active-duty service members who were between the ages of 6 and 17 years on October 1, 2008. Children with geographic moves in 2008 were compared with children without geographic moves regarding the use of mental health services in 2009 (Millegan et al., 2013). The researchers calculated unadjusted odd ratios to predict the odds of a mental health outpatient visit, emergency department visit, or hospitalizations based on whether a child had faced a geographic move the year prior. The results indicated that children who had moved the year prior were significantly more likely to have mental health outpatient visits, emergency visits, and psychiatric hospitalizations in comparison to children who had not moved. This data provides evidence that moving is a risk factor for mental health difficulties in children, whether or not the move is international and requires adjustment to a new culture. Unfortunately, there is no longitudinal data on the long-term adjustment of this specific group of military children.

There has been no research on the mental health of business and government TCKs, specifically. Additionally, there is no research on the long-term impact of global mobility on the mental health of any of the subgroups of TCKs.

Posttraumatic Growth

The term posttraumatic growth, based on research by Tedeschi and Calhoun (1999; 2001; 2004), refers to a positive development in the psychological well-being, due to the struggle with highly difficult life experiences. In their research they use the terms trauma, crisis, highly stressful events, and other similar terms interchangeably (Tedeschi & Calhoun, 2004). As explained earlier in the chapter, many aspects of TCK's lives can be viewed as highly stressful; therefore, this research is aiming to understand if there is any connection of childhood global mobility and post traumatic growth. Calhoun and Tedeschi (2004) explain that posttraumatic growth develops while persons try to adapt to negative situations in their lives which can trigger high levels of psychological distress. In the literature, they found that growth after distressing life events were documented far more frequently than the development of psychiatric disorders. The idea of growth due to struggle has been discussed for thousands of years. As an example, the teachings of Buddhism, Islam, and Christian traditions discuss the transition of suffering into power (Tedeschi & Calhoun, 1995).

Based on earlier research (Epstein, 1990; Janoff-Bulman, 1992; Parkes, 1971), Tedeschi and Calhoun (2004) assume that individuals develop certain sets of beliefs and rely on those to make sense of the world. These beliefs help them make assumptions, which in return help them decide which actions to take, as well as make sense of the causes and effects of what happens to and around them. When major life crisis occurs,

this has a strong effect on an individual's understanding, and processing of the world.

Calhoun and Tedeschi (1998) use the metaphor of an earthquake to explain the process of posttraumatic growth, which follows the traumatic event. Like an earthquake, the seismic impact of psychological trauma, shakes the persons beliefs, assumptions, and typical reactions of the world. The destruction of the understanding of how the world functions usually goes in hand with severe psychological distress (Tedeschi & Calhoun, 2004). After the psychological seismic event, the individual rebuilds their understanding of the world, learns from what has happened, and builds structures which are more resistant for the future. This is what Tedeschi and Calhoun (2004) refer to as posttraumatic growth.

To allow the quantification of the experience of growth, the Post Traumatic Growth Inventory developed by Tedeschi and Calhoun (1996), measures five domains of growth. Through literature review on responses to highly stressful events, such as spousal loss, physical disabilities, and other similar life crisis, they developed a 21-item scale. The scale was based on five major themes of posttraumatic growth which are greater appreciation of life and changed sense of priorities; more intimate relationships with others; a greater sense of personal strength; recognition of new possibilities; and spiritual development (Tedeschi & Calhoun, 1996).

There has been no research on the posttraumatic growth in TCKs or ATCKs specifically. However, the literature on posttraumatic growth shows that the cognitive processing of trauma is supported by talking about the trauma in a supportive environment. As this research concerns two different groups of ATCKs, of which one is assumed to have a more stable, supportive social environment, it is an additional aim of this research to find possible differences in posttraumatic growth.

Cordova et al. (2001) conducted a controlled comparison study on posttraumatic growth following breast cancer. Their cross-sectional study compared self-reports of depression, well-being, and posttraumatic growth of breast cancer survivors with a healthy comparison group of women which matched in age and education (Cordova et al., 2001). The 70 breast cancer survivor participants were all above 18 years of age, less than 5 years post prognosis, more than 2 months after completion of surgery, chemotherapy, and radiotherapy, and they had to be English speaking (Cordova et al., 2001). The 70 healthy women were all above 18 years of age, had no cancer history, they were age matched within 5 years and education-level matched with a participant of the breast cancer group (Cordova et al., 2001). Both groups completed a demographic information form, the six-item physical functioning subscale of the Medical Outcomes Study Health Survey MOS-20 (Stewart et al., 1988), the Duke-UNC Functional Social Support Questionnaire DUKE-SSQ (Broadhead et al., 1988), the Center for Epidemiologic Studies-Depression Scale CES-D (Radloff, 1977), Ryff's Well-Being Scales (Ryff, 1989; 1995), Cancer Patient Behavior Scale CPBS (Ross et al., 1978), and the posttraumatic growth Inventory PTGI (Tedeschi & Calhoun, 1995; 1996). The results showed similar levels of depression and well-being in both groups but greater posttraumatic growth in the breast cancer group. On the CES-D thirty percent of the breast cancer group had scores higher or equal to the cut-off point of .16, compared to thirty-six percent of the healthy group (Cordova et al., 2001). Planned comparisons showed no significant differences between the groups on Ryff's Well-Being Scales (Cordova et al., 2001). Comparing group means on the PTGI showed significance. The breast cancer group had significantly higher scores in the Relating to Others subscale, the

Spiritual Change subscale, and the Appreciation of Life subscale (Cordova et al., 2001). Greater posttraumatic growth was also associated with more talking about the illness with others (Cordova et al., 2001). Cordova et al. (2001) interpreted these findings, such as talking to others about their illness, that it might support reappraisal of the life-threatening situation and therefore integrate the experience of the illness by changing assumptions about the world. Cordova et al. (2001) were of the opinion that this supported the development of deeper meaning, supported the ability to express the patients emotions, and created an opportunity to create a sense of belonging.

Although Cordova et al.'s (2001) research could show significance of posttraumatic growth in breast cancer survivors associated with talking about their illness with others and relating to others in general, the study could not prove posttraumatic growth generally through social support.

