Asian Journal of Counselling, 2013, Vol. 20 Nos. 1 & 2, 1–31
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Psychological Health of Expatriate Spouses: A Neglected Factor in International Relocation

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Little research exists on the emotional health of expatriate spouses in international relocation. This study clarified how primary constructs identified in the expatriate research (e.g., cultural differences, personality, social support) and theories of voluntariness related to the psychological health of expatriate spouses in Hong Kong. Using hierarchical regression, psychological health emerged as a relevant outcome in relocation as well as a mediator of the relationship between other variables and intent to stay in the international setting. In support of hypotheses, social support mediated the relationship between personality and psychological health. The relationship between voluntariness and intent to stay, as well as that of social support and intent to stay, appeared to be fully mediated by psychological health. This study clarifies prior research, identifying psychological health as a route through which other variables may impact intent to stay in the international setting. Findings have implications for counselors working with families relocating internationally and warrant more attention to ways to enhance the psychological health of expatriate spouses in international settings.

The data in this article were collected while the author was at the University of Wisconsin–Madison but the study was reconceptualized and data were reanalyzed while the author was at Whitman College. Correspondence concerning this article should be addressed to Deborah L. Wiese, Miami University, 90 N. Patterson Ave., Psychology Bldg, 100, Oxford, OH 45056, U.S.A. E-mail: wiese3@mac.com

Keywords: psychological health; social support; international relocation; expatriate spouses; adjustment

Globalization has led to an increasing number of people working internationally for some portion of their careers. According to an international corporate survey, 61% of corporations expect an increase in their expatriate population, with another 32% expecting the population to remain the same (Brookfield Global Relocation Services, 2011). Due to trends in international sojourns, attention to the psychological health of individuals and families in the international setting is imperative.

Much of the research on international relocation has focused on identifying employees likely to be successful in international settings and determining the causes of early termination of assignments. The research has attempted to identify personality characteristics and factors of adjustment to the culture or workplace that might impact performance in the international setting. However, correspondingly little research has involved expatriate spouses or families, unless to represent the situation for employees. In addition, the research has overlooked psychological factors and positive psychological outcomes.

Research has also reinforced the idea, perhaps prematurely, that the expatriate spouse plays a critical role in employee retention. In a cross-national study, U.S. and Western European firms do cite the adjustment of the spouse as the number one reason for early termination of the employee (Tung, 1982). Over twenty-five years later, organizations continue to cite partner resistance and family adjustment as two of the primary challenges for companies (Brookfield Global Relocation Services, 2011). However, findings about spouses tend to be based on surveys of employees or corporate managers, with spouses portrayed as “problems to be solved” (e.g., Ali, Van der Zee, & Sanders, 2003;

Black & Stephens, 1989; Tung, 1982). These studies offer few insights as to actual experiences of expatriate spouses.

Aspects of an international move may indeed be difficult for expatriate spouses. International labor restrictions and language barriers often prevent spouses from finding jobs or from being able to apply for jobs in their area of expertise (Kilgore & Shorrock, 1991). Indicative of this, a recent report found that although 60% of spouses had been employed prior to relocation, only 12% of those spouses were employed during the international assignment (Brookfield Global Relocation Services, 2011). A recent qualitative study identified challenges such as long working hours of the expatriate employee, corresponding lack of family time, and disproportionate impact of normal life events such as illness in an international setting (Bikos et al., 2007). However, despite the suggestions that career or psychosocial issues may inhibit the satisfaction and psychological well-being of spouses in the international setting, there is little direct evidence of this in the literature.

Adjustment and Psychological Health

In a nod to psychological factors, research consistently identifies "adjustment" as the primary issue in failure of the international assignment. Rarely is the term defined, and scales measuring adjustment vary widely. Some studies allow participants to deduce their own meaning, asking simply about the "degree of adjustment" to various aspects of the new living situation (e.g., Black & Stephens, 1989; Harvey, 1997; Takeuchi, Yun, & Tesluk, 2002). Other studies ask how comfortable participants feel about aspects of daily living (e.g., Shaffer & Harrison, 1998). In a meta-analytic review of the empirical research on expatriate employee adjustment, Hechanova, Beehr, and Christiansen (2003) identified three types of adjustment receiving the most focus: general adjustment (addressing comfort regarding daily living), work adjustment (addressing competency in the job), and interaction

adjustment (referring to comfort in the host community). Mohr and Klein (2004) additionally identified role adjustment of spouses (referring to reconciling changes in career status or new social responsibilities). One type of adjustment notably missing in the employee literature involves the psychological response to what could potentially be a stressful situation.

