

# Financial Strain, Social Relations, and Psychological Distress Among Older People: A Cross-Cultural Analysis

Kenneth F. Ferraro and Ya-ping Su

Department of Sociology and Gerontology Program, Purdue University, West Lafayette, Indiana.

**Objectives.** This article examines how financial strain and social relations may independently and jointly influence psychological distress among older people in four nations.

**Methods.** Data from four Western Pacific nations ( $N = 3,277$ ) are used to test additive and multiplicative models of the relationships between financial strain, social relations, and psychological distress.

**Results.** Financial strain is associated with higher levels of psychological distress in three of the four nations. Interactive models of the effects of financial strain and social relations on distress were uncovered in three of the four nations, but the type of social relation influencing the strain-distress relationship varied. Subjective health and IADLs were significant predictors of psychological distress in all four nations.

**Discussion.** Findings suggest that although financial strain is quite likely to lead to psychological distress among elders, this can be mitigated, at least in part, by social relationships. Modernization was not associated with higher psychological distress.

THE question of how social relations influence the psychological distress of elders has attracted considerable attention in the past two decades, much of it as part of the avalanche of research on caregiving. The findings from this literature have been both insightful and inconsistent. Perhaps the greatest inconsistencies arise regarding the effects of social exchanges on morale and well-being. Some studies have shown that giving aid increases elders' psychological well-being (Stoller, 1985), whereas others have shown that giving aid decreases elders' psychological well-being (Mutran & Reitzes, 1984). Findings concerning the receipt of aid are also inconsistent. The link between receiving aid and psychological well-being has been reported as positive (Mutran & Reitzes, 1984), negative (Lee, Netzer, & Coward, 1995), or nonsignificant (McCulloch, 1990).

Although the inconsistency in findings from the literature points to the need for further research, there have also been notable insights from research in the past decade. We suggest that four recurrent findings are especially useful for resolving the inconsistencies and advancing the research, especially as it pertains to the link between social relations and psychological distress. First, it is now clear that the complexity of social relations makes it imperative to differentiate integration in social structures from relational content (House, Umberson, & Landis, 1988). Social integration refers to the quantity of relations and frequency of contact, whereas relational content refers to social exchanges and the quality of relations (Schwarzer & Leppin, 1991). With this distinction in mind, the literature points increasingly to how social integration influences the types and consequences of exchange. A second major finding

from the literature is importance of negative interactions in heightening psychological distress among older adults (Krause, 1995; Ingersoll-Dayton, Morgan, & Antonucci, 1997). Negative interactions are less prevalent as age increases, but more consequential to psychological distress (Rook, 1984, 1997). Third, the financial status of the elder is related to psychological distress and may also shape the content of social relations (Krause & Liang, 1993; Whelan, 1993). The material wealth of an elder may well compensate for aid received in other domains because the cost to the other partner(s) is minimized.

Finally, although main effects of social relations on psychological distress are anticipated (Schwarzer & Leppin, 1991), recent research shows the importance of testing conditional relationships. The types of conditional relations uncovered vary, but two forms have been noted repeatedly. First, psychological distress among older people is often influenced by the interaction of giving and receiving (e.g., Krause, 1995). If people give help, then the effect of receiving help is typically positive (i.e., balanced exchange relations). On the other hand, if the older person is unable to offer assistance, then receiving help may lead to a negative outcome (Wethington & Kessler, 1986). Second, social relations often interact with stressors in shaping psychological distress. Beyond what one would expect on the basis of main effects, previous research has shown that social relations are likely to moderate distress as people face health problems, the death of a spouse, or financial strain (e.g., Kahn & Antonucci, 1980; Silverstein & Bengtson, 1994). Moreover, financial strain involves anxiety about subsistence but it may also lead to problems in social function-

ing, especially with family and friends (Krause & Liang, 1993). Thus, social integration and exchange are important for understanding how financial strain influences psychological distress.

Most of these recent contributions to the understanding of social relations and psychological distress derive from studies in the United States or other modern, Western societies. In contrast, the present study uses a cross-cultural perspective for understanding how social relations influence psychological distress among older people. Given the dearth of studies examining the joint effects of financial strain and social relations on psychological distress, these relationships are highlighted here. The rationale for the comparative analysis of four Western Pacific nations is twofold.

First, the comparative perspective may shed new light on the understanding of social relations and psychological distress, especially discussions of the universality of cross-generational support and its consequences for older adults (Bengtson, 1995). There are studies that examine social relations and either well-being or distress in other developed countries such as France (Grand, Grosclaude, Bocquet, Pous, & Albarede, 1988) and Ireland (Whelan, 1993) and among Korean immigrants to Canada (Noh, Wu, & Avison, 1994), but little attention has been given to less-developed nations. Moreover, cross-cultural studies of these relationships, especially quantitative ones, are rare (Krause, Jay, & Liang, 1991). The approach taken here is to determine whether social relations influence psychological distress in a similar way among older adults in diverse societies (Hashimoto, 1993). The strategy is to “increase the diversity in sociocultural factors and look beyond the boundaries of any one cultural system” (Fry, 1997, p. 138). Patterns consistent across societies and observed in the extant literature merit special attention.

Second, Dowd’s (1975) widely cited article on developing a social exchange theory of aging concluded by offering two propositions, one of which focused on the comparative approach. Noting how exchanges may operate differently in traditional and modern societies, Dowd argued that the “amount of power resources possessed by the aged relative to other age strata is inversely related to the degree of societal modernization” (Dowd, 1975, p. 591). If this is the case, elders in more modern societies may be especially vulnerable to financial strain and both social and economic dependency. The four nations studied in the present research are at different stages of modernization, thereby permitting us to examine how the effects of financial strain and social relations on psychological distress may vary by degree of societal development.

#### *Aging and Exchange in Comparative Perspective*

As people enter advanced old age, they face the risk of becoming dependent on others for help. They may not face the risk of dependency in every area of life—from finances to personal care—but the question of dependency is a pivotal one in the everyday lives of older people and has been discussed at length in several sociological theories of aging. Social exchange theory focuses on the give-and-take of social life, but does not presume that human interaction is a

simple matter of quid pro quo. Instead, stable relationships, especially those among kin, are dependent to some degree upon investments in the relationships that may not be compensated directly (Yamagishi & Cook, 1993). The willingness to provide help to older people may be due to many reasons, but it is most often seen in light of the contributions the elder has made over the life course. In a sense, people develop “credit” from the contributions they make to others. Blau (1964) observed, “As individuals regularly discharge their obligations, they prove themselves trustworthy of further credit” (p. 98).

