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**Dr. Vijayan K. Pillai** is Professor of Social Work at  
University of Texas- Arlington, Texas.

**Dr. Eileen Levy** is Associate Professor of Social Work  
at San Francisco State University.

Correspondence to Rashmi Gupta, San Francisco  
State University, School of Social Work, 1600

Holloway Ave, Rm 217, SF, CA 94132,

E-mail: [rgupta@sfsu.edu](mailto:rgupta@sfsu.edu)

**Dr. Rashmi Gupta** is Assistant Professor of Social Work at  
San Francisco State University.

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RASHMI GUPTA,  
VIJAYAN KUMARA PILLAI,  
EILEEN F. LEVY

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## RELATIONSHIP QUALITY AND ELDER CAREGIVER BURDEN IN INDIA

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### ABSTRACT

#### Relationship quality and elder caregiver burden in India

The purpose of this study was to examine the psychosocial factors that contribute to burden among Asian Indian caregivers of the elderly in Allahabad, India. Within this context of caregiving, the importance of relationship quality as a determinant of burden was examined in 259 Asian Indian families. A stress process model was utilized to explain the quality of relationship between the caregiver and the elderly persons. Another factor predicting burden was role overload. In addition, it was found that there were several indirect effects through relationship quality that predicted burden. The findings suggest that psycho educational interventions may be gainfully used to reduce burden among caregivers of elderly in India.

## **Keywords**

Elder care, Asian Indian, caregiver burden, relationship quality

## **SAMENVATTING**

### **Mantelzorg in India: de kwaliteit van de relatie tussen mantelzorger en zorgbehoevende oudere en de ervaren zorg last**

In deze studie staat de relatie tussen diverse psychosociale factoren en de ervaren zorg last van mantelzorgers (van ouderen) in Allahabad (India) centraal. "De kwaliteit van de relatie" tussen mantelzorg en zorgbehoevende wordt als belangrijke voorspeller van de ervaren zorg last gezien. Deze wordt in de theoretische verkenning van het artikel verder uitgewerkt aan de hand van een zogenaamd "stress-proces-model". Op basis van vragenlijstonderzoek, uitgevoerd onder 259 families, wordt geconcludeerd dat "overbelasting" een belangrijke voorspeller van zorg last is. Ook blijken er verscheidene indirecte effecten van de kwaliteit van de relatie te zijn. De uitkomsten suggereren dat er een mogelijke rol voor psychosociale interventies in het reduceren van de ervaren zorg last onder mantelzorgers in India is weggelegd.

## **Trefwoorden**

mantelzorg, ouderen, India, ervaren zorg last, kwaliteit van de relatie

## **INTRODUCTION**

Perhaps one of the biggest demographic issues emerging at the global level today is the growth of the aging population, and the demands that elder care will place on family members and health care systems. India has one of the highest growth rates of older adult population in the world (Eberstadt, 2006). In India, the population aged 60 and over constitutes about 7.4% of the population of over a billion (Census of India, 2001). The care of elderly persons in developing countries rests entirely on family members, yet despite the increasing numbers the current body of research does not adequately address the caregiver burden experienced by Asian Indian caregivers. Caregiver burden poses a health risk to both the caregiver population, and the recipients of care (Hughes, Giobbie-Hurder, Weaver, Kubal & Henderson, 1999). Though several aspects of care giving stress are well known, many volunteer to provide elder care giving due to a number of value related and normative reasons. Several studies report that caregivers are able to identify

positive aspects as well to the process of care giving (Cohen, Colantonio & Vernich, 2002; Kramer, 1997). Reducing the burden of the caregiver is of primary concern for improving the quality of care of the elderly persons. In general, factors influencing caregiver burden can be grouped into two categories; social structural variables such as support tasks by older adults and social – psychological as role conflict and role overload (Chatterjee, Patnik & Chariar, 2008).

Research on elder caregiver burden in Indian families suffers from three drawbacks. First, data on elder caregiver burden in Indian families are scarce. Second, prior studies in the South Asian region are mostly descriptive in nature. A few that have attempted to explain caregiver burden have not included “relationship quality” as a determinant (Stimpson, Tyler & Hoyt, 2005) though a number of socio-psychological studies have identified relationship quality between the caregiver and the care recipient as an important correlate of perceived caregiver burden (Katz-Saltzman, Biegel & Townsend, 2008). Moreover, very few studies have attempted to test an explanatory model of elder caregiver burden in families in India. This study attempts to address these research gaps. In this study, an attempt is made to develop a model of caregiver burden with relationship quality between the caregiver and the elderly as a prime determinant. The study tests a path analytic model of caregiver burden in Indian families in the city of Allahabad, India, including variables found to be associated with caregiver burden in western studies, such as relationship quality, support provided by older adults, role conflict and role overload (Williamson & Shaffer, 2001; Williamson & Schulz, 1990).

