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Examining the Interacting Effects of Marital Role Salience and Satisfaction on Mental Health Trajectories of Female Expatriates

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Examining the Interacting Effects of Marital Role Salience and Satisfaction
on Mental Health Trajectories of Female Expatriates

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

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Abstract

Expatriate populations encounter significant change throughout their expatriation experience, yet little is known about the individual expatriate's mental health changes throughout the first year of this process. Even less explored is the impact that marital satisfaction and marital role salience have on the mental health trajectories of this population. Using hierarchical linear modeling, this study examined the mental health trajectories of a cohort of females ($N = 32$; age $M = 38.63$, $SD = 2.65$) moving with their spouses to Turkey. Further, the moderating effects of marital satisfaction (KMSS; Schumm, Milliken, Poresky, Bollman, & Jurich, 1983) and marital role salience (LRSS; Amatea et al., 1986) on these longitudinal mental health (MHI; Stewart, Ware, Sherbourne, & Wells, 1998; Veit & Ware, 1983) trajectories was explored. Data were collected at 2 weeks, 6 weeks, 3 months, 6 months and 12 months post-arrival in country. There was no significant trajectory for mental health across time, but statistically significant moderation of the trajectories by aggregate mental health was found (AGMHITOT, $\beta_{12} = .004$, $SE = .001$, $p = .041$; AGMHITOT, $\beta_{22} = -.000$, $SE = .000$, $p = .039$) and aggregate marital satisfaction was found to have a significant moderating effect on initial ratings of mental health (AGKMS, $\beta_{02} = 0.027$, $SE = .048$, $p = .574$). In the final model, marital role salience had a significant interaction (AGKMS, $\beta_{11} = .122$, $SE = .066$, $p = .077$) with marital satisfaction and was, itself, significantly moderated by aggregate mental health (AGMHITOT, $\beta_{12} = .037$, $SE = .009$, $p < .001$). Hypothesized impacts of marital satisfaction on mental health were not demonstrated, nor was significant change over time in mental health; sample size may have impacted this lack of

findings. The results demonstrated that trait standings of mental health and marital satisfaction had more significant effects than these same variables measured independently across time. Exploring overall traits may therefore better predict well-being factors among expatriate populations during times of adjustment. The part of role expectations, trait mental health, and individual components of mental health are presented as areas for continued study.

CHAPTER I

Literature Review

Introduction

The purpose of my dissertation was to explore the context-specific change in mental health trajectories for expatriate spouses as affected by their ratings of marital satisfaction and marital role salience. Specifically, I proposed that mental health trajectories would be predicted by the marital satisfaction that an expatriate spouse experiences. I hypothesized that this relationship would be moderated by the role salience of the marital relationship.

As the world becomes increasingly global, individuals are moving across borders and into new cultural domains at greater rates than ever before (United Nations, 2015; van Riemsdijk, & Wang, 2016). For women relocating internationally, there are many difficulties that confront them relationally, vocationally, and intrapersonally (Bikos et al., 2007; Wechtler, 2015). Expatriate research has historically focused on the organizational and interpersonal factors that impact an expatriate-employee and their success in an international post (Brewster, Bonache, Cerdin, & Suutari, 2014). This focus on employee-specific outcomes has generally left a hole in the literature by overlooking the holistic systems in which the expatriate-employee exists (Bonache, Brewster, & Suutari, 2001; Takeuchi, 2010). One of the primary systems that demands greater attention is that of the global family.

Cartus (2007) found that 70% of expatriate assignees are male, and close to half of assignees are completing their assignment with their spouse. Considering this, the female-expatriate spouse becomes a central person within the global family and her

experience overseas becomes a salient factor. Cartus (2007) found that a premier reason for denial of expatriate appointment on behalf of the assignee is concern for the spouse's experience overseas in adjustment and in career continuation. Further, conflict between work and family have been seen to uniquely predict desire for early international assignment withdrawal, and strain within the spousal relationship has been identified as one of the leading predictors of premature international assignment extraction (Cole & Nesbeth, 2014; Shaffer, Harrison, Gilley, & Luk, 2001). If spouses are sojourning alongside the expatriate appointee, their experience is of pivotal importance.

While many individual factors have been explored for expatriate spouses' and assignees' adjustment to expatriate postings, mental health is relatively unresearched for both groups (Wiese, 2013). Yet, mental health highly impacts quality of life, emotional coping abilities, and successful cross-cultural adjustment (Connell, Brazier, O'Cathain, Lloyd-Jones, & Paisley, 2012; Herleman, Britt, & Hashima, 2008; Houben, Van Den Noortgate, & Kuppens, 2015). The need to research expatriate mental health increases as the number of individuals living outside their country of birth increases (United Nations, 2015). Specifically, within the psychological literature, Mohr and Klein (2004), have called for a focus on expatriate spouse well-being research to further understand the role of adjustment.

One of the factors strongly correlated with mental health is marital satisfaction. Marital satisfaction has been linked to a plethora of positive outcomes, whereas low ratings of marital quality are strongly linked to poor well-being and negative health outcomes (Kiecolt-Glaser & Newton, 2001). Although marital satisfaction has been demonstrated to be a strong predictor of well-being, its role in adjustment for expatriates

is rarely assessed among social and familial factors (Caligiuri, Hyland, Joshi, & Bross, 1998). Simultaneously, there has been an appeal from the literature to consider the change in the marital relationship over time, as relationships are likely to shift and adapt to changing environmental factors inherent to expatriation (Robles, Slatcher, Trombello, & McGinn, 2014). Previously, Bikos and Kocheleva (2013) and Bikos et al. (2007) found that marital satisfaction and role salience had a significant explanatory effect on the outcome of psychological well-being. Of special interest to this study, Bikos et al. (2007) looked at adaptation of female expatriate participants over time, using cross-sectional methods, and found no significant changes in marital satisfaction or mental health functioning as a function of time in country. Therefore, part of this study was to re-analyze this data, with more sophisticated longitudinal hierarchical linear modeling.

Role salience offers a contextualized frame from which a person understands themselves, their actions, and experiences their values (Hartung, 2012; Super, 1990). Identification with and valuing of a life role (e.g., spouse, parent, worker) could contribute to an individual's sense of well-being when he or she moves internationally. Further, changing cultural and geographic domains may affect the way that one is able, or not able, to fulfill or identify with specific roles. Roles for the expat spouse may gain importance as a spouse's identity is shifted from what is familiar or expected in one setting, to a different context with differing expectations. Whether role salience influences mental health outcomes, either improving them or negatively affecting them, is a central component of this study.

In the literature that follows, I define *mental health* within the context of this research project and examine the moderators of change over time: expatriate status and

marital status. I then discuss marital satisfaction, its relationship with mental health, gender differences, change over time, and what is known about marital satisfaction within the expatriate population. Last, I review the life-space, life-span theory, and explore how this theory and its understanding of role salience supports my investigation through its theoretical framework.

The Fundamental Importance of Mental Health

Although queried for millennia, what makes one mentally well or unwell is a question that remains elusive to define (Dahlsgaard, Peterson, & Seligman, 2005; Prince et al., 2007). Broadly, mental health has been understood to be, “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2016, para. 2). Mental health has been seen to strongly impact an individual’s assessment of his or her quality of life and can have significant financial, relational, and health consequences (Cohen, Mount, Tomas, & Mount, 1996; Huppert & Whittington, 2003; Rippe et al., 1998; WHO, 2003). While mental health is important, only 48% of U.S. participants report a sense of happiness in their lives (Keyes & Annas, 2009). Of this 48%, 18% of participants met criteria for *flourishing*, or high subjective and psychological well-being. Interestingly, those who were not flourishing reported significantly higher rates of mental illness (Keyes & Annas, 2009). Keyes (2002) similarly found that the majority of adult Americans reported “moderate mental health,” with only 17% meeting criteria for optimal mental health.

Mental health: The contribution of well-being. Many terms have been used to capture components of the idea of psychological wellness, such as “the good life,” well-

being, subjective well-being, psychological well-being, quality of life, life satisfaction, and mental health (Keyes, Shmotkin, & Ryff, 2002; Seligman, 1998; Seligman & Csikszentmihalyi, 2000; Veenhoven, 2013). This study of well-being has historically been divided into two conceptualizations: hedonic and eudaimonic (Ryan & Deci, 2001).

A hedonic view of well-being focuses on the affective sense of well-being; that is, the sense of happiness, comfort, positive affect, and enjoyment that a person experiences (Kahneman, Diener, & Schwarz, 1999). From a hedonic perspective, well-being can be captured by the presence of positive affect and emotion, and the simultaneous absence of negative or distressing emotions. Within the psychological literature, hedonic well-being has become synonymous with subjective well-being (SWB), or how one evaluates their general state of contentment, happiness, or pleasure (Deci & Ryan, 2008).

The second view of well-being, eudaimonic, focuses on the extent to which one is thriving or fully functioning in his or her life, per their potential, even during difficulty or in the presence of negative affect (Lee & Carey, 2013). Waterman (1993), discusses the eudaimonic concept of well-being as movement toward an ideal and full sense of wellness for the individual. Eudaimonic views of well-being have become associated with the term psychological well-being (PWB) and seek to define the extent to which one is living to the fullness and depth of their possible potential (Deci & Ryan, 2008).

Keyes, Shmotkin, and Ryff (2002, p. 1007) wrote, "Although [SWB and PWB] assess well-being, they address different features of what it means to be well: SWB involves more global evaluations of affect and life quality, whereas PWB examines perceived thriving vis-a-vis the existential challenges of life." One of the most salient divisions between the eudaimonic/SWB and hedonic/PWB views can be found in their

deviating assumptions regarding hardship, pain, or difficulty. The hedonic perspective understands the presence of negative affect or hardship as interfering with one's optimum well-being or taking away from the possible experience of pleasure. In such a way, the hedonic viewpoint operates much like a mathematical equation where negative affect subtracted from positive affect equals one's well-being, pleasure, or happiness (Ryan & Deci, 2001). Divergently, eudaimonic/PWB sees hardship or negative affect as being a contextual factor that contributes to one's perception of their well-being but does not necessarily detract from it.