Similar to the employee research, the limited research on expatriate spouses has tended to focus on identifying antecedents to non-psychological adjustment. For example, Black and Gregersen (1991) found that cultural novelty and pre-move involvement impact the general and interaction adjustment of spouses in the international setting, with cultural novelty referring to the perception of cultural difference between the host and home countries. Mohr and Klein (2004) found cultural novelty to be related to general adjustment, but not to interaction or role adjustment. These and other hypothesized variables (such as age, language fluency, length of stay, personality, and pre-departure training) show inconsistent relationships to adjustment in the research on expatriate employees and spouses, with findings suggesting that variables such as social support or a sense of belonging may be more important (e.g., Ali et al., 2003; Herleman, Britt, & Hashima, 2008; Mohr & Klein, 2004).

As an exception to much of the research on international relocation, a handful of studies on expatriate spouses attend to psychological aspects of relocation. These studies addressed general mood states (De Cieri, Dowling, & Taylor, 1991), pathological responses such as depression (Copeland & Norell, 2002; Herleman et al., 2008), and satisfaction with life (Ali et al., 2003; Herleman et al., 2008). All four studies point to the importance of social support (as measured by family relationships or social networks) to psychological outcomes, suggesting the importance of including social support as a critical component of an

emerging theory of expatriate spouse adjustment. Notably, Ali et al. (2003) and Herleman et al. (2008) are the only ones thus far in the research on expatriate employees or spouses to have explored a positive psychological outcome to relocation.

Little is known about factors impacting psychological health or successful relocation outcomes for expatriate spouses. Psychological health refers to positive aspects of emotional health, broadly encompassing satisfaction with life, sense of self-worth, sense of purpose, and personal growth and resources. The measurement of psychological health allows for a reconceptualization of international relocation as a transition that may well have overall positive consequences despite the stressors. By measuring aspects of psychological health, it may be possible to identify the strengths and resources of the majority of spouses who successfully adjust in the international setting. This may in turn provide a better understanding of factors relevant for psychologists working with expatriates or developing programs to assist families relocating internationally.

Personality, Novelty, and Pre-move Attitudes

The lack of existing research on psychological outcomes of relocation justifies an exploratory study that may help to identify theory for future research in this area. The pre-existing factors that have consistently demonstrated the most relevance to relocation outcomes for expatriate employees or spouses include personality, perceived cultural novelty of the country, and pre-move attitudes (e.g., Black & Gregersen, 1991; Cui & Awa, 1992; De Cieri et al., 1991; Mohr & Klein, 2004). These three variables also have the potential to impact psychological health.

Research has shown that personality may, to a certain degree, determine subjective well-being (Diener, 2000; Diener, Oishi, & Lucas,

2003; Schmutte & Ryff, 1997) and affect support (S. Cohen & Syme, 1985). Personality traits such as extraversion or agreeableness may lead people to more quickly obtain or seek out social support in new surroundings. In addition, openness to experience or emotional stability may influence satisfaction with life in the international setting. Also, in the international setting, personality of expatriate employees has demonstrated relevance to outcomes such as the success of the assignment (e.g., Caligiuri, 2000; Cui & Awa, 1992), although findings are mixed regarding which personality variables affect relocation (e.g., Aycan & Kanungo, 1997; Caligiuri, 2000; Hechanova et al., 2003; Ones & Viswesvaran, 1997). In research on spouses, Ali et al. (2003) found that open-mindedness and emotional stability were the only personality variables related to satisfaction with life. With the exception of Ali et al., no studies to date have examined the personality of expatriate spouses as it relates to psychological health.

Expatriate employee research also suggests that perceived cultural novelty of the country affects attitudes regarding the move. A majority of researchers have found that cultural novelty impacts general adjustment (e.g., Black & Gregersen, 1991; De Cieri et al., 1991; Mohr & Klein, 2004). The degree of cultural difference between host and home countries may also impact psychological health. Larger differences may result in individuals having a more difficult time obtaining social support, whereas the lack of cultural familiarity could impact methods of coping that individuals relied on in their home countries.

As with cultural novelty, pre-move attitudes may play a role in seeking social support and maintaining psychological health in a new setting. Two studies measured pre-move attitudes of expatriate spouses, asking whether spouses discussed the move or whether the corporation sought the opinion of the spouse prior to the move. Although Copeland

and Norell (2002) found no relationship between discussions and maladjusted mood, Black and Gregersen (1991) found that seeking spouse opinion improved general adjustment.

The measurement of pre-move attitudes in the international relocation research could be enhanced by attending to the degree to which spouses perceived the move as voluntary, a decision in which they had choice and control. Theory and research on life transitions suggests the importance of choice and control in psychological well-being (Perlmuter & Eads, 1998; Smider, Essex, & Ryff, 1996). Voluntariness of the move would likely influence spouses to a greater degree than employees. Given inherent losses for spouses in relocation, perceived choice and control might mitigate resentment regarding losses or potential unexpected stressors during relocation.