## **FACTORS ASSOCIATED WITH CAREGIVER BURDEN**

Caregiving usually takes place within the family setting. One of the consequences of caregiving is “caregiver burden,” which has been defined as “the physical, psychological or emotional, social and financial problems that can be experienced by family members caring for impaired older adults” (George & Gwyther, 1986, p. 253). Caregiving is a very engaging task and often results in subjective feelings such as abandonment, a sense of entrapment, and demoralization (Pinquart & Sorenson, 2003, 2005). Among Asians and Asian Indians in the United States, caregiving is a product of cultural expectations, duty, love, and a positive attitude towards aging in general (Bhagat & Unisa, 2006; Gupta, 2000). Reciprocal relationships are carefully cultivated by both parents and children in order to realize the cultural ideal of filial responsibility to parents in their old age (Gupta & Pillai, 2002). The gerontological literature points to stressors and resources relevant to addressing the unique needs of caregivers, and the outcome that is caregiver burden. Earlier studies have utilized the stress process model to explain caregiver burden (Diwan, Hougham, & Sachs, 2004; Haley, LaMonde, Han, Narramore & Schonwetter, 2001). We concur with the

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earlier research and we utilize the stress process model to examine caregiver burden among Asian Indian caregivers providing care to their elderly persons in a multigenerational household (Adams, McClendon & Smyth, 2008).

Pearlin, Mullan, Semple and Skaff (1990), developed a stress process theory to explain the process whereby caring for an older adult affects the well-being of caregivers. They outline the pathways through which older persons' health problems create burden on caregivers. In this theory, stressors are defined as "conditions, experiences, and activities that are problematic for people" (p. 586). The model focuses on three categories of variables; stressors, resources and outcomes. The outcomes often studied are socio-psychological dispositions which are to be explained, and the resources are tangible possessions which can be used to acquire desired outcomes. Caregiver burden can be easily seen as an outcome of a series of stressors. The impact of these stressors according to the stress process model will depend upon the amount of resources that caregivers bring to bear on the amount of caregiver burden. However, the stress process model recognizes variations in relationships among background factors, the stressors and the resources as they impact the outcome. In this study, a number of variables such as role overload and role conflict are seen as stressors while the support tasks provided by the elderly persons was viewed as a resource with the variable "relationship quality" being proposed as a prime determinant of caregiver burden. A socio-demographic characteristic interplaying with stressors and resources resulting in caregiver burden is "gender". The stress and appraisal process models have been increasingly adapted to examine the role of relationship quality in the care giving process (Adams et al., 2008; Clark & Diamond, 2010). The stress process model (Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, 1995) locates level of relationship quality as an outcome of several primary objective stressors stemming from mental and physical health status of elder care recipients (Adams et al., 2008). The appraisal process model, though similar to the stress process model emphasizes the subjective assessments caregivers attach to the physical, and mental health conditions of the elder care recipients (Yates, Tennstedt, & Chang, 1999). Existing levels of role overload can influence such subjective assessments with significant consequences for relationship quality (Gupta, 2000).

In the Indian setting, the problem of aging is worsening because of fertility decline in most Indian states. The population is young with about 41 percent of the population less than 18 years of age. Only about 4 percent of the population is in the age group 65 to 79 years. The sex ratio in this age group, unlike in most developing countries is in favor of males. However among the old-old, 80 years and above, constituting less than one percent of the population in 2000, the sex ratio favors females (Census of India, 2001). It is projected that by 2051, the Indian elderly population will reach 324 million, about four times the size of this population in 2000. Since the proportion of the old-old population is small, most elderly do not need high levels of care, it is likely that the extent

of role overload determines the perceived quality of relationship with the elderly. In spite of the fact that the status of elderly in India declined during the course of last few decades, sons remain committed to the care of elder parents owing to strong filial –piety norms (Jamuna, 2003). This expectation however is now on the decline.

