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# Individual Characteristics and Relocation Factors Affecting Adjustment among Relocated American and Egyptian Older Adults

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## Abstract

Worldwide, the population of elders is increasing significantly. Relocation can be a positive or a negative experience, depending on many factors, including culture. The purpose of this study is to compare individual characteristics (age, gender, marital status, education, perceived health status, activities of daily living), relocation factors (movement preparation, time passed since relocation, closeness of prior home to the present, and whether relocation was from home or another facility), and adjustment in relocated American and Egyptian elders. This secondary analysis study merged data from two cross-sectional descriptive studies of a 104 elders relocated to retirement communities in Northeast Ohio and 94 elders relocated to retirement communities in Alexandria, Egypt. Our findings indicated that American elders have greater independence in daily activities ( $t(161.23) = -3.03, p = .003$ ); better perceived health ( $\chi^2[3, N = 198] = 53.21, p < .001$ ), better education ( $\chi^2[1, N = 198] = 47.28, p < .001$ ), better preparation before the move ( $\chi^2[1, N = 198] = 40.58, p < .001$ ), and better

relocation adjustment ( $t(196) = 9.42, p < .001$ ) than relocated Egyptian elders. Our results indicate that culture should be taken into account when caring for older adults who relocate to retirement communities. Additionally, interventions, such as counseling, and preparation before relocation are needed to help elders adjust to relocation.

The population of elders is increasing significantly both in the United States (US) and Egypt. The number of older adults is projected to double from 35 million in 2000 to 72 million by 2030 in the US (US Department of Health and Human Services, Administration on Aging [AOA], 2011) and to climb from 4.28 million in 2000 to 23.68 million by 2050 in Egypt (Boggatz, Farid, Mohammedin, & Dassen, 2009). Millions of adults develop chronic illnesses as they age (Bekhet, Zauszniewski, & Nakhla, 2009; Bekhet, Zauszniewski, & Wykle, 2008), and these chronic illnesses can lead to many losses, including impairment in functional ability, which affects daily activities and independence (Bekhet, Fouad, & Zauszniewski, 2011).

Approximately 80% of American elders have one chronic condition, and 50% have two or more (Bekhet, Zauszniewski, & Wykle, 2008); the average 75-year-old has three chronic conditions and consumes an average of five prescription drugs (Merck Institute of Aging & Health [MIAH], the Centers for Disease Control [CDC], & Gerontological Society of America [GSA], 2004). Similarly, three quarters (74.5%) of Egyptian elders consume two or more drugs (Fouad & Bekhet, 2010), and 9% of Egyptians over the age of 50 have high rates of physical and cognitive impairment (Yount, 2007; Yount & Agree, 2005), requiring formal or informal caregiving (Bekhet et al., 2008; Sinnun, Yount, & El-Afify, 2009).

Thus, relocation to retirement communities and long-term care facilities has emerged as an important concept in health care (Hertz, Koren, Rosseti, & Roberston, 2008). Relocating older adults is not a new phenomenon in the US and statistics show that there are currently 30,000 to 40,000 retirement communities US, housing approximately 1 million elderly residents (Chao, Hagsavas, Mollica, & Dwyer, 2003). However, relocation of older Egyptian adults began to take place in the 1980s (Sinunu, Yount, & El-Afify, 2009), and expectations for home-based care still persist in Egypt. However, although family care of older relatives is still the norm in Egypt (Sinunu et al., 2009), the socioeconomic changes that have taken place over the last 30 years have brought about significant family life changes (Sinunu et al., 2009). Egyptian migration, urbanization, and the participation of women in the workforce have led to increases in the number of elders in retirement communities (Bekhet et al., 2011; Sinunu et al., 2009) at a time when nurses and other health care professionals are not prepared to care for older adults. The public infrastructure in Egypt, likewise, is inadequately prepared to care for the needs of elders (Bekhet et al., 2011; Sinunu et al., 2009) and so elders' families are still their main source of support (Boggatz & Dassen, 2005).