Current Study

The current study differs from prior research by exploring the adjustment of expatriate spouses from a positive perspective, focusing specifically on strengths of individuals in the international setting and the enhancement of psychological health. As the research on expatriate psychological health is still exploratory, the current study sought to create a foundation for future research and theory. The factors of personality, perceived cultural novelty of the country, and pre-move attitudes were included due to the relevance in prior research on expatriate adjustment as well as the theoretical link they have with psychological health. Psychological health also has been suggested as one outcome in the research on social support and the counseling theory related to choice and control, making both factors relevant in an emerging theory of psychological health for expatriate spouses. The intent of this study was to add to an initial understanding of psychological processes at work when families relocate internationally.

Corporate interests drive some of the variables in expatriate research more so than in other psychological research. Consequently, the outcome most often addressed in prior research is whether expatriate employees complete their assignments as expected. Previous research has suggested that premature termination of assignments is linked to the adjustment of expatriate spouses. Clarifying the relationship between psychological health and intent to stay in the international setting allows for a fuller understanding of the impact of psychological factors in international relocation. In addition, determining the importance of social support and identifying other underlying factors of well-being in an international setting would allow for the development of expatriate family assistance programs that could more comprehensively address the needs of expatriate spouses.

The current study examined the psychological health of expatriate spouses in Hong Kong. The study addressed social support that may come from family, friends, or other individuals or groups. The few studies on expatriate spouses suggest that various aspects of social support are critical factors in emotional adjustment (e.g., Ali et al., 2003; Copeland & Norell, 2002; De Cieri et al., 1991) although not necessarily the only relevant factor (Herleman et al., 2008). This study attempted to confirm these findings while also particularly examining the relationship between social support and psychological health once factors of personality, cultural novelty, and voluntariness of move have been considered.

Personality, cultural novelty, and voluntariness of move may result in some people seeking out, obtaining, or maintaining greater levels of social support; thus, the first set of hypotheses suggested that the relationship between pre-existing factors and psychological health would be mediated by social support, such that social support will predict psychological health even when personality factors, cultural novelty, and voluntariness are controlled:

Hypothesis 1a Social support will mediate the relationship between personality and psychological health.

Hypothesis 1b Social support will mediate the relationship between cultural novelty and psychological health.

Hypothesis 1c Social support will mediate the relationship between voluntariness and psychological health.

Three ancillary hypotheses explored the role of psychological health in determining the desire to remain in the international setting for the predetermined length of stay. The second group of hypotheses proposed that psychological health would mediate the relationship between the pre-existing variables and the desire of spouses to stay in the international setting:

Hypothesis 2a Psychological health will mediate the relationship between personality and intent to stay.

Hypothesis 2b Psychological health will mediate the relationship between cultural novelty and intent to stay.

Hypothesis 2c Psychological health will mediate the relationship between voluntariness and intent to stay.

Finally, the last hypothesis explored the relationship between social support and intent to stay in the international setting, considering psychological health as a mediator:

Hypothesis 3 The relationship between social support and intent to stay will be mediated by psychological health.

Method

Participants

Participants included 73 English-speaking expatriate spouses (69 female, 4 male) residing in Hong Kong, a response rate of 15%. This was high given research on expatriates that found Hong Kong had

the lowest response rate (7.1%) among 22 countries (Harzing, 1997). Participants ranged in age from 33 to 57 years old (M = 43.81, SD = 5.24). They had between one to four children accompanying them (M = 2.07, SD = .77). Participants were identified as citizens of 11 countries (75.3% U.S.; 11% Canada; 5.5% Australia; 4.1% U.K./Britain); 6.8% of participants claimed citizenship in two or more countries. Nearly half of the participants (48%) had lived in Hong Kong for 2 years or less and 66% of participants had lived in Hong Kong for 3 years or less. Over 50% of participants expected to remain in Hong Kong less than two more years. A total of 40% of participants reported never having lived outside of a culture significantly different from their own before this move.

Measures

Cultural novelty

Cultural novelty refers to the perceived difference between the host country and a participant's country of origin. The Culture Novelty scale (Black & Stephens, 1989, adopted from Torbiorn, 1982) consists of eight items to measure the cultural similarity of the host country compared to the home country, with reliabilities of .64 (Black & Stephens, 1989), .72 (Selmer, 2002), .75 (Black & Gregersen, 1991), and .81 (Shaffer & Harrison, 1998). Participants used a 5-point scale (1 = very similar, 5 = very different) to compare broad cultural issues. Sample items are "everyday customs that must be followed," "general living conditions," and "climate." One question regarding available quality and types of food was not included in this study due to an oversight. Internal consistency for the current 7-item scale was .94.