Tanriverdi et al.'s (2012) study on posttraumatic growth and social support in Turkish patients with cancer, investigated the role of perceived social support in enhancing the development of posttraumatic growth. Participants were 105 patients with cancer admitted to the Department of Medical Oncology of Gaziantep University Hospital (Tanriverdi et al. 2012). Tanriverdi et al. (2012) used an information form containing questions about demographics, diagnosis, and treatment. They then applied the Post Traumatic Growth inventory (PTGI) developed by Tedeschi and Calhoun (1996), which assessed possible positive changes due the participants illness, and the Multidimensional Scale of Perceived Support (MSPSS) developed by Zimet et al. (1988) to measure perceived social support (Tanriverdi et al., 2012). The majority of participants were female, the mean age was 46.26 years, 86.7% were married, 57.1% had an average

income level, and 61.7% were unemployed (Tanriverdi et al., 2012). Results showed high levels of posttraumatic growth. The highest means were found in the self-perception subscale, the relationship with others sub-scale, and in the changes in philosophy of life sub-scale (Tanriverdi et al., 2012). Additionally, the results showed a positive relationship between perceived social support and changes in the relationship with others. They also found a positive correlation between changes in self-perception, perceived social support, and family support. The researchers conclude that overall, social support had a positive effect on posttraumatic growth of cancer patients. Although these results were promising, the general positive mindset of the participants could be seen as a variable that might have had an effect on the final results of Tanriverdi et al.'s (2012) research. A total of 82.9% of participants stated that they believed the treatment would cure their disease. Therefore, it is not clear whether the social support is the only variable correlating with posttraumatic growth in this sample.

Support for the hypothesis that social support influences the development of posttraumatic growth positively was found by Yu et al. (2013). Their research aimed to show the positive influence of resilience and social support on posttraumatic growth in women with infertility. They assumed a mediating role of positive coping on resilience and social support. The study recruited 182 participants, who were at least six months post-diagnosis, were still trying to have a child, were able to read and understand the questionnaires, and had no other recent life-crisis prior to their diagnosis (Yu et al., 2013). All participants completed the Chinese version of the PTGI (Wang et al., 2011) translated from the original PTGI developed by Tedeschi and Calhoun (1996), the Connor-Davidson Resilience Scale (CD-RISC) developed by Connor and Davidson

(2003), the Simplified Coping Style Questionnaire SCQ (Xie, 1998) to determine positive coping, the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet et al. (1988), as well as a background survey, assessing the participants age, education level, and time since infertility prognosis (Yu et al., 2013). The mean age of participants was 30.5 years. The results of their research suggests that positive coping has a partially mediating effect on the impact of resilience on posttraumatic growth, while it has a total mediating effect on the relationship between social support and posttraumatic growth (Yu et al., 2013).

Yu et al. (2013) conclude that social support showed to be a significant predictor of increased posttraumatic growth in Chinese women with infertility. It is however strongly related to the positive coping abilities of the participants. Therefore, it supports the previous suggestion that a positive mindset and social support combined have a positive effect on posttraumatic growth. Unfortunately, the study by Yu et al. (2013) did not assess the direct effect of social support on posttraumatic growth.

Target groups of this research

Although all subgroups of TCKs have similar challenges, there are interesting differences among their global mobility lifestyles that have yet to be empirically addressed. One key example of the differences is that compared to children of business and government expatriates, children of military affiliates often live on military bases or in close proximity to other military families. These military-based communities can mitigate a big part of the TCKs' host culture's influence. Belonging to these military-based communities allows for regular interactions with other young people from their passport culture who are also coping with living overseas and undergoing similar

changes. In addition to meeting likeminded peers, these military-based communities most likely provide national support services available at school and/or the base which encourage community relationship building. Irrespective of the support that military-based communities provide, Millegan et al. (2013) showed that moving is a risk factor for mental health difficulties. With government and business TCKs repeatedly moving cross culturally, this risk is likely amplified by lack of support of living in a community of others going through the same experience.

A comparison among the types of TCKs is essential. Military TCKs tend to belong to military-based communities whereas diplomatic and business TCKs often attend international schools, which are richly mixed in cultures. The comparison amongst the different types of TCKs allows us to consider whether the expatriation on its own or the expatriation combined with a stronger influence of the host culture is the more powerful predictor. As a result, this comparison will provide data that will allow us to draw conclusions as to which of the two may predict adjustment challenges for children as they progress into adulthood. An indication for a possible mediation is given by Clever and Segal (2013). Clever and Segal found that while moves seem stressful for military children, these children show increased resilience, which included fewer school problems and a positive attitude towards relocation (Weber & Weber, 2005). Additionally, Huebner (2019) proposes that the reason for this positive development is the presence of protective factors, which may include living in military-based communities that provide transitional programs designed to address relocation stressors, which create effective support systems.

The present research aims to ascertain the impact of global mobility during childhood and adolescence on the mental health of two subgroups of ATCKs and a similar sample of monocultural adults who have not relocated during their childhood. I examined this by exploring the following research question: do ATCKs of business and government families show more general mental health problems, more symptoms of anxiety, depression, and stress, and increased posttraumatic growth compared to adult TCKs from military families and monocultural adults? I hypothesized that (H1) ATCKs, both military and government, show more general mental health problems, symptoms of depression, anxiety, and stress as well as increased posttraumatic growth than monocultured adults. Secondly, I hypothesized that (H2) ATCKs from government and business families show more general mental health problems, symptoms of depression, anxiety, and stress, but less posttraumatic growth than ATCKs from military families.

Chapter II

Method

In order to investigate the mental health and posttraumatic growth of TCKs of government and business families, their mental health was compared with similarly aged young adults who moved frequently due to their parents' military careers and to young adults who lived in the same country for their entire childhood.

Participants

After approval from the Harvard Committee on the Use of Human Subjects (CUHS), 168 participants, between the ages of 26 and 36 years of age, were recruited for inclusion in the study. The sample size was calculated using G*Power 3.1 assuming one-way ANOVA with an effect size of 0.25, an alpha of 0.05, and a power of 0.95.

The participants belonged to one of three groups. The first group were participants who grew up as TCKs in a global mobile lifestyle due to government or business parental reasons. Inclusion criteria were having moved a minimum of three times internationally before eighteen years of age in addition to attending an international school. Participants were recruited through the Alumni networks of The British International School of Jeddah (Saudi Arabia) and The Emirates International School Dubai. Additionally, adult TCKs were invited through the well-known third culture kid website <https://www.tckworld.com>. This website is the biggest TCK online-platform. Snowball sampling allowed the initial respondents to share information about the study with their TCK peer network.