For PWB, external factors like socio-economic status and stage of life impact one's sense of wellness, with meaning-making being implicated in important psychosocial events like parenthood, life stage adjustment, and resilience, and considering if one is weathering them "well" (Heidrich & Ryff, 1993; Kahneman & Deaton, 2010; Ryff, Schmutte, & Lee, 1996). Meanwhile, SWB research has shown that contentment, happiness, and pleasure impact an individual's sense of being "well" and that one's evaluation of his or her well-being seems to hover within a range influenced by heritability (Keyes, Shmotkin, & Ryff, 2002). Keyes, Shmotkin, and Ryff, (2002) evaluated PWB and SWB and found that the strongest model for wellbeing was two highly correlated, but discrete, latent constructs; this model fit was stronger than two orthogonal or one factor models. Echoing these results, Compton, Smith, Cornish, and Qualls (1996) took 18 commonly used measures of wellbeing (e.g. meaning making, happiness, personality integration) and found two distinct factors for both meaning making (PWB) and SWB. More recently, a tripartite model of well-being has emerged, with PWB, SWB, and, additionally, social well-being holding their own factor loadings

(Gallagher, Lopez, & Preacher, 2009; Joshanloo, Capone, Petrillo, & Caso, 2017).

While the relationship between PWB and SWB remains foggy, the research consistently points to two highly correlated, yet different constructs that work together conceptually to capture the construct of “well-being.” Considering this, I will hold PWB and SWB as tapping into the same construct in a highly correlated, albeit distinct, way. Therefore, within the remainder of this paper, the terms of PWB, SWB, well-being, mental health, and wellness, will all be used to discuss one’s overall sense of well-being.

Mental health: The influence and contribution of ill-being. Mental unwellness, mental unhealth, and mental illness present just as thorny a topic to define as that of well-being or positive mental health. One of the central topics in understanding mental unhealth is in its classification. Events of mental unwellness could be conceptualized as discrete and definable categories, or as dimensional, conceptualized along a range of possible presentations. This reasoning leads one to consider the continuum paradigm of mental illness, or that certain behaviors or experiences are normative until they reach a boundary outside of the normative range; this boundary has several proposed markers, such as dyscontrol, impairment, or distress (Klein, 1999, p. 424; Widiger & Mullins-Sweatt, 2011). In the Diagnostic Statistical Manual-5 (APA, 2013), these boundaries are conceptualized as impairment in functioning or distress to the individual. Rates of clinical mental illness are common globally. It is estimated that about 4.5% of the world’s population suffers from clinical depression, and 3.6% suffer from an anxiety disorder; trends indicate that these numbers are rising (WHO, 2017).

Despite the need to categorize and understand mental disorders, there is critique of such language, as some argue that the use of “illness” or “disorder” conveys a

pathology-focused approach which linguistically associates normative responses to life stressors as “diseases” (Scheff, 1970; Shedler, Mayman, Manis, 1993; Szasz, 1961). Certainly, the common, non-pathological human experience still holds difficult or distressing experiences. Strine, Chapman, Kobau, Balluz, and Mokdad (2004, p. 1412) found that of 80,301 participants who self-reported “no major impairment or health problem” (criteria for which included a mental health impairment/health problem), also reported the following rates of occurrence of symptoms: Fair-to-poor general health (9%), frequent mental distress (7.8%), frequent depressive symptoms (5.6%), frequent anxiety (11.9%), and infrequent vitality (24.8%). Even among this subclinical group negative affect and negative mental health were present.

Traditionally, the field of psychology and its literature has done a better job at defining the clinical and severe presentations of disordered mental health than describing subclinical difficulties (Fava, 2012). In response, there has been an ongoing push to research typical and subthreshold presentations of psychological distress and promote mental health, not just promote the absence of negative mental health (WHO, 2004).

Mental health: Holding well-being and ill-being together. Conceptualizing mental well-being and ill-being together has resulted in the formation of several models of mental health: the bipolar model, the independence or two continua model, and virtue-based models.

The first concept, of either presence or absence of mental health or illness, has been termed the bipolar model and has its roots in the hedonic tradition. Russell and Carroll (1999) presented the bipolar model of affect and described a model of emotion and affect that acts with the assumption of opposites: either you are sad or happy, but you

are not simultaneously both. Through this reasoning, the authors have developed a strong psychometric argument for the measurement of emotion being adequately captured through a bipolar scale. While positive affect and negative affect have been seen to be negatively correlated, these correlations are not strong and are independently correlated with other constructs, hinting that perhaps there is an unknown or unaccounted-for variable in the concept of well-being yet to be incorporated (Ryff et al., 2006; Watson & Clark, 1997).

Offered as an alternative to the bipolar model, is the independence or two continua model of mental health (Ryff et al., 2006; Westerhof & Keyes, 2010). Westerhof and Keyes (2010) summarized the model by saying, “The two continua model of mental illness and health holds that both are related, but distinct dimensions: one continuum indicates the presence or absence of mental health, the other the presence or absence of mental illness” (p. 112). While it may be intuitive to think that someone would not report being sad and happy at the same time, Synard and Gazzola (2017) found that people simultaneously identified well-being as the absence of mental or physical ill-health, and described resilience, coping, and steadfastness, *in light of* experiencing ill-being. Confirmatory factor analysis has supported this idea. Keyes (2005) examined positive affect and negative affect (indicators of well-being and ill-being, respectively) and found that the strongest model fit was not for a single-factor model, but for a two-related factor model; the latent factors of mental illness and mental health correlated around -.50, demonstrating only about 25% of shared variance.

Offered as a third option, an emerging literature within positive psychology conceptualizes well-being as a construct composed of virtues and characteristics. The

view put forward is that neither happiness nor sadness, nor positive and negative affect can capture all components of well-being, but rather, there are well-researched and intuitively known constructs that predict mental illness and flourishing (Johnson & Wood, 2016). For example, resilience is neither positive or negative affect, per se, but rather a construct that is associated with weathering life well (Schultze-Lutter, Schimmelman, & Schmidt, 2016; Smith & Hanni, 2017). By presenting well-being in such a way, the focus becomes the functional understanding of traits and individualized traits.

As of now, each of the outlined conceptualizations of the relationship between well-being and ill-being add to the complex but important interplay of mental health and mental ill-being. What can be gleaned from their comparison, however, is that there is a relationship between mental health and mental ill-health, to the extent that both are important, and one does not negate the other.

Moderators of Well-being and Mental Health

Many factors have been found to influence one's sense of mental health, such as a person's emotional state, personality traits, change over development, self-appraisal, positive and negative cognitive evaluations, context and meaning making (DeNeve, 1999; Lyubomirsky, 2001; Ryan, LaGuardia, & Rawsthorne, 2005; Suh, Diener, Oishi, & Triandis, 1998; Suh, Diener, & Updegraff, 2008). Moreover, there is substantial evidence that socio-economic status, living conditions, and environmental factors influence mental health (Jackson, Brown, Williams, Torres, Sellers, & Brown, 1996; Wheaton & Clark, 2003). The literature on well-being and its relationship to a variety of variables is

manifold. Considering this, I will look at the most salient variables for my purposes, specifically the relationships between time, marriage, expatriation, and well-being.

Well-being over time. Mental health quality and prevalence of mental health disorders have been found to be moderated by age (i.e., over time; Argyle, 1999). Researchers have demonstrated that older adults report less mental illness, but lower positive or hedonic mental health, while retaining their levels of life satisfaction (Diener & Lucas, 2000). Westerhof and Keyes (2010) found a significant curvilinear relationship between age and mental health; adults in mid-life reported fewer mental illness symptoms than their younger counterparts, but geriatric adults (65 and over) returned to reporting mental illness symptoms as they aged. In the same study, the authors found that psychological well-being (eudaimonic well-being) decreased with age, but emotional well-being (hedonic) increased with age. Blanchflower and Oswald (2004) found that life satisfaction and hedonic well-being were lowest around the age of 40, all else held constant. In both studies, the authors highlighted that these results were significantly impacted by life circumstances; specifically, that ratings of subjective health, marital status, and employment status most significantly impacted these trajectories.

Well-being among expatriated individuals. In the well-being literature discussing expatriation, *adjustment* is often used as a catchall phrase to address a multitude of psychosocial outcomes, including well-being and mental health. Adjustment regularly encompasses activities of daily living, work, and relational adjustment (Hechanova, Beehr, & Christiansen, 2003), and more recently, the adjustment of the family system (Brewster, Bonache, Cerdin, & Suutari, 2014; Mohr & Klein, 2004) to a new, often geographically or culturally distant, relocated environment. In general, several

factors have been found to relate to successful adjustment overseas in an expatriated post: previous international experiences (Mohr & Klein, 2004), personality factors (Wiese, 2013), cultural novelty (Black & Gregersen, 1991) and sense of autonomy (Smider, Essex, & Ryff, 1996) have all been seen to affect adjustment to expatriation setting. Among the factors that affect adjustment, social support has regularly been seen to have a positive effect on adjustment for both expatriate employees and their partners (Caligiuri & Lazarova, 2002; Copeland & Norell, 2002; Wiese, 2013).

Beyond common factors of adjustment, the specific variable of mental health has largely been overlooked for expatriates and their spouses (Wiese, 2013). However, moderate rates of mood disorder and poor mental health have been seen to exist in migrant workers and returning expatriates (Dervic et al., 2012; Peppiatt & Byass, 1991). Peppiatt and Byass (1991, p. 161) reported that among 200 international sojourners returning to the UK, 26% of the returning population received a “serious psychiatric illness,” but accounted for 60% of premature repatriations. Peppiatt and Byass (1991) acknowledged the need for further mental health assessment among returnees, saying, “This probably reflects a lack of appropriate psychiatric facilities in many countries, as well as the relief from stress that can be achieved by repatriation” (p. 161).