## NURSING HOMES IN EGYPT, EGYPTIAN CULTURE, AND PARENTAL EXPECTATION

The number of geriatric homes in Egypt has increased from 28 registered institutions in 1978 to 77 registered institutions in 2002, according to the Ministry of Official Affairs (Boggatz & Dassen, 2006). However, Boggatz and colleagues (2009) reported there are additional nursing homes, not registered as independent organizations at the Ministry of Official Affairs, because they operate under the umbrella of a local church or mosque (Boggatz, Farid, Mohammedin, & Dassen, 2009a). Nursing homes in Egypt are classified into Christian, Muslim, and governmental homes depending on sponsorship (Boggatz & Dassen, 2006). The cost for staying in these nursing homes depends on the quality of the nursing home and can range from being free of charge to 2500 Egyptian pounds (L.E.) per month, which is approximately \$357 in the US (Boggatz et al., 2009a).

In general, relocating of Egyptian and Middle Eastern older adults to retirement communities is quite challenging given the strong cultural value placed on personal relationships and the role played by extended family members in elders' lives (Aboul-Enein & Aboul-Enein, 2010). Typically, adult children live with their parents until they get married and when their parents get older, adult children are expected to care for them for the rest of their lives (Aboul-Enein & Aboul-Enein, 2010). A study conducted by Ajrouch (2005) explored the aging experience in six focus group interviews with both English- and Arab-speaking Arab immigrants in the US. Tensions have emerged between "cultural ideals" and "pragmatic realities" in terms of placing older adults in nursing homes and the children of older adults' expectations regarding caregiving (Ajrouch, 2005, p. 655). Among the responses that reflect the Middle Eastern culture, which also emanates from their religious beliefs, was: "I know our people in the Qu'ran, the kids are responsible for the parents when they're old. They should be with them. They shouldn't let them go anywhere like an old house, an old age house; they should be with the kids" (Ajrouch, 2005, p. 661). Arabic older adults have expressed how important it is for them to be with their children and that they would not put their parents in a nursing home, even if their parents needed care, because these older adults felt an obligation toward their parents (Ajrouch, 2005). In Egypt, there are parental expectations of children based on gender. More specifically, when daughters get married, their duties shift to their husbands' families, while sons tend to remain with their biological kin (Yount, Cunningham, Engelman, & Agree, 2012). Consequently, parents tend to invest more in male than in female children because males will assume duties for supporting their aging, widowed, or ill parents by providing co-residence, material transfers, and their wives' care (Yount, 2005; Yount et al., 2012). It is obvious that culture shapes one's thoughts and feelings toward placement, and it is one of the most significant factors that affect Middle Eastern older adults' adjustment to relocation.

Two main factors have been identified as reasons for relocation to nursing homes in Alexandria, Egypt, in a qualitative study conducted by Abd El Ghany (1986). The first reason was health care needs; many older adults reported their inability to carry out activities of daily living. The second reason was loneliness as a result of the death of the spouse or the travel of their children (Abd El Ghany, 1986). More recently, the attitudes of Egyptian elders toward staying in a nursing home were investigated by Boggatz and colleagues (2009a). The results indicated that the factors shaping the attitudes of older Egyptian adults include: perceived stress, (e.g., health problems or functional limitations); options and barriers to receiving care (e.g., financial problems or social network support); and the older adults' disposition throughout their lives (e.g., cultural values and self-image) (Boggatz et al., 2009a).