### **Relationship quality**

Relationship quality is the most immediate determinant of burden (Gupta, 2009a). Caregivers often express feelings of closeness to the care-recipient. Recent studies suggest that emotional closeness between the caregiver and care receiver in a relationship is an important factor in explaining the level of caregiver burden (Lecovich, 2008; Spaid & Barusch, 1994). Stoller & Pugliesi (1989) suggest that caregivers who report positive relationships with the care recipients are less likely to report high levels of caregiver burden, regardless of the amount of care they provide. Recent studies show that poor relationship quality between the caregiver and care recipient increases caregiver burden (Koerner, Kenyon, & Shirai, 2009; Gupta, 2009a). Thus, it is likely that as “relationship quality” increases, the amount of perceived caregiver burden decreases.

### **Gender**

Caregiving within the family is bounded by normative gender specific expectations of considerable importance to Asian Indian families. Given the role of women as caregivers in the Asian Indian context, women are generally more likely to provide care to the elderly and therefore more likely to experience perceived caregiver burden than males (Morrow-Howell, Rozario, & Hinterlong, 2004). Therefore, women are likely to report greater burden than men (Kahn, McGill, & Bianchi, 2011; Miller, Lynda, & Cafasso, 1992; Navaie-Waliser, Spriggs, & Feldman, 2002). Since caregiving duties may be imposed on women (primarily daughters-in-law) because of gender related expectations, their relationship with the care recipient may become strained. Consequently, women are more likely to have poorer relationship quality with the care recipient than men.

### **Role Conflict**

Caregiving may be considered a role, as those who engage in it seem to identify themselves with the tasks involved. Role is defined as “a pattern of behavior that is characteristic or expected of an individual occupying a particular position within the social system” (Wolman, 1989, p. 297). Role conflict refers to discrepant expectations, irrespective of time pressures (Sieber, 1974). Role conflict

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has been defined as the incompatibility of demands in the form of conflict between organizational demands and one's own values, problems of personal resource allocation, and conflict among obligations to several different people (Rizzo, House, & Lertzman, 1970). Within the family system the amount of caregiving provided by individuals is a function of the social positions they occupy. As the number of social positions an individual occupies increases, caregivers are likely to experience both role conflict and role overload (Mui & Shibusawa, 2008). As a source of stressor, increases in role conflict are likely to increase caregiver burden. As care givers experience role conflict, their relationship with the care recipient is likely to be strained. Consequently, there is likely to be a negative relationship between relationship quality and caregiver burden. Since most relationships are reciprocal in nature, care recipients are likely to react to caregiver's experiences of role conflict. Care recipients attempt to increase their own task performances. Thus, role conflict of the caregiver is likely to increase the support tasks provided by the elderly care recipient.

### **Role Overload**

Multiple role involvements are associated with a caregiver's concurrent commitment to a number of social role positions. Multiple role involvements may lead to inadequate allocation of resources, such as time, for the fulfillment of all the roles the caregivers play (Soskolne, Halevy-Levin, & Cohen, 2007). This scarcity hypothesis focuses on the cost of multiple role commitment (Goode, 1960). According to the scarcity hypothesis, people do not have enough time and energy to fulfill their multiple role obligations. Therefore, the multiplicity of roles produces role overload (Goode, 1960). Role overload refers to perceived constraints imposed by time and energy (Sieber, 1974). As role overload increases, caregiver burden is likely to increase. However, role overload is likely to influence caregiver's choices as well as capacity to provide care resulting in an erosion of relationship quality with the care recipient. As role overload increases care recipients are more likely to increase their level of support task.

### **Health Problems of Care Recipient**

The health problems of the elder are also an important determinant of perceived caregiver burden. An older person with many health problems is likely to demand more energy, time and money from the family system (Hooyman & Kiyak, 2006). Caregiving entails high costs to the caregiver. The degree of caregiver burden is likely to depend upon the extent of physical and mental health problems (Beach et al., 2005). In general, mental health problems are more likely to increase the level of burden than elder physical health problems. However, the high caregiving costs may be

mitigated if socio-emotional and/or material rewards are extended to the caregiver (Gupta & Chaudhuri, 2009). Thus, when caregiving is not rewarded, the level of caregiver burden is likely to increase. A positive relationship between the elderly persons and their caregivers is to a great extent dependent upon the amount of reciprocity experienced (White, Townsend & Stephens, 2000). That is, an elderly person who has a high degree of dependency on the caregiver and also suffers from poor health may find it more difficult to maintain supportive family relationships. The elderly persons with health problems are likely to provide few rewards while imposing increases in costs to caregivers. Consequently the greater the health problems of the elderly person, the poorer the relationship quality with the caregiver is likely to be. In addition, the poorer the health of the elderly person, the greater the burden the caregiver is likely to perceive (Hooyman & Kiyak, 2006). Earlier studies have shown a correlation between health and mental health (Silveira & Ebrahim, 1995). Health problems can exacerbate mental health due to social isolation (Silveira & Abdullahi, 1993). Also the poorer the health of the elderly person, the lower the level of support tasks provided by the older adult.