Culture shock: The Expatriate Shorthand for Well-Being. Often, the well-being of expatriates is addressed through the idea of *culture shock*. Culture shock can broadly be understood as psychological responses to new settings and cultures; reactions to these responses can aid or deter adjustment experiences, and thereby, mental health outcomes (Furnham & Bochner, 1986). In the excellent overview by Zhou, Jindal-Snape, Topping, and Todman (2008), the authors described how culture shock reaction models originated

from a medically focused model that saw culture shock as an ailment or pathological response. One of the most prolific descriptions of cross cultural adjustment was the proposed model of the *U-curve*. The U-curve model posits that culture shock can be described across the dimensions of time in new environment and degree of adjustment and follows a sequential four-stage trajectory. These stages, beginning in a moderate zone, dipping, then returning to baseline, form a *U* of adjustment. While used as the dominant model for culture shock for decades, the U-curve model has suffered from lack of empirical support and strong theoretical foundations, yet the model is used throughout cross-cultural literature to describe adjustment (Black & Mendenhall, 1991). The U-curve model of change over time in culture shock has been joined by other models: The *J-Curve* model (Davis, 1963), the *W-model* (Gullahorn & Gullahorn, 1963), another *U-Curve* model (Oberg, 1960), and other non-linear models. Again, these models suffer from lack of empirical founding or support (Ward, Bochner, & Furnham, 2005). Recently, data from Bikos and Dykhous (2015) added empirical, longitudinal support for the presence of a U-curve in adjustment upon re-entry of undergraduates returning from international service learning projects. While the findings of Bikos and Dykhous (2015) speak to the phenomena of *reverse culture shock*, they critique the terms *reverse culture shock* and *culture shock* as stigmatizing and pathologizing of what is a normative adjustment period of a major life event. The authors propose the phrasing *re-entry friction* to describe the ongoing adjustment process of cultural adjustment.

Well-being among expatriate spouses. Specifically, for expatriate spouses, data on mental health is limited. Herleman et al. (2008) found that the spouse's sense of *ibasho*, or "feelings of comfort and security in the places that he or she normally goes"

was negatively correlated to symptoms of depression and positively correlated to reported levels of adjustment. Wiese (2013) addressed the role that the mental health of an expatriate spouse plays in successful completion of an expatriation assignment by looking at the influence of social support. By examining reported psychological well-being and satisfaction with life among 73 spouse-respondents, Wiese found that psychological well-being fully mediated the relationship between social support and intent to stay in country for the entirety of the assignment; moreover, psychological well-being also fully mediated voluntariness to move to country and intent to stay in country. Such findings demonstrate that mental health is an important factor to consider when evaluating the likely success of an overseas post for expatriate spouses. As Wiese (2013, p. 19) wrote, "psychological health was related to the desire to stay in the international setting, supporting the theoretical model that psychological health may be a primary route through which the voluntariness of the move and social support affect intent to stay in the international setting."

The effect of marital status on well-being. Marital status has long been explored within the psychological literature as a predictor of well-being. Those who get married and remain married experience enhanced mental health and report greater subjective well-being (Glenn & Weaver, 1979; Horwitz, White, & Howell-White, 1996).

Kim and McKenry (2002) examined the relationship statuses of participants at two time points and classified eight types of marital status trajectories by these time points, including, but not limited to: married to divorce/separated, continually divorced/separated noncohabitating, never married cohabitating to married, married to continuing married, and so forth. Within their data, they found that marital status

significantly impacted reported rates of depression, with married participants reporting higher psychological well-being than members of any other group. Even as the authors controlled for initial well-being scores, those who were married had lower levels of depression than participants who were continuously single at both time points. Frech and Williams (2007) found that those who were depressed prior to marriage benefited the most in their psychological well-being when transitioning from being single to married, more so than non-depressed individuals, highlighting the potential protective factor that marriage can play for mental health.

In tandem to these finding, though, Pirani and Vignoli (2016) analyzed the surveys of close to 30,000 young, Italian adults and found that differences in reported well-being between cohabitants and married disappeared statistically in 2011. The authors discuss how the changing cultural ideals and the increased occurrence of cohabitation within Western developed countries likely contributed to these findings. Relatedly, Diener, Gohm, Suh, and Oishi (2000) compared the happiness of those living in intimate cohabitation, those who were in marital relationships, and those who were divorced. Among the 42 countries surveyed, the authors found no differences in positive or negative emotions between those who cohabitated or those who were married, but did find significant differences in life satisfaction, such that those cohabitating in collectivist cultures reported lower life satisfaction; this finding became null for individualist countries. The authors also found that differences in subjective well-being reported between married and divorced/separated groups held small effect sizes, favoring the well-being of those who were married, but that this effect was once again impacted by culture type.

This evidence points to the importance of cultural norms in considering the protective factors of marriage and their etiology, or said differently, perhaps the protective factors of marriage are not found in the uniqueness of the marital relationship, but rather in a socially/culturally-condoned union of two individuals.

Marital Satisfaction

Robles, Slatcher, Trombello, and McGinn (2014, p. 2) defined high marital quality as, “. . . high self-reported satisfaction with the relationship, predominantly positive attitudes towards one’s partner, and low levels of hostile and negative behavior,” and noted that low marital quality is marked by inverse traits. Indeed, marital satisfaction demands attention as its presence, and absence, strongly impact health outcomes (Umberson, Williams, Powers, Liu, & Needham, 2006), role strain (Quittner, Espelage, Opiari, Carter, Eid & Eigen, 1998), self-esteem ratings (Taghizadeh & Kalhori, 2015), and sexual satisfaction (Litzinger & Gordon, 2005).

Marital satisfaction and mental health outcomes. Generally, there exists a high correlation between marital satisfaction and mental health (Culp & Beach, 1998; Whisman, 2001), with “predictors of well-being hav[ing] been variously labeled marital quality, success, happiness, satisfaction, discord, adjustment, and well-being” (Proulx, Helms, & Buehler, 2007, p. 577). Mental health and marital satisfaction affect one another in a bidirectional manner, such that marital satisfaction can affect mental health and mental health can affect marital satisfaction.

Marital satisfaction and well-being: Quality over status. Historically, the fact that those who are married have higher reports of psychological well-being has been presented largely in a wholesale fashion, as participants were usually classified as being

dichotomously married or unmarried. Recently, however, there has been a shift in explaining the positive outcomes of marriage on psychological wellbeing through understanding mediating pathways; marital status influences mental health, but relationship quality emerges as a crucial moderating variable.

Chapman and Guven (2016) explored the relationship between marital happiness and psychological well-being and found that married people were more likely to report being happier than non-married individuals. However, when the authors controlled for marriage quality, a different picture emerged: those who were married and happy had even greater psychological well-being than the average individual (married or not), but those who were in marriages assessed as “poor” in quality reported less positive subjective well-being than those who were unmarried.

Marital quality, as captured in large part by marital satisfaction, moderates one’s experience of the benefits of marriage, such that those in the happiest marriages are globally the happiest individuals, but those in unhappy marriages are the unhappiest individuals, when compared to other married, unmarried, divorced, or widowed individuals (Chapman & Guven, 2016; Hawkins & Booth, 2005; Waite et al., 2002). Hawkins and Booth (2005) looked specifically at the “lowest levels of satisfaction” among unhappily married people and found that these individuals reported high levels of psychological distress, physical complaints, low levels of self-esteem, and low rates of life satisfaction. On the positive mental health side of the issue, individuals who reported marital satisfaction ratings that were above-average experienced mental health gains, yet those results were siloed to those experiencing the greatest marital satisfaction (Williams, 2003).

Poor marital satisfaction can lead to poor mental health. Marital satisfaction has been seen to correlate with and predict several outcomes that are associated with psychological disorder or distress; marital dissatisfaction is highly correlated with negative behaviors and affect, such as marital discord (Gottman, 2014). Proulx, Helms and Bruehler (2007) found that marital quality and characteristics of the marital relationship moderated the outcomes of psychological well-being for those who were married, with low marital satisfaction predicting increased levels of depression, and Whisman and Uebelacker (2009) found that marital discord, or low marital satisfaction, predicted alcohol use disorder. These findings mirrored those of previous research which demonstrated that marital dissatisfaction was predictive of depression symptoms (Beach & O’Leary, 1993) and that ratings of marital dissatisfaction were predictive of major depressive disorder incidence within a year’s time (Whisman & Bruce, 1999).

Psychological distress has also been seen to affect marital satisfaction, in turn. As discussed above, Frech and Williams (2007) found that those who were depressed prior to marriage benefitted the most from transitioning from being single to married. The authors expanded their work by looking at the role of marital satisfaction and found that those who were depressed prior to marriage had “slightly but significantly worse marital happiness than the nondepressed” (Frech & Williams, 2007, p. 159). Similarly, Whisman and Uebelacker (2009) found that depression ratings at time one predicted marital satisfaction both for the individual and their partner at time two; the authors commented that this prediction, along with their other findings, demonstrate the strong bidirectional relationship between marital satisfaction and psychological distress.

Marital satisfaction and gender. Historically, women have been thought to experience lower marital satisfaction due to marital-role, parental-role, and work-role conflict and prescriptive cultural gender norms that often place unspoken expectations on women (Bernard, 1975; Jackson, Miller, Oka, & Henry, 2014). Data have reflected lower ratings of marital satisfaction among women compared to men, (Amato, Booth, Johnson, & Rogers, 2007; Whiteman, McHale, & Crouter, 2007), while other studies have shown no difference between the genders (Broman, 2005; Gager & Sanchez, 2003).

In studies where there were statistically significant differences reported between women and men, the effect sizes of these differences were small or were attributed to moderating variables (Jackson, Miller, Oka, & Henry, 2014; Whiteman, McHale, & Crouter, 2007). For example, Jackson, Miller, Oka, and Henry (2014) found that women did report statistically significantly lower scores in well-being, but that this finding lost significance once the clinical sample was controlled for within analysis. Adding to this, Freudiger (1983) found that wives' general report of life satisfaction correlated positively to marital satisfaction. Such insights into the role of gender differences highlight the need to consider and value the differential experiences among husbands and wives and, perhaps, pay specific attention to the life satisfaction of the female partners.

Marital satisfaction across time. Marital satisfaction has been long known to decline over time, with initial ratings beginning high and decreasing with each passing year (Vaillant & Vaillant, 1993). These findings have been found for married couples with and without children (Clements, Cordova, Markman, & Laurenceau, 1997). Lorber, Erlanger, Heyman, and O'Leary (2015) followed marital satisfaction among 395 newly married couples for two and a half years. They found that most couples reported

moderate to high levels of marital satisfaction at the beginning of the marriage and that these levels of satisfaction persisted over time, with relatively small decreases each year. These findings demonstrate that length of marital relationship can influence marital satisfaction, solely as a function of time.