After a lifetime of typically giving more to younger persons than they received from them, elders must increasingly come to accept beneficence, especially if they lack power resources such as wealth (Dowd, 1984). The beneficence most often comes from family members—spouses, siblings, adult children—but in some situations it may come from community or government initiatives. Although most elders have established social credit from past contributions, receiving beneficence is nonetheless difficult for many. Receiving beneficence reveals the commitment of the giver to the elder, and this is often reassuring to the older person (Krause, 1995). At the same time, however, it shows that the elder has less to offer to balance the relationship (Wentowski, 1981). In cases where the elder perceives an imbalanced exchange, the inability to reciprocate may make the elder feel awkward, and may perhaps even lead to depressed affect. It appears elders have fared reasonably well by drawing from social credit in traditional societies (Silverman & Maxwell, 1978; Simmons, 1945), but debate ensues on whether this applies to non-Western societies and how modernization may alter filial piety and the structure of beneficence to older people (Cox, 1990; Haber & Gratton, 1994; Sung, 1995).

Findings from major U.S. studies show that most elders have at least one adult child living within 35 miles of them and that geographic location shapes not only face-to-face contact but telephone contact and emotional support as well (Rossi & Rossi, 1990). The prevalence of routine assistance is described in most U.S. studies as “modest,” with between 25% and 33% of all parents receiving some type of support from their adult children; advice and emotional support are the most common (Bengtson & Harootyan, 1994; Eggebeen, 1992; Hogan & Eggebeen, 1995). Help from parents to adult children is generally less prevalent, but Cooney and Uhlenberg (1992) show that the frequency of such aid varies substantially over the life course. Using data from the National Survey of Families and Households, they found a fairly sharp decline in support from parents after their children reached 30 years of age. The role of older American parents and grandparents appears to be that of providing help when major needs or emergencies arise, leading scholars to describe them as “family watchdogs” (Troll, 1983) or the “family national guard” (Hagestad, 1985).

In contrast to the United States and other Western nations, most Asian and Western Pacific nations display a much higher rate of intergenerational coresidence and a greater flow of intergenerational support. Just how much of this is due to modernization as opposed to filial piety and generational norms is difficult to determine, but even in

more modernized societies such as Japan, Hong Kong, and the Republic of Korea, routine aid to elders is typically more prevalent than in the West (Keith & Hong, 1994; Keith et al., 1994). Whatever the reason, the differences are striking, especially with regard to financial exchanges. While only about 3–4% of adult American children regularly provide financial assistance to their parents (Eggebeen, 1992), about one third of the Chinese elders in Krause and Liang's (1993) study reported such financial assistance. In Shi's (1993) study of rural Chinese, approximately two thirds of the elders reported receiving financial aid (see also Treas & Wang, 1993). The rates are lower in Korea (Ahn, 1982) and Japan (Nishio, 1994), but still much higher than in most American families, suggesting the confluence of culture and modernization on intergenerational exchanges.

Modernization ushered in not only longer life, but a longer period of "old age," including retirement (Cowgill, 1986; Cowgill & Holmes, 1972; Haber & Gratton, 1994). People reaching advanced older ages in modern societies, therefore, are more likely to risk depleting major power resources accumulated over the life course (Cox, 1990; Palmore & Manton, 1974). According to Blau (1964), there are four basic power resources: money (and material goods), approval, esteem, and compliance. Compliance, or yielding to the will of others, is very costly, and is typically used as a last resort in exchanges. Dowd (1975) argued that it may be one of the few power resources that elders have available for exchange relations. Compliance by elders usually makes them more dependent, and their growing dependency may make them feel awkward. Indeed, some research shows that unbalanced relationships—when elders feel that they are receiving more than they can give—have detrimental effects on morale (e.g., Lee et al., 1995).

Although money is but one of the power resources, it is clearly one of the most influential to exchange processes. Moreover, material wealth of an elder may well compensate for aid received in other domains. Krause and Liang (1993) showed that financial strain was the strongest predictor of psychological distress among Chinese older persons, and Whelan (1993) reported a parallel finding in Ireland. Despite the importance of financial adequacy to the exchange processes, most studies simply use education (McCulloch, 1990) or income (Lee et al., 1995; Mutran & Reitzes, 1984). These indicators are limited for understanding socioeconomic status and exchange processes in a single country (Henretta & Campbell, 1976) and of limited utility in cross-cultural comparisons. The present study considers financial strain, along with aid given and aid received, to understand how social relations influence psychological distress.

To summarize, the approach used in this article is comparative, permitting an examination of how sociocultural context shapes the way in which social relations influence psychological distress. If relationships are found to exist in each of the four nations studied, this would provide evidence pointing to universality, or at least greater generalizability. We articulate several hypotheses for this investigation. First, we hypothesize that financial strain is directly and positively related to psychological distress among older people (Krause et al., 1991; Whelan, 1993). Second, con-

sistent with many previous studies, we hypothesize that social integration will be directly and negatively related to psychological distress (Arling, 1987; Krause & Liang, 1993). Third, because contributions to the social order by elders often help balance exchanges, we anticipate that elders who contribute to family and community function will have lower distress (Lee et al., 1995).

Fourth, we hypothesize that elders receiving family financial support will have higher psychological distress, due to what Krause (1997) refers to as the "downside of received support." Although receiving support may intuitively be seen as reducing distress—because of needs being met—there is evidence from previous research that reception of aid may carry with it a realization of growing dependency or even failure (Wethington & Kessler, 1986). Krause observes that this downside of received support is even more likely when financial strain is the issue at hand. Fifth, we expect higher psychological distress among elders in the more modernized societies due to the emphasis upon productivity and independence (Cox, 1990; Gutmann, 1977).

Finally, we expect that the effect of financial strain on psychological distress will be either dampened or exacerbated by social relations. Three interaction hypotheses are articulated: (a) financial strain coupled with low levels of social integration will lead to higher psychological distress; (b) financially strained elders who report giving to family and community relationships will be less likely to manifest distress; and (c) financially strained elders who report receiving family financial support will manifest higher psychological distress. Given the different social and cultural contexts considered and multicollinearity among the product terms, it is unlikely that all three interaction hypotheses will be supported in all nations. However, at least one form of social relations is expected to condition the effect of financial strain on psychological distress in each nation.

## METHOD

### *Sample*

Interview data for this study came from the 1983–1985 survey Social and Health Aspects of Aging in Fiji, Korea, Malaysia, and the Philippines ( $N = 3,577$ ), which was sponsored by the World Health Organization. The same questionnaire was used to study older people living in households in all four countries. To improve comprehension and validity of the questionnaire across different cultures, the questionnaire for each nation was translated into the appropriate language and dialect, and then back-translated into English to compare the differences and minimize problems associated with cultural differences (Andrews, Esterman, Braunack-Mayer, & Rungie, 1986). Different sampling designs were used for each country, and response rates were generally quite high—over 90%, except for the urban Philippines sample (metro Manila), which had a response rate of 83.5%. Although the survey was conducted more than a decade ago, its suitability for cross-national comparisons and tests of social theories of psychological distress make it unique for the present study.