## INDIVIDUAL CHARACTERISTICS AND RELOCATION FACTORS AFFECTING OLDER ADULTS' ADJUSTMENT

For relocated American and Egyptian older adults, relocation is much more than the actual move; it involves the decision to move, the situations and circumstances surrounding the move, and the adjustment period following the move (Keister, 2006). While some older adults consider relocation as traumatic as a divorce or death in the family and experience depression and grieving over the loss of their lifestyle (Walker, Curry, & Hogstel, 2007), others experience relocation as an opportunity to regain self-esteem and life, to get rid of responsibilities, and to discover new love and affection (Bekhet, Zauszniewski, & Nakhla, 2009; Iwasiw, Goldenberg, MacMaster, McCutcheon, & Bol, 1996). Thus, both in the US and Egypt, relocation can be a positive or a negative experience, depending on various factors such as preparation and anticipation of the move, physical health, and the similarity of the current environment to the one the individual has always known (Bekhet et al., 2008, 2009, 2011). Previous studies have shown that age, gender, marital status, education, and time passed since relocation also might play a role in relocation adjustment (Bekhet et al., 2008). However, studies have produced inconsistent findings. For example, some studies have found that gender plays a role in relocation.

More specifically, one study found that older females reported higher levels of psychological distress than older males (Kahana et al., 1995) while another study found that males reported greater life satisfaction than females (Bild & Havighurst, 1976). Furthermore, the findings indicated that relocation was correlated negatively with life satisfaction for females but not for males (Brand & Smith, 1974), whereas others have found no differences due to gender (Edward & Klemmach, 1973).

## SIGNIFICANCE OF THE STUDY

The number of Middle Easterners in the US has increased significantly over the past three decades due to political and economic issues affecting these immigrants' home countries (Aboul-Enein & Aboul-Enein, 2010). Despite this, little is known about the diversity, culture, and experiences of this group (Ajrouch, 2005). Many authors refer to Arab Americans as an invisible minority (Ajrouch, 2007; Salari, 2002). Thus, it is important for nurses to be aware of the Middle Eastern culture and challenges associated with older adults' relocation especially for first generation Arab immigrants. The study reported here was designed to:

1. Compare the relocation adjustment between relocated American and Egyptian older adults to determine whether one group adjusted more successfully than the other.
2. Determine the factors that affect the successful adjustment of relocated older adults and the relationships among these factors.
3. Provide recommendations regarding interventions to help relocated older adults in both cultures adjust to their new surroundings.

Therefore, this study provides insight into factors that nurses should take into account when dealing with relocated Egyptian and American older adults, to help them adjust to relocation. Also, this article highlights the culture, beliefs, and attitudes of the Egyptian older adults toward relocation, which can be used by American nurses to help Arab immigrant elders, especially those who are first generation immigrants, to adjust to relocation.

The study addressed the following research hypotheses: Hypothesis 1: The individual characteristics (age, gender, education, marital status, perceived health status) of relocated American and Egyptian older adults differ; Hypothesis 2: Relocation adjustment factors (activities of daily living, closeness of the prior home to the present, movement preparation, time passed since relocation, and from where the resident transfer) differ between relocated American and Egyptian older adults; Hypothesis 3: Relocation adjustment differs between relocated American and Egyptian older adults.

## THEORETICAL FRAMEWORK

The nursing model of transitions (Schumacher & Meleis, 1994), which proposes that transitions are process oriented and consist of universal properties, transition conditions, and indicators of healthy transitions, informed the selection of variables. Universal properties are process, direction, and change in fundamental life patterns, such as changes in roles, relationships, abilities, and patterns of behavior. In that sense, universal properties in the current study are conceptualized as changes in elders' roles and abilities, such as activities of daily living, health status, and marital status. Transition conditions are personal and environmental factors that influence the transition, such as levels of knowledge and skill, environment, level of planning, and physical and emotional well-being (Schumacher & Meleis, 1994). Transition conditions in this study are: movement preparation, education, age, gender, time passed since relocation, and the closeness of the current home to prior home or residency. Finally, indicators of healthy transitions include the quality of relocation outcomes,

such as satisfaction with the new home, quality of life, or subjective well-being. Indicators of healthy transition are conceptualized as relocation adjustment in this study.