The second group were participants who grew up as TCKs in a globally mobile American military family. Inclusion criteria were having moved a minimum of three times internationally between the ages of 0 and 18 and having attended an American School or a Military-base School abroad. Upon approval of the CUHS, participants were recruited through the researcher's personal contacts and the Facebook website 'The Official Overseas BRAT fan page'. As in the first group, snowball sampling tactic was used by requesting these military ATCKs to share the information about the study with their ATCK peer network.

The third group comprised participants of a monocultural background. Inclusion criteria were having never moved internationally between the age 0 to 18, belonging to a monocultural family, and have not attended an international school. In order to achieve a large enough and broad sample, upon approval of the CUHS, the researcher used social media and personal contacts to recruit these participants.

Unfortunately, many potential participants declined to complete the survey or could not be contacted. Qualtrics showed that many participants finished the consent form but did not respond to the survey questions. Others started the survey but did not complete it. Due to these issues, the researcher revised the recruitment approach. Upon approval of the CUHS, the researcher used the platform MTurk to specifically target participants for all three groups included in this research. Participants recruited through MTurk were paid one dollar for a completed survey. All data was kept anonymous. The researcher had no connection with the participants recruited through MTurk.

The invitation for participation in the research project was sent electronically. In an email, the researcher explained the purpose of the survey (i.e., to gain knowledge

about the possible effect of a globally mobile childhood on mental health). Participants were asked to answer questions about their current mental well-being. Participants were assured that participation was anonymous, and information would not be traced back or linked to them since this research was utilizing a secure data collection platform called Qualtrics.

Measures

Participants in all groups were evaluated with three questionnaires. Consistent with the guidelines of the CUHS, the assessment was presented to the participants over the online platform Qualtrics.

The **Self-Reporting Questionnaire-20** (SRQ-20) was utilized in this research. The SRQ-20 was developed by the World Health Organization to measure the presence of common mental health disorders. It consists of 20 items that are answered with either yes or no. The items are scored with a 1 or a 0. A score of 1 indicates the participant stated that the symptom was present in the past month, whereas a score of 0 indicates that the symptom was absent. For safety purposes due to the inability to trace back a participant's response, item 17 which asks 'Has the thought of ending your life been on your mind' was omitted. This question was deemed unethical in the scope of this specific research. The remaining items on the SRQ-20 assess the general mental health, feelings, sleep habits, activity levels, and some somatic factors of a respondent. Van der Westhuizen et al.'s (2016) validation of the SRQ-20 for the use in low- and middle-income countries showed a Cronbach's alpha of 0.84, which indicates good internal validity.

Additionally, the **Depression Anxiety and Stress Scale-21** (DASS-21) was administered. The DASS-21 is a 21-item self-report questionnaire, which is a shortened form of the longer DASS questionnaire developed by Lovibond and Lovibond (1995). It was designed to measure the three related negative affect states of depression, anxiety, and stress (Davis et al., 2013). The Depression scale aims to measure symptoms of dysphoric mood. The Anxiety scale includes items that aim to measure symptoms of autonomic arousal. The Stress scale includes items which measure symptoms of tension (Davis et al, 2013). The survey asks the participants to choose a number from 0 ('did not apply to me at all') to 3 ('applied to me very much or most of the time') for each item, representing how much the statement was relevant to them in the past week. The DASS-21 is interpreted by cut-off scores, "normal" (0–78), "mild" (78–87), "moderate" (87–95), "severe" (95–98), and "extremely severe" (98–100) (Davis et al., 2013). Henry and Crawford's (2005) validation of the DASS-21 showed a Cronbach's alpha of 0.88 for the Depression scale, 0.82 for the Anxiety scale, 0.90 for the Stress scale, and 0.93 for the Total scale.

Finally, the short form of the **Posttraumatic Growth Inventory** (PTGI-SF) developed by Cann et al. (2010) was utilized in this research. The PTGI-SF is a 10-item questionnaire that aims to evaluate the sense of positive change in life resulting from one or more stressful life events (Bellet et al., 2018). The items of the PTGI-SF cover the five domains of PTG proposed by Tedeschi and Calhoun (1996), with two items for each domain (Bellet et al, 2018). These domains are Spiritual Change, Appreciation of Life, Personal Strength, Relating to Others, and New Possibilities. For the purposes of this study, participants were asked to answer the questions in regard of their non-global

mobile or global mobile childhood. The items were scored by the participants on a 6-point Likert scale (0 = I did not experience this change as a result of my (non)-globally mobile childhood, 5 = I experienced this change to a very great degree as a result of my (non)-globally mobile childhood). Cann et al.'s (2010) validation of the PTGI-SF showed a Cronbach's alpha of 0.86 for the total scores.

Data collection

The researcher collected all scores of the assessment through the online tool Qualtrics, and had sole access to them. No personal data of participants was collected to ensure their anonymity.

Human Subjects Protection

An electronic, written consent form following the checklist of the U.S Department of Health & Human Services (<https://www.hhs.gov/ohrp/regulations-and-policy/guidance/checklists/index.html>, 1998) was presented to all participants. The informed consent form explained the purpose of the study and that it involved research on adult third culture children and monocultural children and the relationship of childhood global mobility and general mental health, symptoms of anxiety, depression, and stress, as well as posttraumatic growth during early adulthood. The expected duration of the survey was 20 minutes. There were no foreseeable risks of this research. Subjects may have felt slightly uncomfortable answering questions about their mental health. However, the results of this research could benefit the lives of future TCKs.

The risk of the participants was held at a minimum since the responses collected by the survey were not connected to any personal data. The participants were not asked

for any personal data. If the participants had any further questions about the research project or process, they had the ability to contact the researcher at any time throughout the study directly under the email address raw021@g.harvard.edu. The participants were informed that participation in this research project was completely voluntary, and the refusal to participate would not have any consequences. The participants could discontinue participation at any given time.

Design

This study was a cross-sectional survey between-subjects design. It was designed to study the possible effect of a globally mobile childhood on the development of symptoms of general mental health problems, symptoms of anxiety, depression, and stress, as well as possible posttraumatic growth.