The Republic of Korea had the only multistage random sample designed to cover the entire country ( $N = 981$ ). The

survey for Malaysia covered Peninsular Malaysia only, with purposive sampling of five subregions ( $N = 1,000$ ; Andrews et al., 1986). Malaysia is a multiethnic society; the three main ethnic groups are Malays, Chinese, and Indians, but the majority of the citizens from where this sample was drawn are Malay Bumis (and Muslim). In the Philippines, the Tagalog Region of Luzon (21% of the Philippine population) was sampled with a three-stage stratified cluster design ( $N = 981$ ). About two thirds of the Tagalog-region residents live in urban areas, including metropolitan Manila, whereas rural residence is predominant elsewhere in the Philippines. Fiji is an archipelago of about 300 islands divided into four government geoadministrative areas. A multistage sampling design within each area was applied so that both urban and rural populations were represented ( $N = 769$ ). The samples, except in Fiji, were weighted to be representative of the populations for these areas for persons aged 60 years and older, by sex, and by rural and urban residence (Andrews et al., 1986).

Esterman and Andrews (1992) showed that living arrangements in the four countries are fairly similar: respondents "lived in households which had an average size ranging from 5.1 persons in Malaysia to 6.0 in the Philippines" (p. 276). There were relatively few elders who lived alone in these four countries during the time of the survey, and this pattern persists in all four countries. The percentage of elders living alone ranges from 2.0% in both Fiji and Philippines to 5.7% in Malaysia (where Islam specifies strong family support). As suggested by Esterman and Andrews (1992), this is in direct contrast to the situation in most Western nations, where as many as 60% of elderly people live alone.

Despite the similarities in living arrangements, there is considerable variability in social structure and culture among the four nations, especially as pertains to the position of older people (McCallum, 1992). Su and Ferraro (1997) recently profiled the four nations on 11 ecological indicators reflecting stage of modernization during 1980 and 1990. Their analysis showed that the Republic of Korea was clearly the most modernized of the four at the time of the survey; this was especially evident on indicators of energy consumption, telephones, TV, and physicians per capita. Ahn (1982) argued that the structural changes accompanying modernization in Korea have decreased the influence of the teachings of Confucius, especially as they relate to filial piety and respect for older people. The Philippines is probably the least modernized of the four, and the Filipino value of "utang-na-loob" or thankfulness is widely applicable to parents, especially elderly parents (Abaya, 1982). Malaysia is probably closer to South Korea in terms of modernization (McCallum, 1992). Fiji is less developed and more similar to the Philippines except that filial piety and elder beneficence are not as salient in Fijian culture, perhaps due to a history that includes cannibalism, witchcraft, and a utilitarian philosophy (McCallum, 1992; Williams & Calvert, 1870). Fiji has been known as the "Cannibal Isles" because cannibalism was observed there even into the mid-to-late 19th century (the practice was customary to show revenge over adversaries or to dedicate a temple; Williams & Calvert, 1870; Wright, 1986). All four nations showed signs

of important change during the decade (e.g., declining infant mortality, increasing urbanization), but the level of modernization across the four was similar in 1980 and 1990 (Su & Ferraro, 1997). Fiji changed the least between 1980 and 1990 on the indicators considered.

Subjects were screened for eligibility based on psychiatric impairment. The measures of psychiatric impairment included "hearing things that other people could not," "seeing things that other people could not," "believ[ing] that other people are watching you, or spying on you, or plotting against you," and "feel[ing] that special messages are being sent to you on the TV or radio." Twenty-nine percent of the sample reported one or more of these symptoms. Given cultural differences in the interpretation of these items and the widespread practice of witchcraft in Fiji and mysticism in several of the countries, respondents who reported three or more problems of psychiatric impairment were deleted from the analysis. Using this decision rule, a total of 208 (6%) cases were deleted from the analysis because of psychiatric impairment that might affect the validity and reliability of responses on other items (most of these cases were from Fiji and Korea).

The present analysis is based on a sample of 3,277 non-institutionalized respondents: 865 Koreans, 976 Malaysians, 621 Fijians, and 815 Filipinos. Approximately 58% of all respondents are female. As one might expect, population age parallels levels of modernization, and this is reflected in the study samples. The average age for all respondents is 70.24 years, but Koreans and Malaysians are slightly older than Filipinos and Fijians. Educational attainment among respondents is modest because it refers to formal, school-based education, and many of the current cohorts of elderly persons in these nations began work after primary school. Thus, although most respondents are literate, their years of schooling are limited. Educational attainment in the samples from Fiji and the Philippines is higher than in Korea and Malaysia, probably due to the purposive sampling of urban areas in the former two nations (Andrews et al., 1986). Although three of the samples were weighted to ensure accurate representation, some caution is warranted when combining the surveys because of bias due to different sampling designs.

### Measures

The surveys asked a number of questions that were related to the concepts under investigation. With the exception of the status characteristics, multiple measures for each concept were available. The analysis began by creating a series of additive indexes with the items for the proposed indexes selected based on extant research and theory (Filenbaum, 1988; House et al., 1988; Wilson & Cleary, 1995). Most of the indexes manifested fairly high reliability, but some Cronbach alpha values were below .70. Therefore, instead of using additive indexes, factor analysis was used to optimize the linear relationship among the items. The same sets of items were identified in the factor analyses as were specified a priori in the additive indexes.

*Psychological distress.*—Seven items were designed to measure psychological distress, several of which were

taken or adapted from the Center for Epidemiological Studies–Depression index (Radloff, 1977). The seven distress items include sleep difficulties, worried-tense, lost interest, very depressed, tired, forget things, and loneliness. Responses for the first six items were coded yes (1) and no (0). The loneliness item was coded almost never (0), sometimes (1), and quite often (2). A factor analysis was performed on the seven items of distress, yielding one factor suitable for the analysis (i.e., all loadings greater than .5). Descriptions of all variables in the analyses for each country and the four countries together are presented in Table 1 with ranges of variables, means, standard deviations, and factor loadings where appropriate. The highest and lowest mean values for psychological distress are not consistent with modernization hypothesis; Fiji has the highest distress and the Philippines has the lowest.

*Social integration.*—Consistent with the recent research literature, social integration and social exchange were measured separately (Schwarzer & Leppin, 1991). The survey included a number of indicators of social integration that reflect the quantity of social relations and frequency of contact. Seven measures were used to tap two domains of social integration (House et al., 1988). As shown in Table 1, the first domain, labeled voluntary associations, was based on three items: whether the respondent belongs to a social group; the respondent's degree of participation (a leader, active, some, or no participation); and whether the respondent belongs to a group for elderly adults. The second domain was conceptualized as integration in family and friends and was constructed with four items: how often the respondent attends family functions; how often he or she sees relatives; number of people he or she knows well enough to visit; and whether the respondent sees family and friends enough. Missing data in small proportions on the social integration indicators were recoded to the mean for respondents from each country (Hertel, 1976).