Marital satisfaction within expatriate populations. Very little research exists on the effect of marital satisfaction within the expatriate community, although, as discussed above, research into the mood and well-being of the expatriate community is increasing. One area that has explored the effects of marital satisfaction on expatriates is the realm of religious organizations. Among studies exploring marital satisfaction for couples engaged in religious international work, adjustment over time and changes in mood are important factors to consider. Rosik and Pandzic (2008) found that marital satisfaction decreased slightly between two time points: beginning training for a mission's position and returning from furlough from the mission's position. Interestingly, Rosik and Pandzic (2008) found that the shifts in marital satisfaction lost significance from time two to time point three, perhaps demonstrating a type of readjustment or recalibration within the marital relationship. Sweatman (1999, p. 154) found a significant relationship between depression ratings and marital satisfaction among 67 missionaries on their first assignment, with the author noting the effect of marital satisfaction, "either exacerbate[ing] the stress leading to increased depression or to buffer[ing] the stress, leading to decreased depression." Sweatman's (1999) findings regarding the link between poor marital satisfaction and negative psychological outcomes mirror those found within the general population.

Although little research exists specifically on expatriate couples' experiences of

marital satisfaction or its change over time, previous studies emerged from the same data set of inquiry. As these studies utilized my same variables of interest, the findings from Bikos and Kocheleva (2013) can guide my investigation. Specifically, in a cross-sectional study, Bikos and Kocheleva (2013) found that marital satisfaction significantly mediated the relationship between marital role salience and psychological well-being. As discussed in the introduction, new types of analysis allow us to investigate this relationship with a focus on change over time, and introduce advanced analysis to further understand the implications of these earlier findings.

Life-Span, Life-Space Theory: The Context-Driven Person

Throughout the discussion of my variables, context and environment have continued to influence outcomes in well-being and marital satisfaction. Life-span, life-space theory provides the theoretical framework to hold these many factors in context.

Life-span, life-space theory conceptualizes an individual's development of career and vocation within the framework of their psychosocial context, their personal developmental trajectory, and their self-concept (Super, 1990). In his work, Super endeavored to create a comprehensive view of vocational determinants, including behavioral, ecological, and personal factors. This shift removes the exclusive focus from career, and moves it to the contextualized individual—a person with multiple roles, environments, and values. By doing so, Super highlighted that career and vocation are merely one facet of identity, or one role the person fills, among several possible roles which change and shift over one's lifetime (Hartung, 2012).

Life roles. Life-space, life-span theory focuses on the changing roles that an individual will encounter in their career and throughout their general development

(Super, 1990). Life-space is the term that Super used to identify the roles that an individual will fill over his or her lifetime. Super identified nine core roles: child, pupil/student, leisurite, worker, citizen, spouse, home-maker, parent, pensioner. These roles can be filled in an unfolding pattern (moving from pupil/student to worker), simultaneously (spouse, homemaker, and worker), or not at all (parent, for instance, will not be a role held by those who are not caretakers of children). A person will value the roles that they fill with differing levels of importance, a concept that Super termed, “role salience.” Role salience is assumed to vary from role to role and across developmental stages.

Life-span, the second component of life-space in Super’s theory, is used to summarize the developmental and time-oriented unfolding of the constellation of life roles. Life-span is comprised of developmental stages and associated ages. Super defined the following life stages: growth (age 10-20), exploration (age 20-30), establishment (age 30-50), maintenance (age 50-60), and decline (age 65 and onward). Super depicted his theory using the *life-career rainbow*, a descriptive graphic that incorporates life stage, age, role, and situational and personal determinants to depict the developmental and unfolding life space of an individual (Super, 1990). Each of these roles has expectations associated with them, that are derived from both the individual and the cultural context which the person finds him- or herself (Hartung, 2002).

Although life stages have been an important part of his theory, Super acknowledged that the way an individual may experience roles or stages is highly dependent upon the individual, making his theory of stages more descriptive than prescriptive (Super, 1990). Super later proposed a second graphical depiction of his

theory called the *archway of career*, which is comprised of the components or building blocks of career and life-role determinants. The archway holds as its two pillars personal/biological characteristics and elements of the societal/environmental context of the individual. Building upon these foundations, and meeting at the top of the archway, is the individual, who has been shaped and formed by his or her intrapersonal and societal context. Such a theory provides an excellent framework from which to understand the challenges and simultaneous role demands placed upon an expatriate wife, as she encounters both intrapersonal and interpersonal psychosocial stressors at contextualized moments of her life.

Role salience. As briefly mentioned above, Super (1990) termed the individual's attribution of importance for a given role, *role salience*. An individual will hold several roles at a given time, with different importance or role salience being attributed to each. The type of role and the amount of salience given to it are expected to fluctuate over time, being shaped, again, by context and development. For instance, a single woman aged 21 may have very different role salience for parenthood and career than a woman at age 47 with two children; indeed, the same woman's sense of importance of specific roles would be expected to shift from age 21 to 47. Savickas (1994) noted that role salience allows for the individual to construct his or her own understanding of what is most important to them from a list of common or self-determined roles, not from a shared narrative or a dictated expectation.

The concept of role salience relies heavily upon the individual's understanding of his or her own identity, as role salience emerges, in part, from one's ability to self-reflect and conceptualize who they want to be, what they want to do, how they want to do it, and

when in their life they want to move toward their goals; this process or ability is also being termed self-actualization (Super, 1963). Placed within the broader theory, role salience is a reciprocal process between the person, the environment and the process of self-actualization of the individual (Savickas, 1994). The self-image that persons have, or their conceptualization of how they would like to be identified (e.g. “a good mom,” “a fit person,” “not married to my job”), is likely to influence their psychological response to a given role, such as parenthood, a leisurite, or worker (ten Brummelhuis & Lautsch, 2016). Roles, therefore, can be a dynamic conceptualization to the individual: highly subjective, yet still able to reflect the environmental changes, life stage, and role expectations.

Role salience has been measured affectively, behaviorally, and cognitively. In 1986, Neville and Super proposed The Salience Inventory (SI) to assess for role salience. Within this work, the authors proposed three indicators of role importance: commitment (affective), participation (behavioral), and knowledge (cognitive). When they developed the SI, they did not assess for knowledge, as they argued that role knowledge was too specific for its inclusion to be useful and that other instruments were already addressing this need (Neville & Super, 1986, p. 5). Instead, the authors added an assessment of “values expectations,” arguing that the values of the individual weigh heavily in determining a course of action for the individual.

Role salience and role importance continue to be measured by affective and behavioral factors. Role salience has been quantified as one’s rating of self-identification with a role (Meyer, Becker, & Rolf VanDick, 2006; Mowday, Steers, & Porter, 1979), affective feelings of the role importance or an attitude (Amatea, Cross, Clark, & Bobby,

1986; Wolfram & Gratton, 2014), or ratings of agreement or disagreement with the importance of a given role (James, Witte, & Galbraith, 2006; Gates, Norberg, Dillon, & Manocha, 2013). Affective assessment of role salience, however, seems to be the predominant and preferred contemporary form of measurement.

Role salience: Commitment and values. Both role commitment and role value expectations are affective in nature and assess the individual's attitudes. Together, role commitment and role value comprise the affective dimensions of role salience (Perrone & Civiletti, 2004). While closely intertwined, role commitment and role value are thought to be separate constructs that uniquely capture a component of role salience. Neville and Super (1986, p. 11) wrote, "[Commitment] is emotional attachment to a role, such as one's work, and the things that one is expected to do and expects to do in the role . . . [Value Expectations] assesses attitudes toward roles by ratings of the degree to which major life satisfactions or values are expected to be found in the role." Stated differently, role commitment feeds a person's current self-identification both presently and in a projected manner, while role values gauge the individual's ability to play out or express personal values within that role (Perrone & Civiletti, 2004).

Role salience: Impacting mental health and marital satisfaction. As proposed above, life-space, life-span theory allows a contingency of variables to be held simultaneously and in concert, including both mental health and marital satisfaction. From this theoretical basis, marital role and influence of marital satisfaction can be linked in their influence on mental health. Perrone and Civiletti (2004) demonstrated that role strain influenced participant ratings of life satisfaction. Further role strain was seen to decrease relationship quality and increase psychological distress (Suchet & Barling,

1986; Voydanoff & Donnelly, 1989). Specifically, for women, high ratings of role quality correlated with high ratings of well-being in midlife (Vandewater & Stewart, 2006).

Chan, Jiang, and Fiang (2015, p. 21) wrote, “Individuals tend to commit to those roles that are important to their self-concepts, thereby maintaining satisfaction with the particular roles even under role strain.” By thinking of role commitment with the lens proposed by Chan and colleagues (2015), we could consider role commitment as a moderator of stressful situations acting upon a role. As the expatriation process is often fraught with stress and coping responses, the expectations and valuing of the marital role could very well moderate the relationship of relational stress and marital satisfaction, thereby moderating individual mental health, in turn.

Purpose of the Study

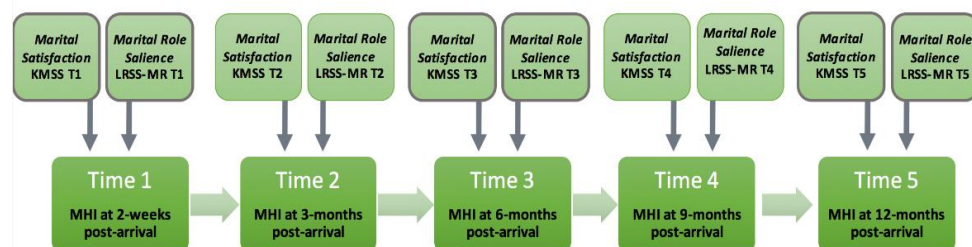


Figure 1. Model 1 of mental health over time moderated by marital satisfaction and role salience.