Voluntariness

Voluntariness refers to the amount of choice and control that participants perceived in the decision to relocate to the host country.

Three of the four questions used for this study were adapted from the Pressure of Move scale (Smider et al., 1996), a 9-item scale developed for transitions in adulthood. Participants rated the first three items on a 6-point scale (1 = not at all, 6 = very much) with questions such as: "To what extent would you say this move was something you wanted to do?" and "Did you feel free to decline this move?" The fourth question asked participants to rate the control they had in the decision to relocate, using a 6-point scale (1 = none, 6 = full control). The internal consistency was .88 for all four items.

Intent to stay

Intent to stay refers to whether someone plans to stay in the host country for the predetermined length of time. The measure included three questions from Takeuchi et al. (2002), with revised wording to better reflect the two questions originally drawn from Black and Stephens (1989). Participants rated the extent to which they agreed with statements about finishing the job assignment. This was measured on a 7-point scale (1 = strongly disagree, 7 = strongly agree) with questions such as "I discuss the possibility of returning early to our home country" and "I would do anything to keep this assignment for its expected duration." Two items were reverse-scored. The coefficient alpha for this study was .70.

Personality

Personality was measured with the Mini-Markers Five Factor Personality Inventory (Saucier, 1994). The Mini-Markers consists of 40 one-word traits measuring five dimensions of personality, with each five-factor scale consisting of eight items. Participants rated the randomly ordered items for how accurately it describes them, on a 9-point scale that ranged from extremely inaccurate to extremely accurate. Some of the items were reverse-scored. The Mini-Markers

show convergent validity with other widely used measures of personality. Mooradian and Nezlek (1996) compared the Mini-Markers with the 60-item NEO-FFI, and found that the reliability for the Mini-Markers was slightly higher, ranging from .78 to .86 compared to the NEO-FFI reliabilities that ranged from .74 to .83. Internal consistencies for the five Mini-Markers scales range from .78 to .83 (Saucier, 1994). The internal consistencies for this study were .89 for Extraversion, .70 for Agreeableness, .81 for Conscientiousness, .72 for Emotional Stability, and .84 for Intellect/Openness.

Social support

Using the Social Provisions Scale (Cutrona & Russell, 1987), participants responded to 24 items measuring six theoretical types of social support that include guidance, reliable alliance, reassurance of worth, opportunity for nurturance, attachment, and social integration. Participants rated the items on a 4-point scale (1 = strongly disagree, 4 = strongly agree). Half of the questions were reverse-scored. Sample questions included: "There are people I can depend on to help me if I really need it" and "There is no one who likes to do the things I do." Studies have provided support for the predictive validity of the Social Provisions Scale for psychological well-being of women in midlife (Dukes Holland & Holahan, 2003), depression in the elderly (Russell & Cutrona, 1991), and burnout of teachers (Russell, Altmaier, & Van Velzen, 1987). The reported internal consistency coefficient of this scale is .92 (Cutrona & Russell, 1987). The coefficient alpha for this study was .93.

Psychological health

Psychological health was measured with two scales. The first scale was the 54-item version of the Psychological Well-Being (PWB) scale (Ryff, 1989; Ryff & Keyes, 1995), a theory-derived construct measuring six dimensions of psychological health, namely self-acceptance, positive

relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Participants reported on a 6-point scale (1 = strongly disagree, 6 = strongly agree) to questions such as "being happy with myself is more important to me than having others approve of me" and "in general, I feel I am in charge of the situation in which I live." Ryff and Keyes (1995) provide evidence for a "super-factor model" combining the six dimensions, and other studies have used the combined scale of PWB to measure effects of coping and support (Dukes Holland & Holahan, 2003). The coefficient alpha for this study was .91.

Psychological health was also measured with the Satisfaction With Life (SWL) Scale (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993), consisting of five questions that ask participants directly about their satisfaction with their life and what they have gotten in life. The content overlap of the PWB scales with social support measures introduces a potential confound. In addition, Keyes, Shmotkin, and Ryff (2002) demonstrated that PWB and global satisfaction measure two empirically distinct aspects of psychological health. Based on these issues, SWL was added as a brief measure of global satisfaction that does not include relational content in items. The SWL utilizes a 7-point scale (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree). Diener, Emmons, et al. (1985) reported a two-month test-retest correlation coefficient of .82 and a coefficient alpha of .87. A coefficient alpha of .96 was obtained in the current study.