*Social exchange.*—In addition to social integration, four items were used to measure common social exchanges with the older respondents in these nations. Two items probe help offered in family networks. The first, provision of child care by elders, is widely used as a measure of intergenerational exchange (Lee et al., 1995; Shi, 1993). The second, help in making family decisions, has also been used as a measure of social contributions by elders (Grant, Patterson, & Yager, 1988; Shi, 1993). In many Eastern and Western Pacific nations, elders, particularly elderly men, are often seen as reservoirs of the wisdom of ancestors—unique intermediaries between the present and the past (Gutmann, 1977; Simmons, 1945)—and this item taps this function. A third item asked the respondent if he or she is consulted with regard to community problems, and the fourth item taps economic exchanges. Older adults were asked to identify their main source of income. If an elder received the major source of his or her income from the family, the respondent was identified as receiving family financial support, implying at least some degree of economic dependency. Responses were coded yes (1) and otherwise (0).

The four items used in this survey were selected because of their frequency of occurrence in these Western Pacific cultures (see Table 1; Andrews et al., 1986). Although the three items on providing help do not exhaust the types of exchanges made, they span both family and community relations and focus on culturally defined roles for elders. Except for Fiji, elders in the Western Pacific have historically relied heavily upon financial support from children, but this is changing (Ahn, 1982; Keith et al., 1994). Financial assistance from elders to children in these four nations is rare, but the other direction of financial exchange is widespread. (Home ownership was considered in penultimate models, but was deleted from the final analysis because it was not significant in any of the multivariate models). Treating the four items separately seemed the best way to use them given (a) the modest correlation among the four items and (b) the value of differentiating which types of exchanges are most predictive of psychological distress. One consequence of treating the four items separately, however, is that more equations are necessary to test the hypotheses stated earlier.

Of course, the ideal strategy is to have parallel measures for giving and receiving across domains of exchange activity as is the case in recent studies by Krause (1995) and Lee and colleagues (1995). Unfortunately, those procedures were not employed when this cross-cultural study was implemented. The strategy adopted by the investigators of this general social survey emphasized prevalent practices in these Western Pacific cultures (Andrews et al., 1986). This approach has merits, but the lack of parallelism limits the generalizability of the results presented later in this article. (For instance, it would be very useful to test hypotheses regarding the interaction of giving and receiving aid with parallel measures.)

*Financial strain.*—Respondents were asked about financial strain with this question: "Thinking about your money situation, would you say you: do not have enough for basic requirements, have just enough to get along on, or are you comfortable?" This subjective appraisal of financial situation was coded 1 to 3 so that higher scores refer to higher levels of financial strain. Given the link between financial strain and both social relations and psychological distress, interactions between financial strain and various measures of social relations were also created and will be described later (Krause & Liang, 1993; Whelan, 1993).

*Health.*—Whereas health is often closely related to psychological distress among older adults, a number of measures of health status spanning four domains were considered in this research. The first domain, subjective health, was measured with two items: "How do you feel about your present health: do you feel quite healthy?" (Responses were yes and no, coded 2 and 1, respectively.) The second question was very similar to the widely used self-rating of health: "How would you evaluate your present health; is it": very good (5), fairly good (4), average (3), fairly bad (2), or bad (1)?

The next two domains concern physical functioning. One domain, activities of daily living (ADLs) was defined by

Table 1. Descriptions of Variables in the Analyses (*N* = 3,277)

Variables	Range	Four-Nations Mean (SD)	Korea Mean (SD)	Malaysia Mean (SD)	Fiji Mean (SD)	The Philippines Mean (SD)	Factor Scores
<b>Psychological Distress</b>							
Sleep difficulties	1 = yes, 0 = no	.365 (.481)	.419 (.494)	.332 (.463)	.418 (.463)	.338 (.469)	.508
Worried-tense	1 = yes, 0 = no	.341 (.474)	.393 (.489)	.243 (.428)	.542 (.497)	.217 (.412)	.709
Lost interest	1 = yes, 0 = no	.377 (.484)	.379 (.485)	.334 (.471)	.646 (.486)	.196 (.397)	.682
Very depressed	1 = yes, 0 = no	.164 (.370)	.343 (.475)	.030 (.170)	.261 (.439)	.038 (.192)	.520
Tired	1 = yes, 0 = no	.485 (.499)	.575 (.497)	.499 (.500)	.648 (.478)	.229 (.420)	.612
Forget things	1 = yes, 0 = no	.563 (.496)	.551 (.497)	.599 (.490)	.710 (.454)	.417 (.493)	.562
Feel lonely	2 = often, 0 = almost never	.718 (.715)	.869 (.762)	.541 (.682)	.899 (.745)	.612 (.608)	.543
<b>Social Integration</b>							
Voluntary Associations							
Belongs to social group	1 = yes, 0 = otherwise	.206 (.404)	.271 (.444)	.232 (.422)	.280 (.449)	.033 (.179)	.863
Group participation	3 = leader, 0 = none	.257 (.630)	.457 (.780)	.158 (.477)	.359 (.737)	.053 (.342)	.873
Belongs to group for elderly	1 = yes, 0 = otherwise	.097 (.296)	.261 (.439)	.047 (.211)	.046 (.209)	.011 (.105)	.721
Family and Friends							
Times attended family function	7 = daily, 1 = once a year	3.090 (1.270)	3.123 (1.338)	3.003 (1.414)	3.012 (1.281)	3.223 (.949)	.677
Frequency see relatives	7 = daily, 1 = once a year	4.038 (1.673)	3.668 (1.423)	4.025 (1.548)	3.350 (1.767)	5.126 (1.476)	.733
No. know to visit	3 = 5+, 0 = none	2.195 (.988)	1.658 (1.000)	2.389 (.925)	2.242 (.949)	2.577 (.760)	.674
Sees family and friends enough	1 = yes, 0 = otherwise	.595 (.491)	.343 (.475)	.798 (.401)	.580 (.493)	.683 (.465)	.653
<b>Social Exchange</b>							
Providing Help							
Provides child care	1 = yes, 0 = otherwise	.559 (.497)	.524 (.499)	.517 (.499)	.675 (.469)	.549 (.498)	
Helps make family decisions	1 = yes, 0 = otherwise	.698 (.459)	.650 (.479)	.634 (.482)	.762 (.426)	.805 (.396)	
Consults community problems	1 = yes, 0 = otherwise	.300 (.458)	.332 (.472)	.167 (.373)	.715 (.452)	.110 (.313)	
Receives family financial support	1 = yes, 0 = otherwise	.587 (.494)	.660 (.474)	.645 (.479)	.412 (.493)	.571 (.495)	
<b>Financial Strain</b>	3 = not enough money, 1 = comfortable with money	2.155 (.648)	2.058 (.738)	1.879 (.545)	2.409 (.635)	2.396 (.489)	
<b>Health Status</b>							
Subjective Health							
Health rating	5 = very good, 1 = very bad	3.344 (1.079)	3.004 (1.280)	3.339 (.989)	3.329 (1.102)	3.649 (.837)	.900
Feeling healthy	2 = yes, 1 = no	1.657 (.475)	1.487 (.500)	1.712 (.453)	1.582 (.493)	1.836 (.369)	.932
IADLs							
Gets to places	2 = no help, 0 = unable	1.617 (.579)	1.589 (.641)	1.678 (.511)	1.678 (.511)	1.637 (.529)	.860
Goes shopping	2 = no help, 0 = unable	1.643 (.619)	1.651 (.627)	1.731 (.564)	1.541 (.625)	1.592 (.583)	.900
Handles money	2 = no help, 0 = unable	1.764 (.511)	1.760 (.567)	1.695 (.511)	1.562 (.713)	1.934 (.277)	.718
ADLs							
Eats	2 = no help, 0 = unable	1.970 (.189)	1.971 (.179)	1.971 (.179)	1.941 (.263)	1.976 (.174)	.752
Dresses	2 = no help, 0 = unable	1.957 (.229)	1.949 (.232)	1.976 (.182)	1.940 (.283)	1.957 (.225)	.918
Appearance	2 = no help, 0 = unable	1.954 (.238)	1.932 (.267)	1.979 (.174)	1.924 (.312)	1.967 (.198)	.901
Walks	2 = no help, 0 = unable	1.887 (.354)	1.874 (.371)	1.954 (.243)	1.801 (.458)	1.898 (.322)	.531
Bed	2 = no help, 0 = unable	1.931 (.294)	1.873 (.394)	1.974 (.176)	1.917 (.332)	1.964 (.204)	.734
Bathes	2 = no help, 0 = unable	1.929 (.287)	1.863 (.369)	1.965 (.219)	1.928 (.315)	1.959 (.209)	.766
Sick Days							
Days sick	5 = 0, 1 = 22–31 days	4.747 (.772)	4.426 (.938)	4.841 (.679)	4.660 (.842)	4.841 (.581)	.727
Days in hospital	5 = 0, 1 = 22–31 days	4.938 (.348)	4.937 (.362)	4.961 (.317)	4.893 (.442)	4.953 (.264)	.892
<b>Status and Social Characteristics</b>							
Sex	1 = male, 0 = female	.417 (.493)	.366 (.482)	.398 (.489)	.507 (.500)	.398 (.490)	
Age	59–110 years	70.08 (7.39)	71.17 (6.99)	70.49 (7.96)	69.30 (7.25)	69.03 (7.08)	
Married	1 = yes, 0 = otherwise	.588 (.492)	.510 (.500)	.594 (.491)	.633 (.482)	.625 (.484)	
Education	6 = 17+, 0 = 0 years	1.130 (1.328)	.678 (1.191)	.713 (1.083)	1.542 (1.330)	1.691 (1.360)	
Household size	8 = 8+, 0 = 0	4.47 (2.403)	4.413 (2.089)	4.03 (2.642)	5.09 (2.382)	4.63 (2.378)	