## METHODOLOGY

A cross-sectional and correlational design was used to compare individual characteristics and relocation factors affecting adjustment in a sample of a 104 American elders and a sample of 94 Egyptian elders who relocated to retirement communities. Individual characteristics included age, gender, education, marital status, perceived health, and activities of daily living. Relocation factors included preparation for and anticipation of the move, time since relocation, whether relocation was from home or another facility, and similarities of the environment to the one the individual had always known. The proposed study is a secondary analysis of data merged from two studies of relocated elders living in six retirement communities in Northeast Ohio (Bekhet et al., 2008) and relocated Egyptian elders residing in five governmental retirement communities in Alexandria, Egypt (Bekhet et al., 2011).

Sample size was assured by conducting a power analysis for independent samples t-test, chi-square, and correlational analyses. Since this is the first study to compare individual characteristics, relocation factors, and relocation adjustment between American and Egyptian older adults, medium to large effect sizes were used for estimating power (Cohen, 1992). With a power of .80 and alpha level at .05, the available total sample of 198 elders was sufficient for showing medium to large effects.

### Recruitment

To recruit participants in the parent study of American older adults, potential participants were identified by social workers in two of the six retirement communities. In the other retirement communities, participants were recruited during a face-to-face group meeting, in which the researchers explained the study purpose. Inclusion criteria included being a resident of the retirement community; being able to read and speak English; and being cognitively intact, as indicated by a score of seven or more on the Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975). Ten participants who scored less than seven on the SPMSQ were excluded from participation leaving a total of 104 elders for the parent study; none were excluded on the basis of gender, race/ethnicity, or socioeconomic status. Following informed consent, elders were interviewed individually by trained data collectors in a private setting at a mutually agreed-upon time. Data collection involved one 45–60 minute face-to-face interview (Bekhet et al., 2008) with each elder. All 104 elders from the parent study were included in the analysis reported here.

Similarly, staff in five retirement communities identified Egyptian older adults who were interested in learning about the parent study. The researcher met with them in a conference room to explain the study and obtain informed consent, from those who met study criteria, which were identical to those in the American study. A total of 99 Egyptian elders were recruited; five individuals who scored less than seven on the ten-item SPMSQ were excluded from participation (Bekhet et al., 2011). Data from the 94 Egyptian elders who met study criteria were included in the secondary analysis reported here.

### Instruments

Individual characteristics were measured using a self-report questionnaire that asked for age, gender, marital status, education in years, and perceived health status. Residents indicated their perceived health status using a 4-point Likert-type scale ranging from 1 (poor) to 4 (excellent). This single-item index has been used in previous research and has proved to be a valid indicator of subjective appraisal of health status (Musil, Haug, & Warner, 1998). Higher scores on the perceived health status index indicate better health.

Movement anticipation was measured by asking elders whether relocation was expected and prepared for over time, and the nature of the environment was measured using a scale that ranged from 1 (less different) to 10 (much different); residents were asked to circle the number that corresponded to how different this new home was from their former home.

Activities of daily living were measured by the Index of Activities of Daily Living (Katz, Down, Cash, & Grotz, 1970), with scores ranging from 0 to 18. Lower scores indicate greater independence in daily activities. Coefficient alphas of the scale are 0.95–0.98. Construct validity of the scale was demonstrated through a high correlation with the Mini Mental State Examination (MMSE) ( $r = 0.76$ ) (Katz et al., 1970). Cronbach's alphas of the Index of Activities of Daily living in this study were .87 for American older adults and .91 for Egyptian older adults. Time since the move was captured by the number of months since relocation.