Procedure

All questionnaires were Web-based. An international school that conducted all parent correspondence by e-mail, and reported 99% of families with Internet access, sent initial recruitment e-mails with the Website link for the study and included information about the study in a parent newsletter. They sent a follow-up e-mail two and four weeks

later. Participants completed psychological health measures first. Demographic, situational, and personality measures followed. No compensation was provided.

Using guidelines presented in J. Cohen and Cohen (1983), a power analysis appropriate for sets of variables determined the level of probability of obtaining significant results in this study. Using the suggested medium effect size (f^2 = .15), the level of power for N = 70 was determined to be between .85 and .90 (p = .05), suggesting that there was more than an 85% chance of obtaining significant results. All variables were normally distributed and met the assumptions of homoscedasticity and linearity.

Results

A correlation matrix and descriptive statistics were calculated for all variables (see Table 1). Scale means and standard deviations were within expected ranges for all measures. Each analysis of psychological health was conducted using both measures of PWB and SWL. To test mediator hypotheses, separate multiple regressions were conducted to satisfy the three conditions necessary for a mediator hypothesis (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). In the first condition, the predictor variable must be significantly related to the outcome variable. In the second condition, the predictor variable must be significantly related to the mediator variable. Finally, in the last condition, the mediator variable must be related to the outcome variable when controlling for the predictor variable. If any of these conditions is not met, the mediator hypothesis is not supported.

Social Support and Psychological Health

Hypotheses 1a–1c

Hierarchical regression was used to test the hypothesis that social

Table 1. Means, Standard Deviations, and Correlation Matrix of All Variables

	1	2	3	4	5	6	7	8	9	10	*M*	*SD*
Outcome variables												
1. Psychological well-being											4.98	.51
2. Satisfaction with life	.62**										4.52	1.04
	(72)											
3. Intent to stay	.45**	.57**									4.13	1.17
	(72)	(73)										
Social and situational factors												
4. Social support	.63**	.47**	.26*								3.52	.35
	(72)	(73)	(73)									
5. Voluntariness	.28*	.37**	.30**	.21							3.04	1.35
	(72)	(73)	(73)	(73)								
6. Cultural novelty	.06	–.01	–.08	–.07	–.01						3.62	.67
	(72)	(73)	(73)	(73)	(73)							
Personality factors												
7. Extraversion	.23	.08	.04	.24*	–.01	–.20					6.15	1.51
	(71)	(72)	(72)	(72)	(72)	(72)						
8. Agreeableness	.10	–.00	.01	.27*	–.28*	–.08	.26*				7.36	.84
	(71)	(72)	(72)	(72)	(72)	(72)	(72)					
9. Conscientiousness	.33**	.24*	.25*	.19	.18	.00	.26*	.22			7.39	.99
	(71)	(72)	(72)	(72)	(72)	(72)	(72)	(72)				
10. Emotional stability	.24*	.21	–.01	.07	.17	.08	.12	.23	.22		6.18	1.10
	(71)	(72)	(72)	(72)	(72)	(72)	(72)	(72)	(72)			
11. Openness to experience	.44**	.14	.02	.39**	–.00	–.10	.36**	.03	.17	.14	6.49	1.24
	(71)	(72)	(72)	(72)	(72)	(72)	(72)	(72)	(72)	(72)		

Note: Numbers in parentheses refer to sample size for the correlation.

* $p < .05$; ** $p < .01$

support functioned as a mediator between personality and psychological health. Satisfying the first condition described earlier for mediator hypotheses, personality was significantly related to psychological health as measured by PWB, $R^2 = .28$, $F(5, 65) = 5.01$, $p < .01$. In particular, the two traits driving this relationship were conscientiousness ($\beta = .24$, $t(70) = 2.12$, $p = .04$) and openness to experience ($\beta = .37$, $t(70) = 3.28$, $p < .01$). The second condition was also met as personality was related to social support, $R^2 = .23$, $F(5, 66) = 3.94$, $p < .01$. In support of the mediation hypothesis, the relationship between social support and PWB was significant when controlling for personality characteristics ($\beta = .56$, $t(70) = 5.65$, $p < .01$). These findings conform to the predicted mediator hypothesis, which states that social support should mediate the association between personality and psychological health. This hypothesis was not evaluated for SWL as the analysis demonstrated no relationship between personality characteristics and SWL, $R^2 = .10$, $F(5, 66) = 1.40$, $p = .24$, suggesting that there was no mediation to test.

The two remaining hypotheses about social support suggested that social support would mediate the relationship between cultural novelty and psychological health as well as the relationship between voluntariness and psychological health. These mediation hypotheses were not supported as cultural novelty was not significantly related to psychological health when measured by either PWB or SWL, and voluntariness was not significantly related to social support (see Table 1).