As outlined above, mental health promotion research among expatriate populations is lacking in general and is even more scarce for the unique experience of the expatriate, female spouse. Further, ratings of marital satisfaction have been seen to correlate highly with mental health, a factor that again, is not well researched. Further, due to the complex nature of mental health, it is important to consider both subjective ratings of well-being. I studied marital satisfaction, and role salience, to give insight to well-being and to consider how these factors interact with mental health over time for the

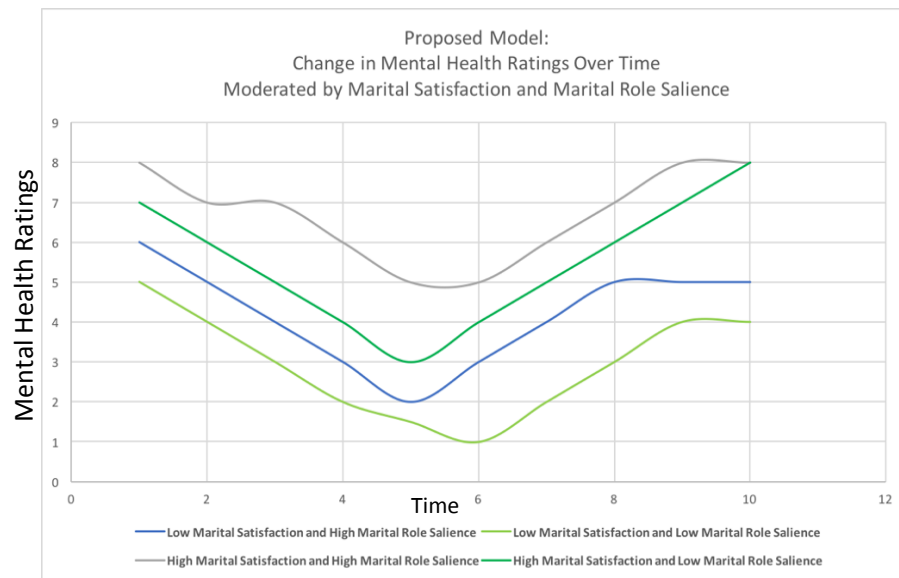


Figure 2. Longitudinal view of Model 1: Mental health trajectories over time moderated by marital satisfaction and role salience.

expatriate spouse. Therefore, the purpose of my dissertation was to explore the context-specific change in mental health trajectories for expatriate spouses as affected by their ratings of marital satisfaction and marital role salience. Specifically, I proposed that mental health trajectories would be predicted by the marital satisfaction that an expatriate spouse experiences. This relationship will be moderated by role salience of the marital

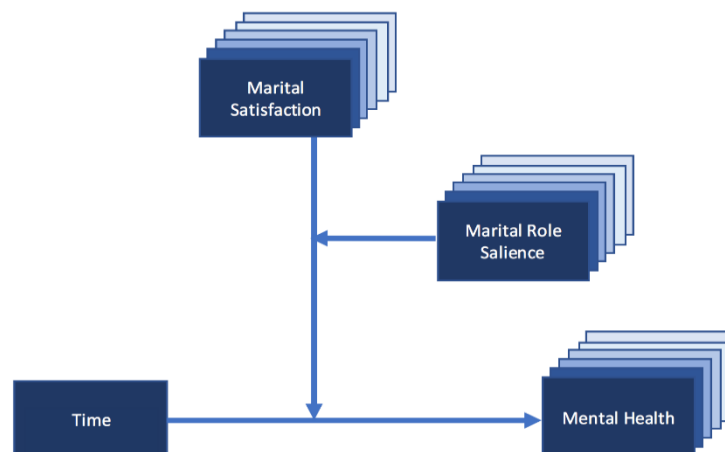


Figure 3. Statistical View of Model 1: Time (IV) affecting Mental Health (DV), moderated by Marital Satisfaction (Moderator 1), which is moderated by Marital Role Salience (Moderator 2); The longitudinal nature of the model is graphically represented by the multiple boxes behind the repeating variables of Marital Satisfaction, Marital Role Salience, and Mental Health.

relationship.

My model proposed that (a) mental health ratings would change as a function of time within country, such that ratings would decrease for a matter of weeks and then gradually increase to an undetermined baseline, (b) marital satisfaction would moderate ratings of mental health, such that those with lower initial marital satisfaction would have lower mental health, correspondingly, across time, (c) that role salience would further moderate marital satisfaction, such that those who had low role salience were likely to have lower marital satisfaction, and correspondingly, lower mental health.

CHAPTER II

Method

The data utilized for the dissertation are archival data and used in a previous publication (Bikos et al., 2007). Therefore, the account of methodology in participant characteristics and sampling procedures is identical to that of the initial data collection.

Participant Characteristics

Recruitment. With the goal of having 30 women complete the 1-year, longitudinal study, all known women who were moving to Ankara, Turkey in conjunction with their husband's occupation were recruited for participation through networking, advertising, and snowballing techniques. Of the 36 women recruited for the project, two declined participation, and two were determined ineligible because they did not meet the inclusion criteria for the study.

Demographic characteristics. The participants in the project were female expatriate spouses who moved to Ankara, Turkey, because of their husband's work assignments. There were two primary inclusion criteria: (a) the women must have held a U.S. passport and (b) the women could be employed; however, their husband's position must have been the primary reason they moved to Turkey. Two women were excluded because they held tandem placements (i.e., they were jointly appointed) in their sponsoring organization.

The ages of the 32 women who were included in the project ranged between 30 and 50 years ($M = 38.63$, $SD = 2.65$). Regarding ethnicity, 82% of the women self-identified as European American, 6% as Hispanic, 3% as African American, and 3% as Asian American. Regarding highest level of education, 9% indicated that they completed

high school, 25% had some college, 44% had completed a bachelor's degree, 3% had some graduate education, and 13% had completed a master's level degree. Nearly all the women (94%) had children. Of those with children, 84% of the women had children who accompanied them to Turkey; 38% of the women had children who remained in the United States. In the year prior to moving to Turkey 47% were employed.

Regarding classification of the husband's position, 41% of the men were in Turkey because of assignments with the U.S. military, 25% worked for the U.S. Foreign Service (i.e., U.S. Embassy). Thus, 66% were in Turkey because of the husband's work with the U.S. government. Thirteen percent of the husbands worked for large corporations, and 13% were in Turkey for human rights, humanitarian, or religious work. Eight percent did not indicate the nature of the husband's assignment. The anticipated length of the assignment in Turkey ranged from 1.5 to 4 years ($M = 2.65$, $SD = .74$); 75% were planning for at least one home leave at some point during their assignment. Regarding international exposure and experience, one woman was a dual national, holding citizenship rights in the United States and another country. Six percent of the women were married to men who were dual-nationals.

Sampling Procedures

Within 2 weeks of arriving in-country and at each of the 3-month intervals (i.e., 3-, 6-, 9-, 12-months), the women completed a packet of paper-and-pencil measures and then, for the qualitative component of the mixed method design (reported in Bikos et al., 2007) participated in a series of 30- to 60-minute interviews. The packet of measures at the just-arrived stage contained a letter describing the project in detail, two copies of the informed consent form (one for the participant, one for the principal investigator), and a

suite of instruments that assessed global functioning (i.e., mental health functioning, marital satisfaction, role salience, and alcohol use). During the middle three intervals, the packet of measures contained only the four measures of global functioning. At the 12-month stage, a thank-you letter, a second copy of the informed consent (i.e., highlighting the plans for utilizing the interview transcripts), and an exit questionnaire were included with the four measures of global functioning. Women had the option of completing the packet of measures via e-mail or paper and pencil. Except for format (to ease computer completion), the packets were identical. When completed via paper and pencil, a member of the research team delivered and collected the measures prior to the in-person interview. When completed via the computer, the packet was sent as an e-mail attachment. For privacy, participants were cautioned about the risks associated with the e-mail option and advised to delete the copy of measures they had saved to their computer. In addition, instructions were provided for completing, saving, and returning the attachment via the reply function of the computer. To mitigate the positive or negative influence of the qualitative interviews on the more objective paper-and-pencil measures (i.e., a woman who was feeling unhappy might feel better after telling her stories to the clinically trained interviewer), it was required that the measures be completed prior to the in-person interview.

The longitudinal data for this dissertation was part of a research project examining marital satisfaction, life role salience, alcohol intake, and mental health among expatriate spouses in Ankara, Turkey. However, only the LRSS, MHI, and KMS will be used for this study. The data is longitudinal in design with up to five repeated measures per participant.

Sampling Size, Power, and Precision

Sample size is a critical yet complex issue in multilevel models. Statistical power in the multilevel model is a function of the number of clusters (in my case, the number of participants), the number of units per cluster (e.g., the number of repeated measures), the intraclass correlation, and the effect size (McCoach, 2010). McCoach's (2010) summary of the literature suggested that while "a bare minimum of 10 clusters" (p. 129) could be sufficient, at least 30 clusters are required to produce unbiased estimates of variance components and at least 100 clusters are necessary to have reasonable estimates of the standard errors of the level two variance components. Additionally, the number of repeated measures and degree of missingness in the longitudinal design can be problematic.

Measures and Covariates

Mental health. The Mental Health Inventory (MHI; Stewart, Ware, Sherbourne, & Wells, 1998; Veit & Ware, 1983) is a self-report, 38-item measure which assesses both psychological well-being and psychological distress. Item scaling is anchored from 1-6, with 1 (*always*) to 6 (*never*). The scale was created for use with a non-clinical population. Sample questions include, "During the past month, how much of the time have you been anxious or worried?" and "During the past month, how much of the time have you been a happy person?"

The MHI was fielded using four large and diverse samples ($N = 5489$). Factor analysis provided backing for a two higher order factor structure of the MHI (psychological well-being and psychological distress), and a lower order factor structure. Psychometric testing supported using both the five distinct lower order constructs or a

summary index. However, Stewart et al. (1998) found that the MHI still held statistical strength and could be used as a single measure of mental health, a two-factor measure (psychological well-being and psychological distress), or as a five-factor lower order measure for anxiety, depression/behavioral–emotional control, belonging/loneliness, positive affect, and cognitive functioning. Veit and Ware (1983) reported a reliability estimates ranging from .83-.96. Preliminary analysis suggests that the 32-item summary MHI index coefficients ranged from .93 to .97 across the five administrations.