### **Support Tasks Provided by the Care Recipient**

A few studies on intergenerational solidarity have focused on the assistance that older adults living in multigenerational households in India provide to their adult children (Kalavar & Van Willigen, 2004; Gupta, 2002). Older adults in the US prefer to live independently. Therefore the variable "support provided by the older adult" has not been empirically tested in very many research studies. In this study, the greater the support tasks performed by the elderly care recipient, the greater the quality of relationship.

Broadly stated, it is suggested in this study that caregiver burden is influenced by the quality of relationship between the caregiver and care recipient and the role overload of the primary caregiver. The relationship quality intervenes between role conflict, the support tasks performed by the elderly person, and gender of the caregiver. These three factors also influence caregiver burden indirectly. The quality of the relationship between the caregiver and the care recipient thus plays a crucial role in this model.

## **METHOD**

### **Sample**

In this study, the term *caregiver* refers to persons 18 years of age or older who satisfy a number of eligibility criteria for selection. In order to be eligible for inclusion in this study, the caregiver should

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be a male/female taking care of a parent or parent-in-law, grandparent or a hired help, neighbor or distant relative who is at least 18 years of age or older and has lived in a joint household with the older adult care recipient for over a year. In joint households, several members of the family share caregiving tasks and reside in the same household (Soldo & Myllyluoma, 1983). From among several care providers, a primary caregiver in this study is one who self-identifies himself or herself as the person who provides at least four hours of care per day and assists the care recipient on at least one activity of daily living (ADL) or two instrumental activities of daily living (IADL). Thus, the primary caregiver is someone who provides more care to the elderly (in the number of ADL or IADL tasks performed) compared to other caregivers in the family.

Allahabad city has of a population of 1,022,365 people (Census of India, 2001). A large proportion of the population is Hindus followed by Muslims, Sikhs and Christians (Census of India, 2001). The multistage probability sampling method is used to generate a sample of primary caregivers.

The City of Allahabad consists of forty wards. Five wards were chosen randomly from a list of all wards. From the Nagar Mahapalika we obtained a master map of the city which shows the boundaries of all the selected wards. Maps of all the selected wards which provided the layout of residential areas within each of the five selected wards were obtained from the City Planning Office. All residential neighborhoods were identified using the ward maps. For the purpose of this study a neighborhood was defined as any area used for residential purposes enclosed by roads on all the sides. A count of all the neighborhoods within each of the wards was obtained. Nearly 104 neighborhoods with an average population of approximately 125 households were identified. Ten percent of all the neighborhoods from the five selected wards were randomly chosen. The distribution of the neighborhoods across the five selected wards is as follows: three each from Civil Lines and Daraganj wards; two from Tagore town; and one each from Chowk, and Katra.

In order to establish contact with households in which primary caregivers reside, three methods for entering into the community were utilized. The first method involved contact with officials from religious organizations such as temples, mosques and churches in each of the selected wards. A number of officials were informed about the objectives and design of the study and were asked to advertise the study through posters placed in areas outside the buildings where worshippers tended to congregate. Permission was also sought to communicate with worshippers inside the premises of the religious organizations. Conversations with worshippers led to the publicity of the study. A second point of entry was through well-known community leaders. A number of prominent community leaders were identified in each of the selected wards. Persons who are elected representatives either at the municipality or ward level are considered community leaders. A list

of all the community leaders in the selected wards was developed. These leaders were informed about the study and cooperation for the study was sought from them. They provided a letter of permission to solicit household interviews from areas under their political jurisdiction.

A third point of entry into the community was through the media. Two major newspapers also published articles on principal investigator's work on caregiving of the elderly in the United States, and invited caregivers to participate in the social survey that had been launched. The community support generated through these methods facilitated the next stage in the sampling process involving selection of sample households.