Procedure

The researcher invited participants of all three groups to complete the surveys electronically utilizing Qualtrics and MTurk. The invitation was provided as follows: “Thank you very much for participating in this research project on the effects of global mobility during childhood on mental health and posttraumatic growth. Please fill out the following survey consisting of three questionnaires regarding your mental health and view of life, as accurately as possible. Your answers will be anonymous, none of your personal data will be stored. Responses to the surveys are not traceable to you. The participation in this research study is completely voluntary, and you may discontinue participation at any given time. The refusal to participate will not have any consequences.” After this introduction, the participants were invited to sign an electronic

informed consent form, which contained more detailed information about the research, as described above. If the participant agreed to the informed consent form, the surveys were administered one question after the other. The participants had to complete each question then click 'next' on their screen to move forward to the following question. After completing all three surveys, the participants received the following message, "Thank you for taking the time to complete the surveys. If you have any further questions or would like to be informed about the research project results, please do not hesitate to contact the researcher at any time, under the following email address raw021@g.harvard.edu. You will not be asked to share any private information if you decide to do so."

Analysis Plan

After data collection, descriptive statistics were examined to check for missing or out of range data. Reliability was tested for all scales by calculating Cronbach's alpha. The results for the SRQ-20 showed a Cronbach's alpha of .913. For the DASS-21 the Cronbach's alpha showed .971. Cronbach's alpha for the PTGI-SF showed .910. The subscales of the DASS-21 showed a Cronbach's alpha of .920 for the Depression subscale, a Cronbach's alpha of .929 for the Anxiety subscale, and a Cronbach's alpha of .913 for the Stress subscale.

The results are presented in Tables 1, 2, and 3.

To test the main hypothesis that government and business ATCKs would report more general mental health problems and more symptoms of anxiety, depression, and stress, as well as increased posttraumatic growth, than either military or monocultural adults, scores on the SRQ-20, the DASS-21, and the PTGI-SF were compared between

the three groups using one-way independent ANOVA. Furthermore, the three subscales of the DASS-21 were compared between the three groups using a one-way ANOVA.

To check for an overall difference between the groups, post hoc testing was run with Hochberg's GT2.

Table 1

Reliability Statistics SRQ-20.

		N	%
CASES	Valid	205	94.5
	Excluded	12	5.5
	Total	217	100.0

	CRONBACH'S ALPHA	N OF ITEMS
	.913	19

Table 2

Reliability Statistics DASS-21.

		N	%	CRONBACH'S ALPHA	N OF ITEMS
OVERALL					
CASES	Valid	205	94.5		
	Excluded	12	5.5		
	Total	217	100.0	.971	21
DEPRESSION					
CASES	Valid	213	97,7		
	Excluded	5	2.3		
	Total	218	100.0	.920	7
ANXIETY					
CASES	Valid	215	98.6		
	Excluded	3	1.4		
	Total	218	100.0	.929	7
STRESS					
CASES	Valid	212	97.2		
	Excluded	6	2.8		
	Total	218	100.0	.913	7

Table 3

Reliability Statistics PTGI-SF.

		N	%
CASES	Valid	211	97.2
	Excluded	6	2.8
	Total	217	100.0

	CRONBACH'S ALPHA	N OF ITEMS
	.910	10

Chapter III

Results

The descriptive output from SPSS showed that the standard deviations of the groups presented no signs of extreme outliers, because they were very similar. The group of government and business ATCKs differed in size significantly ($N = 123$), whereas the group of military ATCKs ($N = 43$), and mono-cultural adults ($N = 52$) were similar in size. Therefore, Hochberg's GT2 was analyzed in the post hoc descriptive statistics. The results are presented in Table 4.

Homogeneity of variance

Levine's test showed that the assumption of homogeneity was not violated in the SRQ, DASS, or PTGI-SF. Although the SRQ was close to showing statistical significance, it was still higher than .05, with $p = 0.056$. The DASS was statistically insignificant, at $p = .588$, and the PTGI-SF showed statistical insignificance at $p = .790$. Therefore it was concluded that the variances of the groups are not significantly different. The results are reported in Table 5.

ANOVA

A one-way ANOVA was performed to compare the differences in between groups for all three measures.

The results of the one-way ANOVA showed that there was no statistically significant difference among groups for the SRQ ($F(2,215) = [.67]$, $p = .515$).

There was a statistically significant difference in between groups for the DASS-21 ($F(2,215) = [10.15], p < .001$). Military ATCKs showed the highest amount of distress on the DASS-21 ($M = 2.677, SD = .689$), followed by government and business ATCKs ($M = 2.521, SD = .782$), and mono-cultural adults ($M = 2.043, SD = .723$).

Furthermore, the results showed there was a statistically significant difference in between groups for the PTGI-SF ($F(2,214) = [4.70], p = .01$). Here, government and business ATCKs showed the highest amount of posttraumatic growth ($M = 4.324, SD = .958$), followed by military ATCKs ($M = 4.178, SD = 1.018$), and mono-cultural adults ($M = 3.821, SD = 1.025$). The results are presented in Table 6.

As the DASS-21 consists out of three subscales, a one-way ANOVA was performed for all three of those subscales.

The results showed that there was a statistically significant difference between groups on the Depression subscale ($F(2,215) = [9.8], p < .001$), a statistically significant difference between the groups on the Anxiety subscale, ($F(2,215) = [9.62], p < .001$), as well as a statistically significant difference in between the groups on the Stress subscale ($F(2,215) = [8.96], p < .001$). The results are presented in Table 7.

Post Hoc Tests

The DASS Hochberg's GT2 showed that business and government ATCKs scored significantly higher than mono-cultural adults ($p < .001$), as well as military ATCKs did ($p < .001$). Business and government ATCKs did not differ significantly from military ATCKs on the DASS ($p = .565$). The results are presented in Table 8.

The PTGI-SF Hochberg's GT2 showed that business and government ATCKs did not significantly differ from military ATCKs ($p = .780$) in their scores. Military ATCKs did also not differ significantly from mono-cultural adults ($p = .229$). However, business and government ATCKs scored significantly higher than mono-cultural adults ($p = .007$). The results are presented in Table 8.

Hochberg's GT2 of the Depression subscale of the DASS-21 showed that business and government ATCKs did not significantly differ from military ATCKs ($p = 0.211$). However, business and government ATCKs ($p = .002$) as well as military ATCKS ($p < .001$) scored significantly higher than mono-cultural adults.