The Index of Relocation Adjustments Scale (IRA) was used to measure relocation adjustment (Prager, 1986). A translated version of this scale was used with the Egyptian participants (Bekhet, Fouad, & Zauszniewski, 2011). The 6-item scale uses a 4-point scoring system that ranges from “completely agree” to “completely disagree.” Total scores may range from 0–18 after reverse coding three items; the higher the score, the better the relocation adjustment. In previous studies using the English version, Cronbach's alpha was adequate (.87) (Prager, 1986). Construct validity was demonstrated by a significant correlation with the 25-item General Contentment Scale (GCS; Hudson, 1982). Cronbach's alpha of the IRA in the parent study for relocated American older adults was .86 (Bekhet et al., 2008). Construct validity was demonstrated by significant correlations in the expected directions with measures of positive cognitions and pressure to move ( $r = .48, p < .01$ ;  $r = -.62, p < .01$ ) (Bekhet & Zauszniewski, 2012). Cronbach's alpha for the IRA score in the parent study for Egyptian older adults was .70 (Bekhet et al., 2011). The IRA score was correlated with the total positive cognitions score and the pressure to move scale score in the expected direction ( $B = .36, p < .001$ ;  $B = -.36, p < .001$ ), suggesting construct validity (Bekhet et al., 2011).

For the American older adults, all the measures were administered in English. For the Egyptian older adults, all the measures were administered in Arabic (Bekhet et al., 2008, 2011). Content and face validity and the cultural equivalence of the Arabic versions of the measures have been reported elsewhere (Bekhet & Zauszniewski, 2010).

### Instrument Translation and Cultural Equivalence

The same measures were used for the Egyptian and the American older adults. For the Egyptian elders, all the English instruments were translated into the Arabic language by a fluent bilingual professional. Then a back-translation was conducted by two other bilingual experts who were blinded to the original English version. Inconsistencies between the original English version and the translated Arabic measures were examined and decisions were made until the English and the Arabic versions were close and identical in meaning, indicating that the two versions are equivalent (Yu et al., 2004). A panel of three Arabic bilingual professionals reviewed the translations and the back translations of the measures as well as the grammar and the structure of the Arabic language in the measured. After reaching an agreement, the Arabic versions of the instruments were generated (Bekhet, Fouad, & Zauszniewski, 2011; Bekhet & Zauszniewski, 2010). Details regarding cultural equivalence have been reported in other publications by the authors (Bekhet & Zauszniewski, 2010; Bekhet et al., 2011).

TABLE 1 Means and SDs on Age, Perceived Overall Health, ADLs, Closeness of Prior Home to the Present Facility, Time Passed since Relocation, and Relocation Adjustment for American and Egyptian Older Adults

	Total Sample ( $N = 198$ )			
	American ( $n = 104$ )		Egyptian ( $n = 94$ )	

Variable	Mean ( <i>SD</i> )	Mean ( <i>SD</i> )	<i>t</i> -test; <i>p</i> -value	<i>p</i> -value
Age	81.97 (7.53)	66.87 (19.7)	7.3*; .001	.001
Activities of Daily Living	1.75 (3.50)	3.67 (5.16)	-3.03**; .003	.003
Closeness of Prior Home to the Present	6.13 (3.02)	6.02 (5.19)	.17**; .87	.87
Time Passed since Relocation	43.36 (52.47)	12.43 (4.98)	5.98**; .001	.001
Relocation Adjustment	12.96 (3.59)	8.15 (3.59)	9.42*; .001	.001

\*Equal variances assumed; \*\*Equal variances are not assumed.

## Data Analysis

The independent samples *t*-test was used to compare Egyptian and American older adults in regard to individual characteristics—such as age, and activities of daily living—and relocation factors—such as closeness of the retirement community environment to their former living situation. Chi-square was used to compare the Egyptian and American older adults in regard to individual characteristics such as gender, education, marital status, and perceived health status and relocation factors, such as movement anticipation/preparation, and whether the resident transferred from home or another unit, site, or hospital. Because of the multiple tests, we used a more stringent alpha (Bonferroni Correction) to account for Type I error (Alpha = .05/10 = .005). Data were analyzed using IBM-SPSS version 13.