the following items: ability to eat, to dress and undress, to take care of one's appearance, to walk, to get in and out of bed, and to take a bath or shower. Responses were coded unable (0), able with help (1), and able without help (2). The other domain of physical functioning, labeled instrumental ADLs (IADLs), was defined by the following items: ability to get to places out of walking distance, to go shopping for food and clothes, and to handle money. The coding scheme was identical for ADLs and IADLs.

Finally, the fourth domain of health measures sick days and is composed of two items: (a) how many days in the last month the respondent was so sick that he or she could not carry on usual activities—such as going to work or working around the house, and (b) how many days in the last month the respondent was in a hospital for physical health problems. The distributions for these two items were grouped into five categories ranging from none (coded 5) to 22–31 days (coded 1). All health items were coded so that high values reflect better health.

*Status and social characteristics.*—The measurement of other variables is fairly straightforward and is depicted in Table 1. Education is a seven-category variable of years of schooling ranging from 0 (no years) to 6 (17 or more years). Each of the status characteristics considered has been shown in previous research to be important in predicting psychological distress.

## RESULTS

As a way of introducing the analysis, Table 2 presents country-specific correlation matrices among selected variables: financial strain, the six variables for social relations, and psychological distress. As hypothesized, financial strain is positively related to psychological distress in all four nations. Receiving financial support is positively related to distress in three of the four nations. The relationships between social relations and distress are more complex, but the overall pattern is one of integration and social contributions associated with lower levels of distress.

Table 2. Country-Specific Correlation Matrices For Selected Variables

	1	2	3	4	5	6	7
<b>Korea</b>							
1. Financial strain							
2. Voluntary associations	-.086*						
3. Family and friends	-.182**	.221**					
4. Provides child care	-.101**	.078*	.217**				
5. Helps make family decisions	-.146**	.147**	.198**	.280**			
6. Consults community problems	-.025	.173**	.232**	.092**	.178**		
7. Receives family financial support	-.132**	-.017	-.091*	.156**	.021	-.085*	
8. Psychological distress	.234**	-.105**	-.273**	-.116**	-.181**	-.045	.085*
<b>Malaysia</b>							
1. Financial strain							
2. Voluntary associations	-.029						
3. Family and friends	-.119**	.231**					
4. Provides child care	-.075*	.006	.159**				
5. Helps make family decisions	-.076*	.150**	.312**	.075**			
6. Consults community problems	-.114**	.380**	.152**	-.002	.196**		
7. Receives family financial support	-.081*	-.263**	-.106**	.077*	-.189**	-.146**	
8. Psychological distress	.098**	-.156**	-.237**	-.093**	-.137**	-.096**	.107**
<b>Fiji</b>							
1. Financial strain							
2. Voluntary associations	.079*						
3. Family and friends	-.095*	.040					
4. Provides child care	-.079*	.111**	.169**				
5. Helps make family decisions	-.003	.120**	.212**	.281**			
6. Consults community problems	.244**	.132**	.030	.224**	.233**		
7. Receives family financial support	-.060	-.170**	-.199**	.023	-.046	-.044	
8. Psychological distress	.284**	-.004	-.263**	.057	.007	.164**	.060
<b>The Philippines</b>							
1. Financial strain							
2. Voluntary associations	-.056						
3. Family and friends	-.197**	.040					
4. Provides child care	-.107**	.040	.117**				
5. Helps make family decisions	-.180**	.046	.253**	.254**			
6. Consults community problems	-.045	.390**	.073*	.099**	.103**		
7. Receives family financial support	-.196**	-.122**	-.128**	-.050	-.099**	-.137**	
8. Psychological distress	.133**	-.031	-.118**	.018	-.218**	-.073*	.141**

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

The multivariate analysis was conducted in two stages: (a) main effects of the independent variables on psychological distress were estimated, assuming an additive model, and (b) interaction terms of financial strain and social relations were tested sequentially. Table 3 presents ordinary least squares (OLS) regression coefficients, both unstandardized and standardized, for the first stage of the analysis. The first three columns display the additive model for all nations combined. A Chow test of the equality between sets of regression coefficients across nations suggested the appropriateness of separate equations as well ( $p < .001$ ; Chow, 1960). Therefore, country-specific OLS regression analyses were conducted to test for different associations between the predictor variables and psychological distress as well as interactions across the nations. (Standardized coefficients are provided for interpretations within a given country but should not be used for cross-cultural comparisons.) Rather than simply comparing slopes, differences of slopes were tested ( $t$  value) for all independent variable contrasts where at least one slope was sta-

tistically significant (Marascuilo & Levin, 1983). Korea serves as the reference group for the analysis of differences in slopes. Thus, no  $t$  values are presented for Korea.