Psychological Health and Intent to Stay

Hypotheses 2a–2c

Testing the hypothesis that psychological health mediates the relationship between voluntariness and intent to stay, the first two conditions of the mediation model were met (see Table 1). To evaluate

the third condition of the mediation model, intent to stay was regressed simultaneously on psychological health and voluntariness of move. PWB and intent to stay were significantly related when controlling for voluntariness of move (β = .40, $t(71) = 3.61$, $p < .01$) (see Table 2). Additionally, it appeared that a full mediation hypothesis was supported, as voluntariness of move no longer uniquely predicted intent to stay when controlling for PWB (β = .18, $t(71) = 1.59$, $p = .12$). These findings conform to the predicted mediator hypothesis, which states that psychological health should mediate the association between whether the move was perceived as voluntary and intent to stay in the international setting. Repeating the regression for SWL, SWL and intent to stay were significantly related when controlling for voluntariness of move (β = .54, $t(72) = 5.13$, $p < .01$) (see Table 2). In addition, a full mediation hypothesis was supported, as voluntariness of move no longer uniquely predicted intent to stay when controlling for SWL (β = .10, $t(72) = .99$, $p = .33$). Thus, the degree to which expatriate spouses perceived the move as voluntary was significantly related to their intent to stay in Hong Kong, with this association fully mediated by either of two correlated measures of psychological health (i.e., PWB or SWL).

Table 2. The Third Condition for the Mediator Effect of Psychological Health on Voluntariness of Move and Intent to Stay

Measures of psychological health	*B*	*SE B*	β
Psychological well-being (*N* = 71)			
Outcome: Intent to stay			
Mediator: Psychological well-being	.92	.26	.40**
Predictor: Voluntariness	.15	.10	.18
Satisfaction with life (*N* = 72)			
Outcome: Intent to stay			
Mediator: Satisfaction with life	.61	.12	.54**
Predictor: Voluntariness	.09	.09	.10

** $p < .01$.

Although psychological health was proposed to mediate the relationship between personality and intent to stay, the first condition of the regression was not supported as personality characteristics of expatriate spouses did not appear to have any impact on intent to stay in the international setting, $R^2 = .07$, $F(5, 66) = .95$, $p = .46$. As there was no relationship to be mediated, this hypothesis was not supported. The hypothesis that psychological health mediates the association between cultural novelty and intent to stay was also not supported as no relationship was found between cultural novelty and intent to stay (see Table 1).

Hypothesis 3

Using multiple regression, the hypothesis that psychological health mediates the association between social support and intent to stay was tested. The first two conditions of the mediation model were supported, with social support being related to both intent to stay and psychological health (see Table 1). To assess the mediation, intent to stay was regressed simultaneously on psychological health and social support. The relationship between intent to stay and PWB was significant when controlling for social support ($\beta = .47$, $t(72) = 3.4$, $p < .01$) (see Table 3). In addition, it appeared that a full mediation hypothesis was supported, as social support no longer uniquely predicted intent to stay once PWB was controlled ($\beta = –.04$, $t(72) = –.28$, $p = .78$). SWL also uniquely predicted intent to stay when controlling for social support ($\beta = .58$, $t(72) = 5.23$, $p < .01$) (see Table 3). This appeared to be full mediation, as social support no longer predicted intent to stay in the last condition of the mediation model ($\beta = –.01$, $t(72) = –.12$, $p = .90$). Thus, social support was significantly related to the intent to stay in Hong Kong for these expatriate spouses, with this association fully mediated by either of two correlated measures of psychological health (i.e., PWB or SWL).

Table 3. The Third Condition for the Mediator Effect of Psychological Health on Social Support and Intent to Stay

Conditions for the mediator model	*B*	*SE B*	β
Psychological well-being (*N* = 72)			
Outcome: Intent to stay			
Mediator: Psychological well-being	1.09	.47	.47**
Predictor: Social support	–.13	.47	–.04
Satisfaction with life (*N* = 72)			
Outcome: Intent to stay			
Mediator: Satisfaction with life	.66	.13	.58**
Predictor: Social support	–.05	.38	–.01

** $p < .01$.

Discussion

The findings of this study identify the centrality of psychological health in international relocation. Psychological health appears to be a critical factor in whether individuals ultimately manage to cope with the challenges and whether they decide to stay in the international setting. Although personality characteristics were related to psychological health, social support accounted for changes in psychological health beyond personality. In addition, 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 findings of the current study go beyond prior research, providing clarification on the role of personality and a theory for how social support and voluntariness in a move affect success in relocation.