Life role salience. The Life Role Salience Scales (LRSS; Amatea et al., 1986) were used to measure participants' personal expectations of marital, vocational, parental, and home care roles by assessing two domains of expectation: (a) the value given to a role and (b) the expected level of commitment that the participant anticipated giving to that role in terms of resources and time; these are termed role value and role commitment, respectively. Self-reported attitudes are assessed through 40 total items, with 10 items per role domain (marital, parental, home maker, and vocational) composed of 5 items for each value dimension (commitment and value). Items are answered on a scale from 1 (*disagree*) to 5 (*agree*). A total score of importance for each domain can be obtained by combining the two value dimensions for a given role, or can be held independently (Amatea et al., 1986; Campbell & Campbell, 1995). For this study, the subscales of marital role salience were used exclusively.

The LRSS was originally fielded with 916 participants. From these studies, it was established that an eight-factor structure held the best fit for the LRSS, holding eigenvalues of greater than 1.00. Preliminary analysis found that the marital role value scale had high reliability for the current investigation, averaging .90 across the five

administrations. Moreover, internal consistency was demonstrated through high coefficient alphas, ranging from .79 (homecare role commitment scale) to .94 (marital role value scale).

Marital satisfaction. The Kansas Marital Satisfaction Scale (KMSS; Schumm, Milliken, Poresky, Bollman, & Jurich, 1983) was used to measure self-reported marital satisfaction within the sample. The KMSS is composed of three questions, rated by the participant from 1 (*extremely dissatisfied*) to 7 (*extremely satisfied*); an individual score ranges from 3-21. Each question begins with the stem, “How satisfied are you with . . .” and respondents are to rate the given component of their marriage per the scale above.

The KMSS has demonstrated strong internal consistency, with Cronbach’s alphas ranging from .92 to .96 and higher (Grover, Paff-Begen, Russell, & Schumm, 1984; Mitchell, Newell, & Schumm, 1983; Schumm, Crock, Likcani, Akagi, & Bosch, 2008). Crane, Middleton, and Bean (2000) established that a cut off score of 17 on the KMSS distinguished between distressed and non-distressed marital relationships. Of specific use for my longitudinal analysis Mitchell, Newell, and Schumm (1983) found that the test re-test reliability over a 10-week period was strong ($r = .71$). Concurrent and discriminant validity have also been substantiated and have demonstrated strong psychometric support, correlating strongly with measures of marital instability and with indexes of marital quality (Schumm, Crock, Likcani, Akagi, & Bosch, 2008; Schumm et al., 1986). For this study, preliminary analysis provided coefficient alphas ranged from .84 to .98 ($M = .93$, $SD = .06$).

CHAPTER III

Results

Data Analytic Plan

This study explored the changes in mental health trajectories for expatriate spouses over time, accounting for the moderating effects of marital satisfaction and marital role salience. Data for this project was analyzed using hierarchical linear modeling (HLM). HLM 7 (Raudenbush, Bryk, & Congdon, 2004) was appropriate for analysis because it allowed for (a) the dependent nature of the repeated measures data, (b) differing numbers and observations within individuals (e.g., permitting missing data), and (c) unevenly spaced data collection. Longitudinal studies naturally produce data with a hierarchical structure in which the repeated measures (e.g. mental health functioning, marital satisfaction, marital role salience) or Level 1 [L1] are clustered within individuals (Level 2 [L2]); for this study, the participant was the clustering variable. These analyses are structured upon an equation that provides an intercept, or a point at which the variable begins, a slope, the change that this variable displays overtime, and polynomial functions that allow one to consider the rate of change that the variable demonstrates (cubic, quadratic, etc.). This allows for within- and between-person effects to be simultaneously estimated and for intercepts and slopes to be predicted. Data was modeled with an unstructured covariance matrix and estimated with full maximum likelihood.

Time was measured by intervals of months (MONTH) between expatriates' arrival to country and time of data collection. For instance, if a participant's arrival date in-country was December 3rd, 2000, and the administration of their first survey was February 3rd, 2001, that time was represented as 2. Each administration of the survey

measured time concordantly.

Data Preparation and Missing Data

Of our 32 female participants, all completed at least one of the five waves of data collection. The median level of waves completed by participants was $M = 4.46$ ($SD = 1.45$) and ranged from 2 to 5 completed waves. Data were analyzed and managed for missingness with the multiple imputation tools in SPSS 25. The data were analyzed by wave of administration (Time 1, 2, 3, etc.), such that each wave had the data of the 32 unique participants and 82 variables. Cases were included in the multiple imputation if no more than 24% of data was missing from a given wave (Olinsky, Chen, & Harlow, 2003). Across the five waves of data collection (upon arrival, 3-months post-arrival, 6-months post-arrival, 9-months post-arrival, 12-months post arrival) there were between 25 and 32 completed surveys per wave for a total of 143 observations for 32 individuals over 5 waves. Once missing data was deleted, stochastic imputation methods, provided by SPSS 2: multiple imputation was utilized to create a single imputation for use in hierarchical linear modeling.

Mean scores were created for each individual at each time point (level 1 variables). Additionally, an aggregate form of each variable (level 2 variables) was created. When used together, the compositional effects provide a complete accounting of within- and between-subjects variance (Enders & Tofighi, 2007). Correlations of the L2 variables can be seen in Table 1.

Table 1
Correlations among Level 2 (Between Persons) Variables

	1	2	3	4	5	6	7	8	<i>M</i>	<i>SD</i>
1. Age	1.0								38.10	4.99
2. Marital Role Value	-.113	1.0							18.21	5.78
3. Marital Role Commitment	-.141	.523**	1.0						16.08	2.62
4. Total Marital Role Salience	-.137	.954**	.753**	1.0					34.30	7.49
5. Marital Satisfaction (KMS)	.296**	.431**	.287**	.433**	1.0				18.17	2.93
6. MHI: Psych Distress	.388**	-.030	-.317**	-.134	.204*	1.0			42.61	14.55
7. Total MHI	-.348**	.078	.364**	.187*	-.140	-.973**	1.0		156.7	22.08
8. MHI: Psych Well-being	.389**	.073	-.178*	-.006	.297**	.887**	-.763**	1.0	42.35	7.28

Note. * $p < .05$, ** $p < .01$

A Sequential and Exploratory Orientation to Model Development

Model development and evaluation took place in a systematic and sequential manner. This exploratory approach is consistent with recommendations to pursue model-generating methodology in complex models (e.g., Jöreskog, 1993) by first understanding the relatively simpler relations between the variables (e.g., McCoach, 2010; O'Connell, Logan, Pentimonti, & McCoach, 2013) and assessing the viability of more complexity based on the results. Given my relatively small sample size ($N = 32$) with 5 waves of data, the number of variables that could be utilized within each predictive model were limited. For my analyses, statistical significance was attributed when $p < .10$.

Two sequential phases were undertaken: (a) the presence of linear and quadratic change over time (MONTHS) for the three variables of interest (mental health functioning, marital satisfaction, marital role salience) were assessed, and (b) prediction of mental health as a function of marital satisfaction and role salience through model building with compositional effects of the time-covarying variables on the dependent variable. To fully account for the within-persons and between-persons variance, aggregated forms of the variables of interest were included as L2 predictors. The final model was created by incorporating statistically significant predictors from both the change-over-time and composite effects analyses.

Models were evaluated for relative fit by comparing Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), which compares the goodness-of-fit for non-nested models based upon log-likelihood statistic, such that the smaller the AIC and BIC coefficient, the generally better the model (Holden, Kelley, & Agarwal, 2008; Singer & Willet, 2003).

Assessing Longitudinal Growth

Longitudinal changes in L1 variables (i.e., marital satisfaction, mental health, and role salience) were assessed as a measure of time in months; this included a linear function (MONTH), quadratic (MONTH2), and cubic (MONTH3). Again, the approach of building from an empty model as outlined by O'Connell et al. (2013) guided my model development, along with the influence of a priori hypotheses detailed above. All growth models began with no growth, or without slopes, but with intercept scores for L1 variables solely. Random error between participants on the intercept is presented with the variance component, r_{0i} ; e_{ti} represents random error within participants from their own mean score. Examining these variables allowed prediction of what variance remains to be explained at the intercept (r_{0i}) or between-subjects level, versus the within-subjects or slope (e_{ti}) level.

For mental health (MNTTLMHI), $\beta_{00} = 4.91$ ($p < .001$) was the average predicted score across all participants, at all time points, and error coefficients were statistically significant ($p < .001$), indicating that more variance remained to be explained for both within and between subjects. Marital satisfaction (KMSMEAN) had an average score across all time points for participants of (KMSMEAN) $\beta_{00} = 6.09$ ($p < .001$). This is a relatively high score across participants when considering that the highest possible mean score on the Kansas Marital Satisfaction Scale is 7. For this variable, both between and within-subjects variance coefficients signified that more variance could be explained. The average score across all participants at all time points for marital role salience (LRMMNT) was $\beta_{00} = 3.45$ ($p < .001$) and demonstrated more variance to be explained in the model through significant variance coefficients for within and between-subjects.

Trajectories of mental health, marital satisfaction, and marital role salience over the first year of expatriation were evaluated with time variables, MONTH, a linear function, MONTH2, a quadratic function, MONTH3, a cubic function. Each variable of interest was modeled with linear, quadratic, and cubic functions (see Table 2), along with the coefficients, variance components, and fit indices. For marital satisfaction, mental health, and marital role salience, there was no statistically significant change as a function of time in our simplest models. However, the best fit model for marital satisfaction did include a quadratic function as indicated by the stronger fit indices (AIC = 352.78; BIC = 367.44). These somewhat contradictory and complex results led us to continue considering the inclusion of time in model building.

Evaluating Time-Covarying and Aggregate Predictors on Mental Health

In evaluating the moderating effects of marital satisfaction and marital role salience on mental health outcomes, model building continued in a sequential and systematic approach. Our predictor variables were included in the multivariate data matrix in two forms: (a) centered within context as an L1 variable (e.g., Kansas Marital Satisfaction Mean, KMSMEAN; Mean total MHI score, MNTTLMHI; Life Role Marriage Mean Total; LRMMNT) for variables which were time-varying, and (b) as aggregate forms (e.g., aggregate Kansas Marital Satisfaction, AGKMS; aggregate MHI total, AGMHITOT; aggregate total Life Role Salience Marital Satisfaction, AGTLRMS) where an individual's scores were averaged across time.