The analysis of the four nations combined reveals that, consistent with the simple relationships shown in Table 1, psychological distress is highest in Fiji and lowest in the Philippines (i.e., modernization does not lead to higher levels of distress). Women have slightly higher distress levels as do people who are not married, live with fewer household members, are under financial strain, and are in poor health—findings consistent with previous studies conducted in other nations (e.g., Krause & Liang, 1993; Whelan, 1993). Indeed, standardized coefficients show that subjective health, IADLs, and financial strain have the strongest effects on psychological distress. Integration in family and friend networks, but not in voluntary associations, is associated with lower levels of psychological distress. There is no main effect of social exchange on psychological distress for the four nations combined.

Table 3. Combined and Country-Specific OLS Regression Analyses Predicting Psychological Distress

Variable	Four-Nations ( <i>N</i> = 3,277)			Korea* ( <i>N</i> = 865)			Malaysia ( <i>N</i> = 976)				Fiji ( <i>N</i> = 621)				The Philippines ( <i>N</i> = 815)			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>t</i> <sup>b</sup>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>t</i> <sup>b</sup>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>t</i> <sup>b</sup>
<b>Status and Social Characteristics</b>																		
Sex (male)	-.07*	.04	-.04	.06	.08	.02	-.06	.07	-.03	— <sup>c</sup>	-.14	.10	-.06	—	-.16*	.07	-.09	1.98**
Age	.00	.00	.00	-.01	.01	-.04	.00	.00	.04	—	-.01	.01	-.06	—	.01	.00	.06	—
Married	-.10**	.04	-.05	-.12	.08	-.05	-.01	.06	-.00	—	-.09	.10	-.04	—	-.14*	.06	-.08	.20
Education	.01	.01	.02	-.01	.03	-.01	-.03	.03	-.03	—	.02	.03	.03	—	.02	.03	.02	—
Household size	-.02*	.01	-.04	-.08**	.02	-.14	.00	.01	.00	-3.58**	.01	.02	.00	-3.18**	.00	.01	.01	-3.58**
Financial Strain	.21**	.03	.13	.26**	.05	.16	.01	.05	.01	3.54**	.32**	.07	.18	-.70	.14*	.06	.08	1.54
<b>Health Status</b>																		
Subjective health	-.15**	.01	-.21	-.15**	.02	-.23	-.20**	.02	-.32	1.77	-.10**	.03	-.13	-1.39	-.14**	.03	-.19	-.28
IADLs	-.07**	.01	-.14	-.05*	.02	-.09	-.07**	.02	-.15	.71	-.09**	.02	-.18	1.41	-.11**	.02	-.21	.30
ADLs	-.00	.01	-.00	-.01	.01	-.04	-.00	.01	-.00	—	.00	.01	.04	—	.00	.01	.00	—
Sick days	-.03*	.01	-.04	-.04	.03	-.05	.01	.02	.00	—	-.03	.03	-.04	—	-.10**	.03	-.12	1.41
<b>Social Integration</b>																		
Voluntary associations	-.01	.01	-.02	.00	.01	.00	-.05**	.01	-.09	3.54**	.01	.02	.01	—	.03	.03	.03	—
Family and friends	-.06**	.01	-.11	-.08**	.02	-.13	-.03	.02	-.06	1.77	-.11**	.03	-.17	-.83	.03	.02	.05	-3.89**
<b>Social Exchange</b>																		
Provides child care	.07	.04	.03	.07	.08	.03	-.07	.06	-.03	—	-.10	.10	-.04	—	.21**	.06	.12	-1.40
Helps make family decisions	-.07	.04	-.03	-.16*	.08	-.06	-.01	.06	-.00	1.70	.09	.11	.04	.57	-.22**	.08	-.10	3.36**
Consults community problems	.07	.04	.03	.17*	.08	.07	-.02	.08	-.03	1.68	.06	.10	.03	.86	-.08	.10	-.03	1.95
Receives family financial support	.07	.04	.03	.22**	.08	.09	.04	.06	.01	1.80	.08	.10	.03	1.09	.01	.06	.01	2.10**
<b>Countries<sup>a</sup></b>																		
Malaysia	.04	.05	.02															
Fiji	.39**	.06	.14															
The Philippines	-.27**	.05	-.10															
Intercept	-.35			.17			-.33				.13				.95			
<i>R</i> <sup>2</sup>	.24			.22			.22				.16				.22			

\*Korea serves as the reference group.

<sup>b</sup>Value of  $t$ , the differences of slopes between countries, was calculated by using Korea as the reference group.

<sup>c</sup>Neither slope is statistically significant ( $t$  value omitted).

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



Turning to the results for each nation, psychological distress is more likely among Korean elders with fewer household members, poor subjective health, and higher IADLs. As expected, psychological distress is also more likely among persons with financial strain and those with low levels of integration in family and friend networks. Social exchanges are quite consequential among Korean elders; psychological distress is higher among those who are not involved in family decision making but are consulted on community problems and receive family financial support.

The results for Malaysia show that household size and financial strain are not significant predictors of psychological distress. Integration in voluntary associations in Malaysia is associated with lower levels of psychological distress, but none of the exchange relationships considered is consequential. The equation for Fiji has the lowest  $R^2$  value of all four nations. Psychological distress there is explained by financial strain, health, and integration in family and friend networks. Again, no form of social exchange influences distress.

Turning to the equation for the Philippines, it is apparent that the determinants of psychological distress are quite different from those seen in Korea. The Philippines is the only nation in the multivariate analysis where women have higher levels of distress. Three of the four indicators of

health influence psychological distress in the Philippines, and the consistency of effects due to subjective health and IADLs across the four nations is remarkable. In other words, health shapes distress regardless of social context.

Household size, community consultation, and receiving family financial support are not associated with psychological distress in the Philippines, but providing child care and helping with family decision making are. The provision of child care is associated with elevated levels of psychological distress presumably due to the physical and mental challenges of taking care of grandchildren (Domingo & Asis, 1995). On the other hand, helping with family decision making is associated with lower levels of psychological distress.