Hochberg's GT2 showed similar results for the DASS-21 subscale for Anxiety. Business and government ATCKs did not significantly differ from military ATCKs ($p = 0.826$), but business and government ATCKs ($p < .001$) as well as military ATCKS ($p < .001$) scored significantly higher than mono-cultural adults.

The results of Hochberg's GT2 for the Stress subscale of the DASS-21 showed the same results. Business and government ATCKs did not significantly differ from military ATCKs ($p = 0.791$), but business and government ATCKs ($p < .001$) as well as military ATCKS ($p < .001$) scored significantly higher than mono-cultural adults.

All results of Hochberg's GT2 for the DASS-21 subscales are presented in table 9.

Table 4

Descriptive Statistics.

	N	MEAN	STD. DEVIATION
SRQ			
ADULT THIRD CULTURE KID (GOVERNMENT/BUSINESS)	123	23.7724	5.61294
ADULT THIRD CULTURE KID (MILITARY)	43	24.6977	4.82323
MONO-CULTURAL ADULT	52	23.5192	4.72992
TOTAL	218	23.8945	5.25768
DASS			
ADULT THIRD CULTURE KID (GOVERNMENT/BUSINESS)	123	2.5216	.07053
ADULT THIRD CULTURE KID (MILITARY)	43	2.6773	.10513
MONO-CULTURAL ADULT	52	2.0426	.10026
TOTAL	218	2.4381	.05297

PTGI			
ADULT THIRD CULTURE KID (GOVERNMENT/BUSINESS)	123	4.3249	.08639
ADULT THIRD CULTURE KID (MILITARY)	43	4.1766	.15526
MONO-CULTURAL ADULT	52	3.8216	.14358
TOTAL	218	4.1772	.06808

Table 5

Test of Homogeneity of Variances.

		LEVENE STATISTIC	DF1	DF2	SIG.
SRQ	Based on mean	2.913	2	215	.056
	Based on median	2.872	2	215	.059
	Based on median and adjusted df	2.872	2	213.523	.059
	Based on trimmed mean	2.789	2	215	.064
DASS	Based on mean	.532	2	215	.588
	Based on median	.898	2	215	.409
	Based on median and adjusted df	.898	2	208.516	.409
	Based on trimmed mean	.580	2	215	.561
PTGI-SF	Based on mean	.236	2	214	.790
	Based on median	.286	2	214	.752
	Based on median and adjusted df	.286	2	189.109	.752
	Based on trimmed mean	.207	2	214	.813

Table 6.

ANOVA results using SRQ-20, DASS-21, and PTGI-SF as criteria

	MEAN	SD	DF	MEAN SQUARE	F	SIG.
SRQ						
BETWEEN GROUPS			2	18.448	.665	.515
WITHIN GROUPS			215			
TOTAL	23.895	5.258	217	27.729		
DASS						
BETWEEN GROUPS			2	5.725	10.150	<.001
WITHIN GROUPS			215	.564		
TOTAL	2.438	.782	217			
PTGI-SF						
BETWEEN GROUPS			2	4.567	4.697	.010
WITHIN GROUPS			214	.972		
TOTAL	4.177	1.003	216			

Table 7.

ANOVA results using the subscales of Depression, Anxiety, and Stress of the DASS-21 as criteria.

	MEAN	STD. ERROR	DF	MEAN SQUARE	F	SIG.
DASS DEPRESSION						
BETWEEN GROUPS			2	6.017	9.797	<.001
WITHIN GROUPS			215	.614		
TOTAL	2.415	.815	217			
DASS ANXIETY						
BETWEEN GROUPS			2	6.478	9.621	<.001
WITHIN GROUPS			215	.673		
TOTAL	2.378	.853	217			
DASS STRESS						
BETWEEN GROUPS			2	4.965	8.964	.010
WITHIN GROUPS			214	.554		
TOTAL	2.522	.771	216			

Table 8

Post Hoc Multiple Comparisons.

			MEAN	STD.- ERROR	SIG.
DASS	Adult Third Culture Kid (government/business)	Adult Third Culture Kid (military)	-.156	.133	.565
		Mono-Cultural Adult	.479	.124	< .001
	Adult Third Culture Kid (military)	Adult Third Culture Kid (government/business)	.156	.133	.565
		Mono-Cultural Adult	.635	.155	< .001
	Mono-Cultural Adult	Adult Third Culture Kid (government/business)	-.479	.124	< .001
		Adult Third Culture Kid (military)	-.635	.155	< .001
PTGI-SF	Adult Third Culture Kid (government/business)	Adult Third Culture Kid (military)	.148	.175	.780
		Mono-Cultural Adult	.503	.164	.007
	Adult Third Culture Kid (military)	Adult Third Culture Kid (government/business)	-.148	.175	.780
		Mono-Cultural Adult	.355	.204	.229
	Mono-Cultural Adult	Adult Third Culture Kid (government/business)	-.503	.164	.007
		Adult Third Culture Kid (military)	.355	.204	.229

Dependent variable: Group; Hochberg's GT2

Table 9

Post Hoc Multiple Comparisons of DASS-21 subscales.

			MEAN	STD.- ERROR	SIG.
DASS DEPRESSION					
	Adult Third Culture Kid (government/business)	Adult Third Culture Kid (military)	-,247	.139	.211
		Mono-Cultural Adult	.441	.130	.002
	Adult Third Culture Kid (military)	Adult Third Culture Kid (government/business)	.247	.139	.211
		Mono-Cultural Adult	.688	.162	<.001
	Mono-Cultural Adult	Adult Third Culture Kid (government/business)	-.441	.130	.002
		Adult Third Culture Kid (military)	-.688	.162	<.001
DASS ANXIETY					
	Adult Third Culture Kid (government/business)	Adult Third Culture Kid (military)	-.112	.145	.826
		Mono-Cultural Adult	.532	.136	<.001
	Adult Third Culture Kid (military)	Adult Third Culture Kid (government/business)	.112	.145	.826
		Mono-Cultural Adult	.646	.170	<.001
	Mono-Cultural Adult	Adult Third Culture Kid (government/business)	-.534	.136	<.001

		Adult Third Culture Kid (military)	-.646	.169	<.001
DASS STRESS					
	Adult Third Culture Kid (government/business)	Adult Third Culture Kid (military)	-.109	.132	.791
		Mono-Cultural Adult	.463	.123	<.001
	Adult Third Culture Kid (military)	Adult Third Culture Kid (government/business)	.109	.132	.791
		Mono-Cultural Adult	.572	.153	<.001
	Mono-Cultural Adult	Adult Third Culture Kid (government/business)	-.463	.123	<.001
		Adult Third Culture Kid (military)	-.572	.153	<.001

Dependent variable: Group; Hochberg's GT2

Chapter IV

Discussion

I hypothesized that ATCKs, both military and government and business, would report more symptoms of mental health problems and posttraumatic growth than the mono-cultural adults. Secondly, I hypothesized that ATCKs from government and business families would exhibit more symptoms of mental health problems but fewer signs of posttraumatic growth in comparison to ATCKs from military families.