Table 2

Evaluating the Fit of Linear, Quadratic, and Cubic Growth Models on Dependent Variables

	Coefficients				Variance Components					Deviance			
	β_{00}	β_{10}	β_{20}	β_{30}	r_0	r_1	r_2	r_3	$\sigma^2(e)$	Dev	Par	AIC	BIC
MnTTLMH/Mental Health													
Empty	4.91***				.238***				.227	247.061	3	253.061	257.458
MONTH	4.86***	.008			.196***	.000			.223	245.700	6	257.700	266.495
MONTH2	4.87***	.001	.000		.129**	.013	.009		.196	240.646	10	260.646	275.304
MONTH3	4.92***	-.058	.013	-.000	.136**	.013	.000	NV	.194	239.969	11	261.969	278.092
KMSMEAN/Marital Satisfaction													
Empty	6.09***				.438***				.515	358.871	3	364.871	369.268
MONTH	6.06***	.018			.627***	.005**			.407	353.859	6	365.859	374.654
MONTH2	6.01***	.024	-.001		1.345***	.112***	.000**		.282	332.787	10	352.787	367.445
MONTH3	6.04***	-.009	.005	-.000	1.350***	.335***	.021**	NV	.282	332.658	11	354.658	370.781
LRMMNT/Marital Role Salience													
Empty	3.45***				.483***				.089	164.959	2	168.959	171.890
MONTH	3.45***	-.002			.648***	.000			.081	163.184	4	171.184	177.047
MONTH2	3.44***	.006	-.000		.716***	.004	.000		.076	174.422	7	188.422	198.683
MONTH3	3.46***	-.022	.005	-.000	.720***	.005	.000	NV	.075	185.592	7	199.592	209.852

***, $p < .001$; **, $p < .05$; NV = not allowed to vary

By providing L2 aggregated variables, an average or trait level could be compared with the fluctuation or state scores of the L1 variable. This allows for variables to be centered either within the group (group centered; L1 variables) or in reference to the overall mean scores of the entire population (grand mean centered; L2 variables).

Table 3

Compositional Effects Model Evaluating the Impact of Aggregate MHI and Marital Satisfaction and Marital Role Salience on Mental Health Trajectories

Fixed Effect	Coefficient	SE	p-value
For INTRCPT1, π_0			
INTRCPT2, β_{00}	4.88	.104	<.001
AGTLRMS, β_{01}	-.001	.005	.868
AGKMS, β_{02}	.027	.048	.574
For LRMMNT slope, π_1			
INTRCPT2, β_{10}	-.187	.158	.245
AGKMS, β_{11}	.122	.066	.077
AGMHITOT, β_{12}	.037	.009	<.001
For MONTH slope, π_2			
INTRCPT2, β_{20}	.000	.040	.911
AGKMS, β_{21}	-0.024	.018	.202
AGMHITOT, β_{22}	.011	.001	<.001
For MONTH2 slope, π_2			
INTRCPT2, β_{20}	.000	.003	.918
AGKMS, β_{21}	.002	.001	.089
AGMHITOT, β_{22}	-.000	.000	<.001
Random Effect	SD	Variance Component	p-value
INTRCPT1, r_0	.438	.192	.007
LRMMNT slope, r_1	.383	.147	.058
MONTH slope, r_2	.167	.028	.026
MONTH2 slope, r_3	.0010	.000	.089
level-1, e	.341	.116	
<i>Fit Indices</i>	<i>AIC = 176.365</i>	<i>BIC = 210.076</i>	

My final model (Table 3) added the time-varying and aggregate forms of life role marital salience as an L1 predictor and a L2 moderator on the intercept, respectively. The outcome variable, mean mental health (INTRCPT, $\beta_{00} = 4.88$, $SE = .104$, $p = <.001$), was not significantly moderated at the intercept (i.e., the just-arrived stage) by aggregate marital role salience (AGTLRMS, $\beta_{01} = -0.001$, $SE = .005$, $p = .868$) and aggregate

marital satisfaction (AGKMS, $\beta_{02} = 0.027$, $SE = .048$, $p = .574$). Life role salience was entered as a L1 predictor (LRMMNT, $\beta_{10} = -.187$, $SE = .158$, $p = .245$) and while it, alone, did not have an effect on mental health trajectories, there was evidence that overall marital satisfaction AGKMS, $\beta_{11} = .122$, $SE = .066$, $p = .077$) and aggregate mental health (AGMHITOT, $\beta_{12} = .037$, $SE = .009$, $p < .001$) moderated the time-covarying (i.e., fluctuations) relationship between marital role salience and mental health. Although time, itself was a nonsignificant L1 predictor, it was significantly moderated by aggregate mental health at the instantaneous rate of change (AGMITOT, $\beta_{12} = .037$, $p < .001$), rate of change (AGMITOT, $\beta_{22} = .011$, $p < .001$), and change to the rate of change (AGMITOT, $\beta_{22} = .000$, $p < .001$).

The final model included marital role salience as an L1, time-covarying, predictor. While marital role salience did not, in itself, have a significant effect on mental health, this relationship was disentangled by looking at the L2 moderators. Aggregate mental health changed the strength of the point-estimates of life role salience

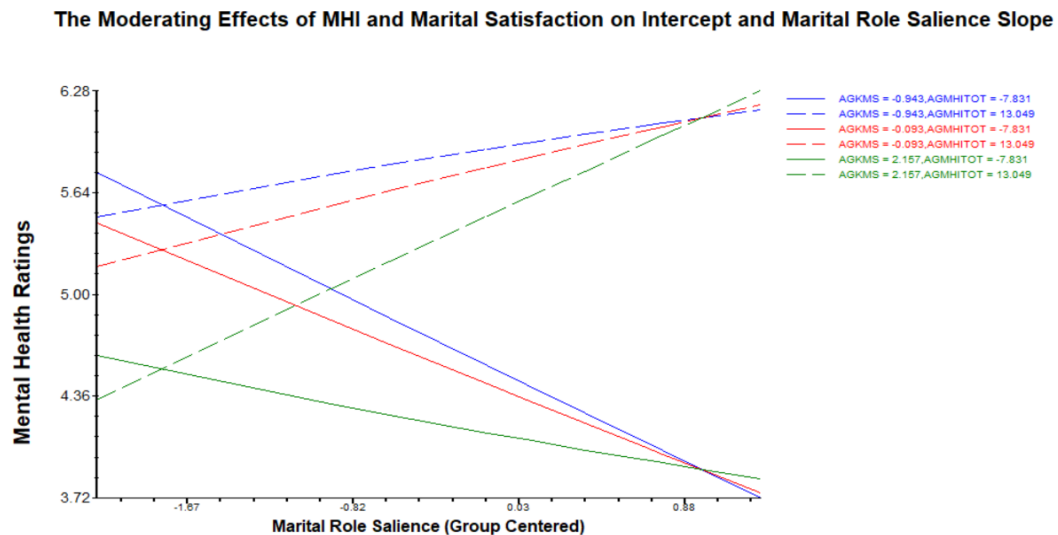


Figure 4. The effect of aggregate marital satisfaction and marital role salience on mental health scores at the intercept and aggregate MHI on the slope of marital role salience.

and mental health relationship, such that the slope was steeper for those with overall higher levels of mental health (AGMITOT, $\beta_{12} = .037$, $p < .001$). This sharpening effect was similar for overall marital (AGKMS, $\beta_{11} = .122$, $p = .077$).

From the final model, there are several salient findings. First there was significant moderation at the intercept and at the rate of change predictors, such that overall marital satisfaction of a participant impacted their initial ratings of mental health and that overall mental health impacted mental health rating trajectories over time.

Interestingly, this creates the appearance of an interaction between aggregate marital satisfaction and aggregate mental health that approaches significance, such that those with mental health overall are more likely to have increased marital life role salience, despite their overall marital satisfaction. Said differently, those with the greatest dissonance between their marital life salience and marital satisfaction had the poorest mental health scores. Depictions of this model can be seen in Figure 5, above, and Figure 6, above.

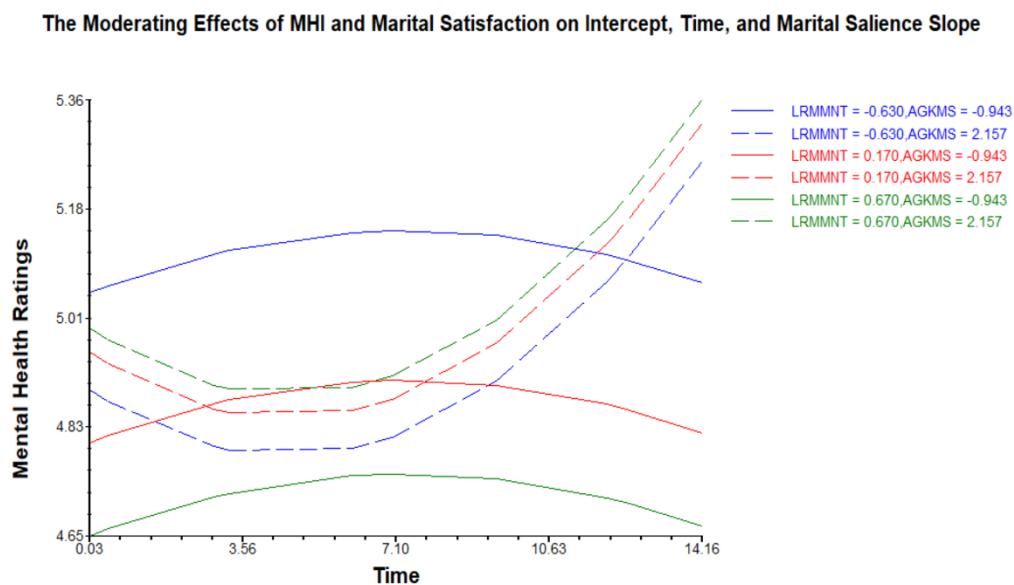


Figure 5. The effect of aggregate marital satisfaction and marital role salience on mental health scores at the intercept and aggregate MHI on the slope of marital role salience across time.