## RESULTS

An independent samples *t*-test comparing the mean ages of the American and Egyptian elders showed a significant difference between the means of the two groups ( $t(196) = 10.28, p < .001$ ). The average age of the American older adults ( $M = 81.97$  years,  $SD = 7.53$  years) was significantly greater than the average age of the Egyptian older adults ( $M = 70.57$  years,  $SD = 8.07$  years). Thus, the Americans were significantly older than the Egyptians (Table 1).

Chi square showed no difference by gender between the American and Egyptian elders ( $\chi^2[1, N = 198] = 3.02, p = .08$ ) (Table 2). However, American elders were more highly educated than the Egyptian elders ( $\chi^2[1, N = 198] = 47.28, p < .001$ ) and there were more single and widowed elders and fewer married or separated/divorced elders among the Egyptians than the Americans ( $\chi^2 [3, N = 198] = 12.71, p < .01$ ) (Table 2).

Examination of the mean scores and standard deviations on the measure of activities of daily living using the Levene test indicated that equal variances could not be assumed in the American and the Egyptian older adults ( $F = 26.26, p < .001$ ) (Table 1). Nevertheless, a significance difference was found between the means of the two groups ( $t(161.23) = -3.03, p = .003$ ); the mean of the Egyptian older adults ( $M = 5.16, SD = .53$ ) was significantly higher than the mean of the Americans ( $M = 3.50, SD = .34$ ). Activities of daily living were measured using the Index of Activities of Daily Living (IADL; Katz et al., 1970) where lower scores indicate greater independence in daily activities. Thus, on average, the American older adults reported greater independence in daily activities than the Egyptians. However, the distribution of the IADL scores of the Egyptian elders was wider, while the scores of the American elders hovered more closely around the mean.

Examination of the mean scores and standard deviations in relation to time since relocation using the Levene test indicated that equal variances could not be assumed ( $F = 56.16, 410 p < .001$ ) (Table 1). However, a significant difference was found between the means of the two groups ( $t(105.05) = 5.98, p < .001$ ); the mean and the standard deviation for the Egyptian older adults ( $M = 12.43, SD = 4.98$ ) were significantly lower than the mean and standard deviation for the American older adults ( $M = 43.36, SD = 52.47$ ). Interestingly, the standard deviation of the Egyptian older adults was much narrower than the American elders, indicating that there was a

larger amount of variation in the time since relocation among the American elders while the Egyptian elders were more similar to each other in time since relocation (Table 1).

Whether residents transferred from home or another unit or hospital did not differ significantly between American and Egyptian elders ( $\chi^2 [1, N = 198] = .068, p = .79$ ). However, preparation for and anticipation of the move did differ significantly ( $\chi^2 [1, N = 198] = 40.58, p < .001$ ). Perceived health status also differed significantly between American and Egyptian elders ( $\chi^2 [3, N = 198] = 53.21, p < .001$ ) (Table 2); indicating that the Americans had better self-rated health and felt better prepared for the move than older Egyptian adults.

TABLE 2 Demographic Variables and Relocation Factors for American and Egyptian Older Adults

Variables	American ( <i>n</i> = 104)	Egyptian ( <i>n</i> = 94)	$\chi^2$
Gender <sup>a</sup>			
Male	35 (34%)	43 (55.1%)	3.02
Female	69 (66%)	51 (54.3%)	
Education <sup>a</sup>			
High school or less	36 (35%)	78 (83%)	55.19**
College/postgraduate	68 (65%)	16 (17%)	
Movement Preparation/ Anticipation <sup>a</sup>			
Yes	82 (78.8%)	32 (34%)	40.58**
No	22 (21.2%)	62 (66%)	
The Resident Transferred from <sup>a</sup>			
Home	78 (75%)	72 (77%)	.07
Another unit/site/ hospital	26 (25%)	22 (23%)	
Marital Status <sup>a</sup>			
Never married	15 (14.4%)	20 (21.3%)	12.71*
Separated/divorced	14 (13.5%)	9 (9.6%)	
Married	24 (23.1%)	6 (6.4%)	
Widowed	51 (49%)	59 (62.8%)	
Perceived Health Status <sup>a</sup>			
Poor	11 (10.6%)	51 (54.3%)	53.21**
Fair	26 (25%)	24 (25.5%)	
Good	52 (50%)	17 (18.1%)	
Excellent	15 (14.4%)	2 (2.1%)	