The results yielded some interesting findings. The data provided preliminary evidence favoring part of the first hypothesis. Although the SRQ-20 showed statistically insignificant results overall and in all groups, the DASS-21 showed statistically significant higher scores of ATCK groups, compared to the mono-cultural adults overall, and on all three subscales. Therefore, this research indicates support of previous research on depression and anxiety in TCKs. As Davis et al. (2010; 2013), Kotesky (2008), Cockburn (2002), Gaw (2000), and Millegan et al. (2013) suggested, there is a strong indication that there is an association between childhood global mobility and the occurrence of symptoms of depression and anxiety in adult TCKs. The data of this study show differences between the TCK groups and the monocultural group in symptoms of depression and anxiety, indicating that TCKs show more symptoms of anxiety, depression, and stress. It is important to add that the results do not represent a clinical diagnosis of depression and anxiety in the ATCK participants of this study.

Contrary to the expectations, the second part of the first hypothesis was only partially supported. The short form of the Posttraumatic Growth Inventory (PTGI-SF) provided support for the hypothesis that ATCKs from government and business families show significantly more posttraumatic growth than the mono-cultural adults of this sample. However, ATCKs from military families did not reach a statistically significant result in comparison to the group of mono-cultural adults. This is an interesting finding, as the two ATCK groups do not significantly differ in their results on the DASS-21 overall, nor in either subscale. The results of the PTGI-SF suggest that the two groups experienced their childhood differently.

One possible explanation is the presence of protective factors during childhood, which may include living in military-based communities that provide transitional programs designed to address relocation in particular, which create effective support systems, as suggested by Huebner (2019). It is possible that the community supports a positive and supportive base, which buffer children against relocation stress. As Weber and Weber (2005) also suggested military children showed more resilience and a more positive attitude towards relocation. It is possible that children from military families do experience relocation as stressful, as the results of the DASS-21 in this study indicate, but the support system buffering the relocations prevents them of experiencing relocation stress as traumatic. Since there is no clinical evidence of trauma in any of the groups of this research, this is only an assumption and needs further research to be clinically supported.

As this research does not investigate, if global mobility during the childhood of TCKs causes trauma, we cannot be certain why military and business and government

ATCKs differ in their post traumatic growth. Further research should investigate if there is a correlation between trauma and global mobility during childhood and if it differs in the two populations investigated in this study.

The second hypothesis, that ATCKs from government and business families exhibit more mental health problems but fewer signs of posttraumatic growth in comparison to ATCKs from military families, was not supported. The DASS-21 did not show any differences between the two groups of adult TCKs. The results suggest that both groups show a similar amount of symptoms of depression, anxiety, and stress.

Contrary to the researcher's expectations, the data did not support the second part of the second hypothesis, which assumed that government and business TCKs would show less posttraumatic growth. Indeed, the results of the PTGI-SF provided evidence for the opposite effect. Statistical significance could only be reached in the population of adult business and government TCKs, not for adult military TCKs.

As explained earlier, this study did not focus on the correlation between childhood global mobility and PTSD in ATCKs. The data can therefore only demonstrate the possibility that business and government TCKs may have experienced their globally mobile childhood as traumatic, whereas military TCKs did not. Therefore, the argument of social support increasing posttraumatic growth is not supported by the results.

The general picture emerging from the analysis is that there is a significant difference in symptoms of depression, anxiety, and stress between monocultural adults and ATCKs overall. This supports the findings of Puskar and Ladely (1992) and Mok et al. (2016), who found evidence that relocation had a negative effect on the mental health of mono-cultural children. Because the mono-cultural population in this study never

moved internationally before they were eighteen years old, the findings of this research indicate that there could be some kind of negative effect on the mental health of ATCKs as a result of their globally mobile upbringing. Although this study does not identify the causes for these differences, taken altogether, the data presented here provide evidence that childhood global mobility possibly has some kind of effect on the development of symptoms of depression, anxiety, and stress in adulthood. Although this study presents evidence for differences in between the groups, it does not present a clinical diagnosis of depression, and anxiety in ATCKs in either groups investigated.

Due to several limitations, the results are not generalizable beyond the study sample, but they do offer an interesting warrant for further discussion and research. TCKs face many challenges which can affect their mental health in adulthood. The general picture emerging from this research is that there is a need for greater understanding of these challenges which TCKs face. Future studies should explore correlations between symptoms of depression, anxiety, and stress in adulthood, clinical diagnoses of depression, and anxiety, and the challenges resulting of childhood global mobility in ATCKs, so these challenges can be addressed in more detail. At present this study does not let us determine the factors which explicitly lead to a significant difference in symptoms of depression, anxiety, and stress between monocultural adults and ATCKs.

Research Limitations

Theoretical writers suggest a significant influence of childhood global mobility on TCKs regarding their general mental health in adulthood (Pollok et al., 2017; Cockburn, 2002; Koteskey, 2008; White, 1983; Walters, 1991). To the researcher's knowledge, the present study is the first empirical study on the general mental health, symptoms of

anxiety, depression, and stress, as well as posttraumatic growth of ATCKs. It is possible that due to the small sample size of ATCKs, the findings will not be generalizable to the whole population of ATCKs. Another limitation lies in the inability of the researcher to collect data from European Union participants, where many ATCKs might have settled. This is due to federal regulation issues. Future studies can hopefully include European ATCKs to bring more attention to this part of the ATCK population, and have the possibility to create a more inclusive picture of all groups of ATCKs.