Social Support and Personality

In line with the hypotheses, social support contributed to levels of psychological health even after accounting for the degree to which

personality characteristics, the voluntary nature of the move, and perceived cultural differences affected psychological health. In addition, findings indicated that the relationship between personality and psychological health appeared to be due at least in part to the fact that personality may increase levels of social support, which further leads to psychological health. This provides evidence for the theories proposed in the social support literature that personality characteristics, such as sociability, might affect support (S. Cohen & Syme, 1985). Although personality characteristics, then, may be a factor in the psychological health of expatriate spouses, findings demonstrate that social support may be the means through which expatriate spouses experience higher levels of psychological health.

Based on findings in this study, expatriate spouses with personality characteristics of extraversion, agreeableness, and openness to experience may seek out or receive more support, thus contributing to psychological health. The personality characteristics of openness and agreeableness have been identified as two of the three personality characteristics most commonly suggested in research on the success of expatriate employees, with the third characteristic suggested to be conscientiousness (Ones & Viswesvaran, 1997). The influence of social support on psychological health for expatriate spouses may also indicate similar untested mediators on the psychological adjustment of expatriate employees.

Psychological Health

Psychological health emerged as an important factor in relocation, related to the desire of expatriate spouses to remain in the international setting. Expatriate spouses who had higher levels of psychological health indicated a stronger desire to remain in the international setting for the expected length of time. In addition, the association between social support and intent to stay appeared to be entirely due to the impact social support has on the psychological health of expatriate

spouses. In this case, perceptions of social support may lead to higher levels of psychological health, which then influences thoughts about remaining in the international setting. This finding suggests that addressing multiple ways of increasing psychological health in expatriate spouses could ultimately be more influential in affecting attitudes about relocation than focusing solely on provisions of support.

The strongest indication of the importance of general psychological health in the international setting came from the findings for the mediations with intent to stay. Both PWB and SWL mediated the relationship between social support and intent to stay. In addition, both measures of psychological health also mediated the relationship between voluntariness of the move and intent to stay. This provides additional evidence that psychological health has a strong role in potentially influencing the success of relocation, particularly when that success is measured by assignment completion.

Contrasts with Prior Research

The choice and control that expatriate spouses perceived in the move was associated with psychological health and intent to stay. In support of the theoretical model, voluntariness of move may influence intent to stay in the international setting because it leads to higher levels of psychological health. This has important consequences for counselors working with families both before and after relocation. Considering the needs of expatriate spouses prior to relocation may have significant impact on satisfaction during the move. Subsequently, focusing on psychological health in the international setting may additionally be worthwhile.

The differences between cultures would logically appear to be related to adjustment, with larger differences creating more challenges. In fact, numerous studies confirm this in research on expatriate

employees (e.g., Black & Gregersen, 1991; Shaffer, Harrison, & Gilley, 1999; Suutari & Brewster, 1998) and expatriate spouses (e.g., Shaffer & Harrison, 2001). The current results indicate that cultural novelty was not associated with the psychological health or social support of expatriate spouses, nor was it related to their intent to stay in Hong Kong. Selmer (2001) suggested that Hong Kong may not be perceived as significantly different for expatriates, due to the history of British influence and the similarity to large cities in other parts of the world. Although this may have been the case for some participants, the mean and standard deviation obtained for this study was comparable with that in prior research utilizing the same scale (e.g., Black & Gregersen, 1991; Black & Stephens, 1989; Shaffer & Harrison, 2001), suggesting that expatriate spouses did perceive Hong Kong to be significantly different from their own cultures. Cultural distance, therefore, did not appear to have the same effect for expatriate spouses in this study as it has had in prior studies with expatriate employees.

Assuming that expatriate spouses did perceive the culture to be different, two possibilities may explain the lack of relationship between cultural novelty and psychological health. First, cultural novelty may in fact be an asset for expatriate spouses, allowing them to receive more assistance or accommodation from host country nationals. Cultural attitudes in the host country may also foster more support for a wife or mother, possibly resulting in differences in the impact of novelty on expatriate employees and spouses as the majority of expatriate spouses are women. In contrast to much of the literature on expatriate employees, Selmer (2002) found that Western expatriate managers in China reported higher levels of adjustment than expatriates of Chinese descent. He hypothesized that perceived lack of cultural novelty might lead to a false sense of familiarity and lower tolerance or understanding when differences do emerge. Similar processes may occur for expatriate employees and spouses, as employees are expected to understand and

work within the culture, possibly leading to more challenges in adjustment when assignments do not go as expected. The level of personal preparation for moving overseas, or even simply expectations of difference, may also offset the impact of cultural novelty. These issues should be examined further to identify when cultural novelty does or does not make a difference in psychological health.