The final stage of the analysis is the test of multiplicative models, where it was hypothesized that financial strain would interact with at least one type of social relations in shaping psychological distress in each of the four nations. (Models for the interaction of giving and receiving on distress were also tested, but none of 15 conditional relationships was significant.) Rather than load the equations with multiple interaction terms, interaction terms were tested one at a time (Jaccard, Turrissi, & Wan, 1990; Southwood, 1978). Those that were significant are reported in Table 4.

Table 4. Country-Specific OLS Regression Analyses With Interaction Terms Predicting Psychological Distress

Variable	Korea ( <i>N</i> = 865)			Malaysia ( <i>N</i> = 976)			Fiji ( <i>N</i> = 621)			The Philippines ( <i>N</i> = 815)		
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>
Status and Social Characteristics												
Sex (male)	.06	.08	.03	-.06	.07	-.03	-.16	.10	-.07	-.16*	.07	-.09
Age	-.01	.01	-.04	.00	.00	.04	-.01	.01	-.06	.02	.00	.06
Married	-.12	.08	-.05	-.01	.06	-.01	-.10	.10	-.04	-.15*	.06	-.07
Education	-.02	.03	-.02	-.03	.03	-.03	.02	.03	.02	.02	.03	.02
Household size	-.07**	.02	-.13	.00	.01	.00	.00	.02	.01	.00	.01	.01
Financial Strain	.21**	.06	.13	.11	.07	.07	.18	.09	.10	.21**	.06	.12
Health Status												
Subjective health	-.15**	.02	-.23	-.20**	.02	-.32	-.10**	.02	-.18	-.14**	.03	-.19
IADLs	-.05*	.02	-.09	-.07**	.02	-.15	-.09**	.02	-.18	-.10**	.00	-.21
ADLs	-.01	.01	-.05	-.00	.01	-.00	.00	.01	.05	.00	.01	.00
Sick days	-.04	.03	-.05	.01	.02	.00	-.03	.03	-.04	-.10**	.03	-.12
Social Integration												
Voluntary associations	.00	.01	.00	-.05**	.01	-.09	.01	.02	.01	.03	.03	.03
Family and friends	-.02	.06	-.04	-.03	.02	-.06	-.11**	.03	-.18	.23*	.09	.39
Social Exchange												
Provides child care	.06	.08	.02	-.30	.19	-.17	-.10	.10	-.04	.20**	.06	.12
Helps make family decisions	-.16*	.08	-.07	.01	.06	.00	.10	.11	.04	-.21**	.08	-.09
Consults community problems	.17*	.08	.07	-.10	.08	-.04	.06	.10	.03	-.07	.09	-.03
Receives family financial support	.21**	.08	.09	.03	.06	.01	.71*	.34	.30	.01	.06	.01
Interactions												
Strain × Family and friends	-.05*	.03	-.18							-.08*	.04	-.34
Strain × Child care				-.19*	.10	-.21						
Strain × Financial support							.33*	.14	.36			
Intercept	.17			-.51			.52			1.16		
$R^2$	.23			.23			.17			.23		

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

The test of the multiplicative model for Korea shows that there is a significant interaction term between financial strain and integration in family and friend networks. It should be noted that the interpretation of interaction effects relies on considering the main effects along with the product term (and the contribution to  $R^2$  by adding the product term; Jaccard et al., 1990). Although the main effect for family and friend networks is no longer significant, the  $F$  test for contribution to  $R^2$  indicates that there is a significant interaction: financial strain heightens psychological distress, but solid integration in family and friend networks serves as a buffer ( $p < .05$ ). Consistent with the hypothesis, psychological distress is most acute for those who face financial strain and report being integrated weakly in family and friend networks.

The results for Malaysia indicate that financial strain is significant only when combined with the provision of child-care. Neither of the main effect variables are significant in Table 4, but the  $F$  test reveals that this is, nonetheless, a case of significant statistical interaction ( $p < .05$ ). This is the only instance where intergenerational aid given by the elder coupled with financial strain is associated with psychological distress. As hypothesized, psychological distress is lower among Malaysian elders who report financial strain and the provision of childcare. Table 3 showed that providing child care was associated with psychological distress in the Philippines, but the results here show that providing child care in Malaysia decreases the effect of financial strain on psychological distress. We view this effect in Malaysia as a way for elders to balance or offset financial strain by providing tangible help to the family. Islam is the most popular religion in Malaysia, and it expects strong family contributions (Tracy & Tracy, 1993). Although Malaysia shows how financial strain coupled with intergenerational giving leads to lower psychological distress, the results from Fiji point to the process of financial support received by elders interacting with financial strain to heighten psychological distress. The  $F$  test for contribution to  $R^2$ , however, indicates that the interaction is not statistically significant ( $p > .05$ ). Given that the  $R^2$  is lowest in Fiji, we believe the interaction between financial strain and receiving support merits further attention, but there is insufficient evidence in these data to claim that the two interact in Fiji. Thus, of the three interaction hypotheses specified, this is the only one for which there was no support in any of the countries.

Finally, the test of interaction effects in the Philippines is consistent with the hypothesis and parallels those for Korea: financial strain heightens psychological distress, and elders who are integrated weakly in family and friend networks suffer the most. (Whereas this conditional relationship was manifest in Korea and the Philippines, a test for a second-order interaction was also performed, but found to be nonsignificant.)

#### DISCUSSION

Considerable research has examined the ways in which social relations influence psychological distress in the United States, but cross-cultural analyses of such relationships are rare. This study used a cross-cultural approach to

improve understanding of how social relations and financial strain influence psychological distress. Based on the most recent literature on stressors and social relations, we hypothesized that social relations and financial strain would manifest both main and interactive effects on psychological distress.

Results from the four nations showed that financial strain is common in these nations, especially in Fiji and the Philippines (the less-developed nations). Financial strain was also higher among persons with limited education and poor health. As is the case in many studies in the United States, the impact of financial strain on psychological distress is clear. Financial strain was associated with higher levels of psychological distress in all of the nations studied, except Malaysia. These findings add to the literature regarding how financial strain is important to psychological distress, but do so with impressive cross-cultural evidence (Krause et al., 1991; Krause & Liang, 1993). Although the status of older people varies by level of societal development, even in the Philippines, the least modern society studied here, financial strain was linked to psychological distress.

Financial strain involves anxiety about subsistence, and confronting the daily exigencies of survival may erode feelings of control and self-worth. Indeed, the connection between the psychological anxiety associated with financial strain and feelings of psychological distress is well established, even in cross-cultural research (Krause et al., 1991). An emerging literature, however, suggests that a second mechanism may also be at work in which financial strain influences the quality of social life, sometimes precipitating more negative interactions (Kim & Rhee, 1997; Krause & Liang, 1993). In this sense, it would be helpful if future studies considered the independent and joint effects of financial strain and quality of social relations on psychological distress. Findings from our analysis reveal that financial strain was associated with less integration in family and friend networks, but these data do not permit a test of the quality of social relations being affected by financial strain.