The researcher had no control of the truthfulness of the participants answers, as well as how well they have read the survey questions, or if they read them at all. The researcher had to fully rely on the truthfulness of the participants answers, and the validity of their inclusion criteria as defined by the recruitment form.

In addition, the study sample of this research was small and unevenly distributed over the three groups. The most dominant group in this research was the group of government and business ATCKs ($N = 123$), followed by monocultural adults ($N = 52$), and military ATCKs ($N = 43$), which might have skewed the results.

The study only assessed the current mental health of participants. There might be other correlational factors playing a role in the mental health of ATCKs that are unrelated to global mobility during childhood. These factors might have taken place during the childhood or adulthood, and had a negative effect on the mental health of participants. The only way to control for these possible confounding variables would be to conduct a longitudinal study that could control for them. Importantly, this study only measured symptoms of anxiety and depression but did not assess a clinical diagnosis.

Additionally, this study was not an experiment. The researcher did not create a controlled environment, and therefore could not control for all variables which may have contributed to current mental health problems or the absence of such. It is possible that current family problems, problems at work, health problems, or other personal challenges and successes had an effect on the results of the surveys.

In line with this limitation, probably the most impactful limitation assessing the current mental health of participants is the ongoing pandemic. Its effects on the mental health of the world population are not yet known, but it could possibly have contributed to the poorer mental health of all participants in this research. Because in-person interviews were not part of this study, due to time and travel limitations, this variable could not be controlled by the researcher. We therefore do not know if the significant results of the DASS-21 in ATCK's were a result of their global mobility in childhood or current difficulties which arose through the pandemic. It is possible that factors such as travel restrictions which resulted in long-term family separations also had an impact on the mental health of this population in the present study. Not being able to connect with family and friends during a frightening time in everybody's lives can possibly make life a lot harder. Not knowing when it is possible to reconnect with loved ones, can put a strong emotional strain on the individual, their families, their friendships, and their relationships. Mono-cultural adults were probably less affected by travel restrictions and family separation since they are more likely to live close to their families and friends.

The study kept all participants anonymous. Therefore, the research could not take demographic and personal data, such as socio-economic status, times moved during childhood, and any other private variables into consideration while analyzing the data.

However, this information could be helpful to draw a more detailed picture of how the general mental health of participants could have been influenced. Relationship status, income, level of education, and other personal data should be retrieved in further research to create a more diverse picture of the possible effects of childhood mobility on mental health.

Another limitation of this study lies in the assumption that both groups of ATCKs experienced their globally mobile childhood as traumatic. Previous research had shown that TCKs experience their moves as stressful, but there has been no research providing information that TCKs experience their globally mobile childhood as traumatic. Due to limited research on TCKs, this assumption was made to find a possible indication of a correlation between childhood global mobility and PTSD. As the research was able to show significant results of posttraumatic growth in business and government ATCKs but failed to do so in military ATCKs, the assumption seems to not be able to be generalized over all groups of TCKs and ATCKs.

Additionally, the PTGI-SF was designed for individuals who have been clinically diagnosed with PTSD or have experienced trauma sufficient to meet criteria for PTSD. As indicated above, we have no information if the ATCKs, as well as the mono-cultural participants of this study met clinical criteria for PTSD since this lies out of the scope of this research. Therefore, we cannot know for certain if the results of PTGI-SF for this research are reliable.

Further Research Recommendations

Because the empirical literature on mental health in ATCKs is very limited, this work is intended as a steppingstone to further research in this area. The more knowledge

we can acquire about this population, the more we can apply meaningful preventative measures to lessen the mental health problems that may be experienced by TCKs and ATCKs. Accordingly, a longitudinal study of the targeted groups of participants would give a complete insight of effects and results of childhood global mobility on the general mental health of ATCKs.

As mentioned in the preceding chapter, the ongoing pandemic possibly has a strong influence on the mental health of TCKs and ATCKs, as it has on everybody around the world. Further research on TCKs and ATCKs should aim at investigating whether the pandemic affected this population differently than mono-cultural adults, and if there is any necessity for more mental health support in the international communities around the globe.

As the research was able to show significant results of posttraumatic growth in business and government ATCKs but failed to do so in military ATCKs, further research should focus on PTSD in TCKs and ATCKs. It would be helpful for further research in this area to understand if there is a general picture of PTSD in this population, and how different types of TCKs and ATCKs differ from each other. Understanding if trauma can be triggered in children by the expatriate lifestyle of globally mobile families can help to further understand protective factors to take into consideration in future research.

A general better understanding of the effects of global mobility on expatriate families as a construct, is a further interesting angle to take into consideration in further research. Questions as: ‘Which family structures support mental health, and which do not.’, ‘Does the age of children, and the amount of relocation make a difference?’, ‘Is the ability of the parents to cope with relocation, and adapt to the life in new places and

cultures a factor which can indicate the children's ability to adjust?', and 'can this be a protective factor for ATCKs, when separating from the expatriate family life to build a life of their own?' are only of a few of many possibly interesting questions that can be asked in the future.

Appendix A

Definitions of Terms

Adult Third Culture Kids (ATCKs)

Adults who have lived a significant part of their childhood and adolescence developmental years in one or more countries outside their passport country due to their parent's occupation.

Globally mobile family

A family unit with at least one underaged child who moves internationally according to the needs of the employer of one or both parents.

Monocultural adults

Adults who grew up in a monocultural environment with both parents having the same passport country as themselves. Monocultural adults have not lived outside their passport country during their developmental years.

Appendix B

Self-Reporting Questionnaire (SRQ-20)

Please read each statement and answer it with YES or NO indicating how much the statement applied to you over the past year. There are no right or wrong answers. Do not spend too much time on any statement.