The second possibility is that advances in technology and access to information have minimized the impact of differences in culture. Even just in five years, technological advances (e.g., Webcams, higher speed and increased Internet access, wider use of the Internet) allow for increased ease in maintaining contact with friends and family around the world or obtaining up-to-date information about one's own country or even home town. The Internet may also provide information that allows more engagement in the new culture. At the same time, globalization and trade continues to provide greater access to familiar foods, resources, and pop culture. Research may find that cultural novelty increasingly will become less of an issue for expatriate employees and spouses.

Limitations

One of the considerations in collecting data for this study was a desire to reach expatriate spouses through a means that would equally select those involved in social support groups and those not. This precluded the use of organizations specifically intended to provide outreach to spouses. Consequently, the sample size for this study was small and may have limited findings obtained. However, as other authors have noted (Herleman et al., 2008), other expatriate research utilizes similarly low sample sizes. In addition, the power analysis and findings for this study point to significant results despite the small sample size. Future research could explore alternate ways of reaching potential expatriate spouse participants without oversampling from social organizations.

Although the exploratory nature of this study warranted a descriptive research design, the findings do not allow for causal explanations. Future research should be conducted to identify the causal relationships. In addition, the cross-sectional nature of this study limits the conclusions that can be made about changes in support needs and psychological health over time. Due to the cross-sectional nature of this research, the voluntary nature of the move was measured retrospectively and responses may have been impacted by the present satisfaction with the experience of the move. However, some researchers have suggested that retrospective measures may have more internal validity than pretest-posttest measures (Howard, Millham, Slaten, & O'Donnell, 1981; Howard, Ralph, et al., 1979). Obtaining a baseline measure of psychological health before expatriate employees and spouses relocate internationally would identify changes in social support and psychological health over time as well as how couples may affect one another in relocation. Such research, while challenging given the difficulty of identifying employees far in advance of a move, would provide additional understanding of the impact of an international move on psychological health.

The findings, based solely on a population of expatriate spouses in Hong Kong, may not apply to experiences of expatriate spouses in other countries. In particular, Hong Kong has had a long history of Western influence, which may decrease some of the challenges in relocation. Cultural novelty was not significant in this study. However, this study does suggest that even when the differences in culture are not seen as problematic, social support and PWB continue to be important factors in relocation. Future research could be conducted to identify the degree to which findings hold across countries.

Implications

The current findings suggest some ways to assist families relocating

internationally. For expatriate spouses, it is evident that psychological health is not only a worthwhile outcome itself, but that it also impacts the broader goals of sending organizations. Previous research identified spouses as the primary cause of failed assignments, noting the negative influence they have on employee desires to remain in the international setting (e.g., Shaffer & Harrison, 1998; Takeuchi et al., 2002). Focusing on the emotional health of spouses in the international setting may be an effective method of increasing the desire of spouses to remain in the international setting, thereby possibly influencing the desire of employees to stay for the entire term of the assignment. The focus on psychological health emphasizes ways in which expatriate spouses can be assets to the international assignment, rather than problems.

Findings demonstrate that perceived control may enhance psychological health, suggesting a value of involving a spouse or partner in the selection process. This study differed from prior research in utilizing a measure of voluntariness that specifically addressed perceptions of choice and control regarding the decision to move. It may be that more intentional recognition and inclusion of expatriate spouses throughout the decision-making process about an international assignment would be beneficial to the ultimate outcomes for couples and families that choose to relocate internationally.

The potentially negative consequences of international relocation are significant, going beyond premature assignment termination to touch personal issues such as loneliness, isolation, dissatisfaction, depression, anger, marital conflict, and more severe psychological reactions. Enhancement of psychological health may indeed provide a buffer to these consequences. In this study, psychological health emerged as not merely important for its own sake, but also important for the ultimate desire of the expatriate spouse to remain in the international setting. Counselors working with expatriate spouses may therefore want to focus

on psychological health, looking for ways to enhance and increase the well-being and satisfaction of expatriate spouses in the international setting.

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異地配偶的心理健康：
關於遷居別國受忽略的因素

目前，很少有關遷居別國異地配偶情緒健康的研究。本研究釐清駐外研究（expatriate research）的主要構念（例如文化差異、個性、社會支援）及自願性與香港異地配偶心理健康的關係。利用階層迴歸分析，心理健康情況既是遷居的相關結果，亦是其他變量與留居別國意願的中介因素。與本研究的假設一致，社會支援是個性與心理健康關係的中介因素，而心理健康亦是自願性與留居意願和社會支援與留居意願這兩方面關係的中介因素。本研究釐清了之前研究的問題，指出其他變量經過心理健康這通道而影響留居別國意願。研究有助輔導員輔導由別國遷居的家庭，確認必須更加關注如何增進遷居別國異地配偶的心理健康。

關鍵詞： 心理健康；社會支援；遷居別國；異地配偶；適應