\* $p < .01$ ; \*\* $p < .001$ .

<sup>a</sup>No cells have an expected count of less than 5.

An examination of the mean scores and standard deviations on the similarity of the current environment to the one the individual had always known using the Levene test indicated that equal variances could not be assumed ( $F = .599, p < .05$ ) (Table 1). No significant difference was found between the means of the two groups ( $t (146.42) = .17, p = .87$ ). Both the Egyptian older adults ( $M = 6.02, SD = 5.19$ ) and the American older adults ( $M = 6.13, SD = 3.02$ ) had a mean score of 6 on a scale from 1 (less different) to 10 (much different), indicating an above average degree of environmental change from the former home. However, the standard deviation for the Egyptian elders was much larger than that of the Americans; that is, Egyptian elders tended to use a broader range of scores than Americans, whose scores tended to cluster closer to the mean.

The independent samples t-test showed that American older adults had better relocation adjustment than the Egyptians ( $t(196) = 9.42, p < .001$ ). The mean score of the Americans ( $M = 12.96, SD = 3.59$ ) was significantly higher than mean for the Egyptians ( $M = 8.15, SD = 3.59$ ) (Table 1).

## DISCUSSION

To date, this is the first study that examined relationships among individual characteristics, relocation factors, and adjustment among relocated American and Egyptian older adults. The study findings indicated that the American elders have better relocation adjustment as compared to Egyptian elders. An explanation could be that the Americans had greater independence in their daily activities and better self-rated health than Egyptian older adults, as shown by the findings of this study. This is consistent with a recent study of 156 older adult residents in seven nursing homes in Korea (Lee, 2010) which found that self-rated health was a predictor of overall adjustment to nursing homes. Another explanation for the better adjustment of the American older adults could be that the average time passed since relocation for the Egyptian older adults was significantly less than for the American older adults. Thus, the Egyptian older adults had relocated to retirement communities more recently than the Americans. Previous research has shown that time passed since relocation is a significant predictor of relocation adjustment (Bekhet et al., 2008; Laughlin, Parsons, Kosloski, & Bergman-Evans, 2007). Still another explanation for the Americans' better adjustment could be the significant difference between the American and Egyptian older adults in terms of movement preparation and anticipation. The Americans were prepared for the move, while the Egyptians were not prepared. Preparation for the move has been identified in previous research as an important factor in the process of adjustment along with anticipation and predictability (Bekhet et al., 2008, 2009, 2011).

Marital status also differed significantly between the American and Egyptian older adults in this study; 23% of the relocated older Americans were married but only 6% of the Egyptians were. This too, may help to explain the better adjustment of the relocated American older adults. Further, education significantly differed between the American and Egyptian elders. Eighty-three percent of the Egyptians had only a high school education or less, compared to 35% of American elders. Further, 65% of the American elders had a college/post-graduate education, compared to only 17% of the Egyptian elders. Previous research has shown that persons with higher levels of education perceive less stress than those with lower levels of education (Cohen & Williamson, 1988). Further, perceived stress has been significantly negatively correlated with adaptive functioning (Rong, 2000). Other studies have shown that less educated people reported lower levels of life satisfaction (Landau, 1995).