Items included in the SRQ-20 (English version)	YES	NO
1. Do you often have headaches?		
2. Is your appetite poor?		
3. Do you sleep badly?		
4. Are you easily frightened?		
5. Do your hands shake?		
6. Do you feel nervous, tense or worried?		
7. Is your digestion poor?		
8. Do you have trouble thinking clearly?		
9. Do you feel unhappy?		
10. Do you cry more than usual?		
11. Do you find it difficult to enjoy your daily activities?		
12. Do you find it difficult to make decisions?		
13. Is your daily work suffering?		
14. Are you unable to play a useful part in life?		
15. Have you lost interest in things?		
16. Do you feel that you are a worthless person?		
17.		
18. Do you feel tired all the time?		
19. Are you easily tired?		
20. Do you have uncomfortable feelings in your stomach?		
SRQ-20 Total Score (total of yes)		

Appendix C

Depression Anxiety and Stress Scale (DASS-21)

Please read each statement and give it a number 0, 1, 2, or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 = Did not apply to me at all – NEVER

1 = Applied to me to some degree, or some of the time – SOMETIMES

2 = Applied to me to a considerable degree, or a good part of time – OFTEN

3 = Applied to me very much, or most of the time – ALMOST ALWAYS

Items included in the DASS-21 (English version)	0	1	2	3
1. I found it hard to wind down				
2. I was aware of dryness in my mouth				
3. I couldn't seem to experience and positive feeling at all.				
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)				
5. I found it difficult to work up the initiative to do things				
6. I tended to over-react to situations				
7. I experienced trembling (e.g., in the hands)				
8. I felt that I was using a lot of nervous energy				
9. I was worried about situations in which I might panic and make a fool of myself				
10. I felt that I had nothing to look forward to				
11. I found myself getting agitated				
12. I found it difficult to relax				
13. I felt down-hearted and blue				
14. I was intolerant of anything that kept me from getting on with what I was doing				
15. I felt I was close to panic				
16. I was unable to become enthusiastic about anything				
17. I felt I wasn't worth much as a person				
18. I felt that I was rather touchy				
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)				
20. I felt scared without any good reason				
21. I felt that life was meaningless				

Appendix D

Posttraumatic Growth Inventory (PTGI-SF)

Please read each statement and give it a number 0, 1, 2, 3, 4, or 5 which indicates how much the statement applied to you thinking of your childhood (up to age 18). There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 = I did not experience this change as the result of my childhood.

1 = I experienced this change to a very small degree as a result of my childhood.

2 = I experienced this change to a small degree as a result of my childhood.

3 = I experienced this change to a moderate degree as the result of my childhood.

4 = I experienced this change to a great degree as a result of my childhood.

5 = I experienced this change to a very great degree as a result of my childhood.

Items included in the PTGI-SF (English version)	1	2	3	4	5
1. I changed my priorities about what is important in life.					
2. I have a greater appreciation for the value of my own life.					
3. I am able to do better things with my life.					
4. I have a better understanding of spiritual matters.					
5. I have a greater closeness with others.					
6. I established a new path for my life					
7. I know better that I can handle difficulties.					
8. I have a stronger religious faith.					
9. I discovered that I am stronger than I thought I was.					
10. I learned a great deal about how wonderful people are.					

Appendix E

Standardized Recruitment Form

Survey study on the mental health of adult third culture children and monocultural adults

We invite you to take part in a research study because you are:

1. An Adult Third Culture Kid (ATCK) who grew up in a globally mobile lifestyle due to government and business parental reasons, and have moved a minimum of three times internationally before eighteen years of age in addition to attending an international school.
2. An Adult Third Culture Kid (ATCK) who grew up in a globally mobile American military family, and have moved a minimum of three times internationally before eighteen years of age in addition to attending an American School or Military-base School.
3. You have a monocultural background and have never moved internationally before eighteen years of age.
4. You are between 26 and 36 years old.
5. You currently do NOT live in the EEA and UK.

The mobility of families is growing continuously. As the world becomes increasingly more multi-cultural, the global mobility of families becomes a vital factor to consider in the development of children that lead their lives moving between multiple cultures. Studies on adults who grew up in a globally mobile family due to their parents' occupation are mostly theoretical in nature, such individuals are referred to as "Third Culture Kids" (TCKs). Little is understood about how international childhood mobility affects TCKs' mental health in adulthood.

This study aims to clarify the relationship between having a globally mobile childhood and mental health in adulthood.

It will compare the general mental health, levels of anxiety, depression and stress, and Signs of posttraumatic growth of government and business ATCKs, military ATCKs, and a group of mono cultural adults.

Learning more about the differences in the general mental health of ATCKs and mono cultural adults can possibly help to develop a structured support system for expatriate families and their children.

You will be asked to complete three questionnaires in total, which will take you about 20 minutes. All data will be confidential and no answers will be able to be tracked back to you.

Thank you very much for your interest and possible participation in our study!

Appendix F

MTurk Recruitment Form

Title:

Do early childhood mobility and cultural changes encourage poorer general mental health in adulthood?

Description:

This study aims to clarify the relationship between having a globally mobile childhood and Mental health in adulthood. You will be asked to complete three questionnaires in total, which will take you about 20 minutes.

Keywords:

survey, third culture kids, TCKs, ATCKs, military brats, anxiety, depression, posttraumatic growth, cultural changes, childhood mobility

Survey Link Instructions:

We invite you to take part in a research study because you are:

1. An Adult Third Culture Kid (ATCK) who grew up in a globally mobile lifestyle due to government and business parental reasons, and have moved a minimum of three times internationally before eighteen years of age in addition to attending an international school.
2. An Adult Third Culture Kid (ATCK) who grew up in a globally mobile American military family, and have moved a minimum of three times internationally before eighteen years of age in addition to attending an American School or Military-base School.
3. You have a monocultural background and have never moved internationally before eighteen years of age.
4. You are between 26 and 36 years old.
5. You currently do NOT live in the EEA and UK.

The mobility of families is growing continuously. As the world becomes increasingly more multi-cultural, the global mobility of families becomes a vital factor to consider in the development of children that lead their lives moving between multiple cultures. Studies on adults who grew up in a globally mobile family due to their parents' occupation are mostly theoretical in nature, such individuals are referred to as "Third Culture Kids" (TCKs). Little is understood about how international childhood mobility affects TCKs' mental health in adulthood.

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It will compare the general mental health, levels of anxiety, depression and stress, and signs of posttraumatic growth of government and business ATCKs, military ATCKs, and a group of mono cultural adults.

Learning more about the differences in the general mental health of ATCKs and mono cultural adults can possibly help to develop a structured support system for expatriate families and their children.

You will be asked to complete three questionnaires in total, which will take you about 20 minutes. All data will be confidential and no answers will be able to be tracked back to you.

Thank you very much for your interest and possible participation in our study!

Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box.

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