CHAPTER IV

Discussion

Mental health among expatriates is an area in global research which has been largely underrepresented or considered predominantly from qualitative and cross-sectional analyses. Spouses of expatriate assignees are an integral component of the assignment's success, and yet remain an underrepresented and overlooked part of the expatriate experience across the literature. The variables of marital satisfaction and marital role salience had demonstrated moderating and mediating effects upon mental health yet had limited bearing on the extant expatriate research. Therefore, I wanted to explore mental health outcomes for the female, expatriate spouse as they were considered across time, along with time-varying and aggregate (trait) forms of marital satisfaction and marital role salience factors.

Changes Over Time Effected More by Trait, not State

For marital satisfaction, overall mental health, and marital life role salience, there was no indication of change over time in our simple models. While fit indices indicated that a quadratic function of time provided the best fit, no time function alone was statistically significant. Yet, when aggregate forms of mental health were added to the time functions, there was a statistically significant moderating effect on both the linear and quadratic functions. This indicates that those with high, average, and low aggregate mental health scores, compared to the group, had distinct trajectories of mental health over their first year in Turkey. Further, when aggregate forms of marital satisfaction and mental health were added to the slope of marital role salience, there was again a significant moderating effect. These results indicate that change over time seems to be

more impacted by general traits or *average* levels of functioning on our variables of interest, rather than by fluctuations of these variables across time.

Such outcomes add to the ongoing debate regarding baseline or set-point levels of well-being, as proposed in theories such as the hedonic treadmill and set-point theory (Brickman & Campbell, 1971; Diener, Lucas, & Scollon, 2009), and models of adaptation-reaction that propose that life events can strongly impact well-being (Luhmann, Hofmann, Eid, & Lucas, 2012). According to Luhmann et al. (2012), the change that one could expect in wellbeing is a function of the type of life event (e.g., desirability, expectation) and outcomes in affective well-being and cognitive well-being. Affective well-being is one's assessment of how they are feeling, whereas cognitive reflects their evaluations of a situation. If we look at the measures included in the current study, those that were more cognitive in nature (i.e. How do you value your marriage? How satisfied are you with your marriage?) impacted the start-point of well-being, whereas the measure that included more affective components (mental health) had an impact on changes over time. The findings of this study demonstrate that it is not solely context or environment which impact the outcomes of interest, but the typical or average of the individual. It may be likely that an expat spouse feels secure in her marriage, but may experience changes in affect (e.g., anxiety, sadness, or a loss of sense of belonging) that are difficult and quickly shifting. In many ways, there is potential to compare the trait and state findings presented here to the larger discussion of well-being discussed in the literature and covered in the introduction; that individuals are more likely to experience certain shifts quickly in hedonic well-being (subjective well-being/affective components/feelings of pleasure) compared to shifts in eudaimonic well-being

(psychological well-being/cognitive components/areas of meaning).

It is possible that looking at the distinct affective and cognitive components of adaptation may provide more nuance to the *change-over-time* questions. Further, Luhmann et al. (2012) found significant longitudinal changes in their meta-analysis with longitudinal analyses that spanned more time than our own. It is likely that our sample size and power may not be strong enough or our measures sensitive enough to highlight non-drastic changes across time.

Discrepancies in Marital Satisfaction and Role Salience Effect Mental Health

When marital life role salience was included in the final model, aggregate mental health was a significant moderator of this variable and there was a significant interaction between life role salience and aggregate marital salience. First, those with higher mental health were more likely to have higher marital life role salience when compared to other members of the sample, but regardless, marital life role salience had a non-significant negative effect on mental health outcomes. Second, the inclusion of aggregate marital satisfaction produced a significant interaction with marital role salience, such that those with the highest levels of marital role salience but the lowest levels of marital satisfaction (the greatest dissonance) had the lowest mental health outcomes.

The dissonance between these variables is meaningful due to the importance of expectations and changing roles across domains. While the strong positive effect of marital satisfaction on overall wellbeing is marked throughout the literature, our final model provides the opportunity to consider this large domain of marital satisfaction from a more nuanced perspective, as it is influenced by role salience (values and commitment) and overall mental health and its moderating effect on marital role salience and changes

in mental health across time. If we continue with the hypothesis that the dissonance between expectation and lived experience is the active agent of moderation between mental health and marital satisfaction, it opens doors for understanding the phenomena of marital quality from the backdrop of context and environment. By better understanding the contextual factors which may be aligning or working against valued expectations, interventions (such as supportive couples counseling prior to expatriate assignment focused on expectations) can be tailored to address potential, future difficulties. The relationship between these variables could possibly be clarified through a larger sample and a sample marked with less homogeneity in scale response.

Increasing Statistical Complexity Allows for Greater Insights

The current study builds upon the work of Bikos and Kocheleva (2013) and Bikos et al. (2007), where the authors found that role salience and marital satisfaction did statistically significantly impact mental health outcomes. While the current study hypothesized that greater statistical methods, namely HLM, would allow for greater analysis of the time variables, these variables remained insignificant in our model. However, through the greater statistical complexity allowed by HLM, the moderating effects of role salience, aggregate marital satisfaction, and aggregate mental health were better understood in that the relationships of moderation and in what ways (i.e. intercept or across time) they acted upon the model. Further, the comparison of within-person and between-person effects was unable to be produced in the previous studies. By being able to analyze these differences, we were able to draw our final model which highlighted trait characteristics of our participants over state characteristics.

Study Limitations

For our data, individuals reported generally high marital satisfaction and moderately high mental health, without much fluctuation over time. This creates a small spread of data that limits variability of the sample, thereby limiting the variability from which to draw statistically significant differences within our sample. Such homogeneity was likely impacted by the relatively small *N* of our study and, perhaps, by the scope of time that these participants were followed. Hypothetically, with a greater span of time, more fluctuations in response may occur, producing more discernable trends over time.

Secondly, the archival nature of the data allows retrospective analysis of the experiences of female expat spouses but may not represent current trends in partner-related outcomes. For instance, as cited in the literature, changes in marital satisfaction and partnerships have changed drastically in the last 15 years. More individuals are seeking non-married, committed partnerships instead of legal, marital relationships than ever before (Geiger & Livingston, 2018). One of the important changes in looking at marriage as a predictor of well-being is accounting for the context and shifting cultural understanding of marriage, singleness, and cohabitation. As discussed above, the categories of married versus unmarried have historically been used to investigate differences between those within a marital relationship and those who were not. Be that as it may, divorce, singleness, widowhood, and intimate partner cohabitation provide more depth in understanding what outcomes are unique to marriage union or dissolution, and which may be better explained by other influential variables. Musick and Bumpass (2012) looked at cohabitating and marital unions over time and found relatively little difference in the psychological health between the two groups. Any intimate union, either through marriage or cohabitation, was found to be beneficial to one's psychological well-

being. In fact, when the authors compared married individuals' scores with those who were cohabitating, marriage was seen to negatively impact overall sense of happiness and self-esteem. By looking at solely spouses, we are not addressing the normative experience of an expatriate dyads who may or may not be married. Further, global sociopolitical changes have occurred in the last 15 years, which would likely impact the experiences of expatriates as culture becomes more or less receptive to expatriates, Western culture, and variables of globalization (Collings & Isichei, 2018; Cui & Feng, 2018).

Another limitation of my dissertation is the generalizability of my sample. First, our sample included only female U.S. passport holders who were expatriating to Turkey, which limits the generalizability of these findings in gender, host-country factors, and home-country factors. Such factors can have significant impact on the coping skills employed, mental health base-rates among genders, and gender differences in marital satisfaction evaluation. Further the spousal relationships that were examined in our sample were composed entirely of heterosexual, married couples. The heteronormative nature of our sample and the non-exploration of committed, but unmarried partnerships limit the generalizability of our data and offers more areas to be explored in future studies. Generalizability outside of our sample is virtually impossible, however, this study provides first steps in substantiating the relationship between marital satisfaction and mental health during periods global adjustment.

Future Directions

Distinct future recommendations for my study provide potential solutions to current limitations as well as proposed next steps to build upon the current findings. One

of the strengths of the current study is the inclusion of role salience, which was an unexplored variable in the literature previously, but holds significant moderating effects within the model. The role that personal expectations and importance of role play in global adjustment processes could potentially provide a strong variable of interest across expatriate populations. Specifically, the expansion role salience would allow for further exploration of the dissonance findings of this study, to substantiate whether it is the dissonance of expectation and experience that impacts mental health trajectories. These salience variables can also be tailored to explore specific expatriate populations, for example, by looking at work salience for unpartnered individuals.

In regard to measurement, future studies would likely benefit from more in-depth measurement of marital satisfaction to better explore the scope of this variable. Changing the self-report measure from the global evaluation provided by the KMS to a more nuanced and specific measure would allow greater granularity in assessing the complex relational patterns in marriage and romantic partnership. Greater discrimination would likely provide greater insight in determining if specific components of marital satisfaction impact mental health or interact with role salience differently, ultimately allowing to see if some of the trending results reviewed above could shift toward more meaningful outcomes.

This recommendation leads to another consideration for future work: more robust investigation into the contextual factors that regularly influence both rating of mental health and marital satisfaction. Specifically, inclusion of social support and community-based factors are an important part of the biopsychosocial model that are missing a prominent place in this current study. While the current study considered the role of

context from the perspective of role salience, this perspective presents a myopic and limited understanding of context and environment, including both biological factors (e.g. better measures of individual trait variables) and situational context (e.g. country of expatriation, stage of life, political climate). Future forays into the expatriate research would be strengthened and supplemented by including central contextual factors.

Expanding the inclusion criteria for future studies address both the limitations and next steps for this study, increasing generalizability, but also moving toward capturing trends in romantic partnerships and nonheteronormative relationships (Geiger & Livingston, 2018). The picture of married, heterosexual, first-marriage dyads is no longer the normative trend and the understanding the current relational trends would better and may more accurately capture the experience of expatriated individuals.

As noted above, when mental health subcomponents were analyzed, there was a significant linear effect for anxiety, one of the only significant trends over time. An appropriate and interesting next step for this line of research would be to analyze the different subcomponents of mental health in a more in-depth manner, such that anxiety specifically is understood from the cognitive and affective components of mental health and its effect on understanding the role of values dissonance.

In conclusion, the globalized world includes the globalized family, and for married dyads the importance and the experience of the quality of the marital relationship impacts the mental health trajectories of those adjusting to global expatriation experiences. This study presents a basis to understand the interaction between these variables and the values of role across adjustment.

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