Although financial strain directly and positively influenced psychological distress in three of the four nations, none of the other variables pertaining to the main-effect hypotheses demonstrated such a consistent pattern. Six measures of social relations were considered across four nations, resulting in 24 tests; 8 of these 24 were significant, but only 6 were consistent with the hypotheses. Each measure of social relations was significant in at least one nation, but only two were significant in more than one nation: psychological distress was lower for respondents with family and friend integration and help with family decision making. From another perspective, psychological distress in Korea was related to four measures of social relations, but only one or two of the six measures were significant in each of the remaining nations.

Beyond main effects, analyses of these Western Pacific elders provide some evidence that financial strain and integration in family and friend networks interact in shaping psychological distress: although financial strain heightens psychological distress, solid integration in family and friend networks serves as a buffer in two of the four nations. For

those individuals who lack such integration and report financial strain, psychological distress is much higher. We uncovered another case of statistical interaction—financial strain interacted with the provision of child care in Malaysia. Although some might argue that providing child care might increase distress for those experiencing financial strain, the opposite effect was observed in Malaysia; financially strained elders who helped with child care had lower levels of psychological distress. We see this as a compensatory mechanism—one way for elders to balance or offset financial strain by providing tangible help to the family (Tracy & Tracy, 1993). Also, recall that the vast majority of Malaysians sampled are Muslim and that Islam is the national religion. According to Islam, family members are expected to support the family. Thus, providing child care may lower psychological distress because of the unique religious and cultural expectations of family support among the Muslim Malays (Chan & Davanzo, 1996). The data are not sufficient to test hypotheses about religious identity and expectations, but it is clear that among the four samples studied, Islam is prevalent in Peninsular Malaysia.

Taken together, these findings point to this study's three major conclusions about how financial strain and social relations affect psychological distress among older people. First, the main effect due to financial strain on psychological distress is important. By using a cross-cultural framework, financial strain was found to heighten psychological distress in some fashion for three of the four nations considered. The gravity of structural inequality in power resources on psychological distress is hard to underestimate. This is not to suggest a simplistic notion of socioeconomic determinism on the psychological state of elders. Instead, we see socioeconomic resources as key influences on the intricate process of how social relations shape distress.

Second, the effect of social relations on psychological distress is rarely as simple as may be detected when estimating main effects only. Rather, the effect of social relations on psychological outlook is shaped in conjunction with the stressors experienced by the older person (Silverstein & Bengtson, 1994). The same measures of social relations did not interact with strain in all four nations. Thus, there is no simple conclusion that generalizes across all of the nations considered; the interaction findings are not consistent across the nations. What we uncovered, however, was that strain interacts with different measures of social relations in three of the four nations. We believe it is noteworthy that in three of four Western Pacific nations, financial strain interacts with one of two forms of social relations in shaping psychological distress. These results demonstrate more convincingly that although the main effects of strain and social relations are important, it is also likely that the two phenomena interact in shaping psychological distress. The precise dimensions of social relations that interact with strain vary by the unique cultural context, but interaction effects should be examined. Failure to account for conditional relationships between stressors, social relations, and psychological distress means that one does not adequately capture the richness of the links between these concepts.

Third, the types of social relations with which financial

strain interacts vary by cultural context and appear to be independent of the status of modernization. Some theories regarding the effects of modernization suggest that elders in more modern societies may be especially vulnerable to financial strain and low morale (Cowgill, 1986; Dowd, 1975), but we found no clear pattern along levels of modernization. Indeed, three important findings run counter to what one would anticipate from modernization theory. First, psychological distress was higher among elders in Korea who received family financial support (Table 3), perhaps because they feel inadequate by receiving the aid (Lee et al., 1995). Second, the interaction of financial strain and family and friend integration on psychological distress was observed in Korea and the Philippines, the most and least modernized nations, respectively. Third, the influence of involvement in family decision making on psychological distress was significant in the Philippines and Korea. It may seem intuitive that the risk of social dependency may be more consequential to psychological distress in more modern societies where utilitarian values are more common. Yet, the effect of modernization on the both the status of older people and their psychological distress appears to be more contingent on cultural heritage than modernization alone (Haber & Gratton, 1994). The modernization hypothesis is not supported by these data.

Four limitations of the present study should be kept in mind when interpreting the results. First, the results are derived from cross-sectional data reflecting degrees of modernization, but results from long-term, longitudinal studies of societies undergoing modernization would be more insightful. With that said, the cost and organization needed for such an endeavor would be truly extraordinary when studying a subject such as psychological distress. All four nations experienced major changes in their economies and quality of life during recent years, but the rank order of modernization is probably the same now as when the surveys were conducted. Second, for Malaysia and the Philippines, the surveys cover only selected geographic regions of the nation. This is not a serious flaw given the comparative emphasis here and the dearth of related research, but it does constrain external validity for those two nations. Third, because different sampling designs were used in the four nations, some caution is needed regarding external validity. Finally, although the measures of social exchange tap a range of interactions, the lack of parallelism for giving and receiving is important. Given this limitation, studies with parallel measures that examine the independent and interactive effects of social relations and financial strain (or other stressors) on psychological distress would prove especially useful. Despite the shortcomings of this research, this is the first cross-cultural study of which we are aware that systematically examines these relationships. The data clearly show the importance of how the effects of social relations and financial strain jointly influence psychological distress.

In conclusion, the findings of the present investigation add to the literature on how social environments and functioning influence the psychological state of elders. It is clear that some social and economic conditions are likely to lead to psychological distress among elders, but our find-

ings suggest that this can be mitigated, at least in part, by greater social integration and/or involving elders in family decision-making processes. In addition, the fact that subjective health and IADLs were significant predictors of psychological distress in all four nations underscores the importance of health factors in shaping distress regardless of social or cultural context.

#### ACKNOWLEDGMENTS

An earlier version of this article was presented at the August 1997 annual meeting of the American Sociological Association in Toronto. Support for this research was provided by a grant from the National Institute on Aging (AG 11705). The data were made available by the Interuniversity Consortium for Political and Social Research. Neither the collector of the original data nor the Consortium bears any responsibility for the analyses and interpretations presented here. The authors appreciate the assistance of Evelyn Douthit and the helpful comments of Sharon DeVaney, Akiko Hashimoto, Ahmad Othman, Heeseung Roh Ryu, John Stahura, Janet Wilmoth, and anonymous reviewers on earlier versions of this article.

Address correspondence to Dr. Kenneth F. Ferraro, Professor of Sociology, Stone Hall, Purdue University, West Lafayette, IN 47907-1365. E-mail: ferraro@purdue.edu

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Received March 25, 1997

Accepted June 30, 1998

Decision Editor: David J. Ekerdt, PhD