Finally, the American older adults were older than the Egyptians. The mean age of relocated Americans was 82 years while the mean age of relocated Egyptians was 67 years. This provides another explanation of the better adjustment of American older adults. Some studies have found that as age increased, stress associated with finances, work, home maintenance, personal life, and family and friends declined (Cohen & Williamson, 1988; Folkman, Lazarus, Pimely, & Novacek, 1987). Further, perceived stress had a direct negative effect on adaptive functioning (Rong, 2000). At the same time, a number of studies have suggested that as people get older, their health problems increase, their physical health decline, and they experience more difficulties in daily activities (Heidrich, 1993). In fact, studies have suggested that age-related physical health problems, not age per se, affect well-being and adaptation in later life (Heidrich, 1996). Thus, the influence of age on relocation adjustment is unclear.

Another explanation for the poorer adjustment of the Egyptian older adults is the cultural aspect of relocation. In fact, elder care and aging are relatively new and emerging phenomena in the Egyptian society (Boggatz & Dassen, 2006; Boggatz, Farid, Mohammedin, Dijkstra, Lohrmann, & Dassen, 2009b). This, in fact, has resulted in fear and distrust regarding relocation (Boggatz & Dassen, 2006) and has an impact on elders' perceptions of relocation and their ability to adjust, especially when they have recently relocated to retirement communities.

Limitations of this secondary analysis study include the use of convenience sampling in the parent studies; this could limit the ability to generalize the findings across all Egyptian and American elders. Also the two parent studies were cross sectional so changes in the study variables could not be assessed over time, especially regarding relocation adjustment. A longitudinal study is needed to examine the causal effects among the study variables. Further, in the parent studies, data were collected during face-to-face interviews for both the Egyptian and the American elders, so social desirability may have affected how participants responded to the questionnaire items. Future studies might consider the use of a social desirability questionnaire to ensure that the responses reflect participants' actual thoughts and feelings rather than socially desirable responses.

### Implications for Clinical Practice

The results of the current study provide a greater understanding of the factors that help relocation adjustment in two different cultures. The American elders appeared to struggle less with relocation adjustment, perhaps owing to greater independence in their daily activities, better self-rated health, better preparation before the move, better education, and having spent more time in the facilities than Egyptian older adults had.

In both cultures, nurses can play an important role in decreasing the stress of relocation by taking these factors into account, for example, by increasing the preparation and predictability of the move by offering a site visit to the institution, explaining the benefits of the new location, and informing older adults about the expected date of relocation (Bekhet et al., 2008, 2009, 2011). Engaging older adults in the decision making process regarding their relocation may help older adults feel some control over the move and allow them to make a better adjustment (Bekhet et al., 2009; Coughlan & Ward, 2007) after the move. Helping clients express their feelings about the changes accompanying relocation is important in facilitating grief, reducing the stress of relocation, and hastening the process of adjustment (Tracy & DeYoung, 2004). In addition, previous research has shown that social interactions and support are essential for adjustment (Bekhet et al., 2008). Taking into account that the Middle Eastern culture values the need for personal relationships and the role played by extended family members in Egyptian life (Aboul-Enein & Aboul-Enein, 2010), nurses should attend more closely to supporting the older adults' personal relationships when dealing with Arab older adults who relocate to retirement communities, especially those who are first-generation immigrants. In fact, nurses are in a strategic position to help older adults interact with each other and with the staff to decrease their feelings of alienation and loneliness. Nurse also should pay attention to language barriers, cultural misconceptions, and perceptions of disrespect that are frequently cited by Arabs (Kulwicki, Miller, & Schim, 2000). It is necessary for nurses to provide translators as needed, include Arab food on the menu, and provide a place for Muslims to pray (Kulwicki et al., 2000). That being said, nurses still should be aware that stereotyping can lead to cultural deficiencies. For example, nurses should pay attention to acculturation and religious beliefs; however, although it is commonly believed that all Arabs are Muslim, 10% of the Egyptian population are Christian (Kulwicki et al., 2000).

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