The locations of all the selected neighborhoods were obtained from the visits that were made to each of the selected neighborhoods. The purpose of the site was to become familiar with the layout of houses in the sample neighborhoods. Upon familiarization with the physical layout of houses in the neighborhoods, a count of all the houses in each of the sample neighborhoods was obtained. In all approximately 1150 houses were counted in the selected neighborhoods. Every second house was included in this study constituting a sample of 575 households. House numbers of all the selected households were recorded. Interviewers visited the selected houses. The household members were informed of the study and asked to participate. Members from selected households were told that participation in the study was voluntary and that they could stop participation at any time during the interview. Information with respect to the presence of an elderly member and his/her care giver was sought. If no caregiver was present, the next house was visited and information with respect to the presence of an elderly and his/her caregiver was sought. Once a caregiver was identified during this process, the house was marked for interview. Of the 575 households contacted, 354 households had primary caregivers. From these 354 households, 263 agreed to participate in the study and were interviewed. As a result, the response rate for the study was 73 percent.

## **Instrument**

A questionnaire was created to gather data required for this study, using items from existing research tools as well as items generated specifically for this study. The interview questionnaire was translated into Hindi, the Indian national language. Hindi is the main language spoken in Allahabad. Even though Muslims speak Urdu, they understand Hindi because the two languages are very similar. After the translation, the questionnaire was pilot-tested by administering the questionnaires to twelve middle-aged adult children who provided care for their elderly. Information from the pilot survey was used to accomplish a few modifications in the wording of the questions and the organization of the questionnaire in order to enhance clarity.

## **Procedures**

The interviewers made contact with household members from each of the selected households in this study. The interviewers first described the study and obtained informed verbal consent for each interview. Administration of the questionnaire through the interview process on the average took approximately 1–2 hours.

## **Operationalization of Measures**

Seven variables were used in the model. The independent variables were relationship quality, gender of the caregiver, role overload, role conflict, elder health, and support tasks of the elder. Internal consistency reliability was assessed for all the scales.

*Perceived Caregiver Burden* – Caregiver burden was measured by the 31-item scale developed by Stommel, Given and Given (1990). They reported reliability coefficients of 0.95. Each item was rated on a 4-point Likert scale, ranging from “1- strongly disagree” and “2- disagree” to “3- agree” and “4-strongly agree”. The reverse-scoring items (Items 1, 5, 10, 17, and 20) were re-coded such that for all the items, the highest value, “4,” implied the high caregiver burden, while lower values indicated low levels of burden; “1,” represented the lowest level of burden. Scores could range from 31 to 124 with higher scores indicating high burden. Examples of the questions asked related to caregiver burden were, “It is difficult to pay for the elder’s health needs and services” and “I wish that family depended less on me to care for the elder”. Alpha value for the scale in this study was 0.81.

*Relationship quality* was measured with the scale developed by Walker and Thompson (1983) for their study on exchange and affection between daughters and their mothers. The original scale had 17 items with a reliability of 0.93. Strawbridge (1991) added five questions to specifically address past relationship quality. Both men and women appeared comfortable in describing their feelings about their parents or in-laws (alpha=0.92). Higher scores indicate poor relationship quality as reported by the caregiver (1=strongly agree, 4=strongly disagree). Examples of a question in the relationship quality scale are “The elder shows that he or she loves me” and “The elder and I want to spend time together”. Alpha value for the 22 item scale in this study was 0.967.

Support tasks performed by the elder were measured using a sub-scale developed by Krause and Markides (1990) to assess support received from others. This scale was scored on a 4-point basis (1=never; and 4=very often). Krause and Markides (1990) reported a reliability coefficient of 0.86. All of the support related indicators are added together to form a single global composite score

representing support received. The lowest score on the scale would be 11 and the highest score would be 44. Examples of items are as follows: "How often has Elder been right there with you (physically) in a stressful situation?" "How often has Elder suggested some action you should take in order to deal with a problem you are having?" High scores reflect high level of support by the elder. The alpha level for the scale in this study was 0.89.

*Role Overload.* According to Pearlin, Mullan, Semple and Skaff (1990) the two indicators of primary stressors subjectively experienced by the caregivers are role overload and role conflict. They reported an alpha of 0.80 for a four-item role overload scale. The items measure the level of fatigue felt by caregiver in accomplishing several chores in addition to providing caregiving for the elderly. The scale was measured with four response categories (1=not at all; 4=completely). Example of an item is "I have more things to do than I can handle?" The alpha level for this study was 0.75.

*Role conflict* was measured with the Pearlin, Mullan, Semple and Skaff (1990) instrument, a five-item scale with questions related to whether caregiving for the elderly has affected the different aspects of the caregiver's life tasks and other relationships. The questions examine levels of role conflict (1=not a problem, 2=a problem; and 3=serious problem). To measure the role conflict in the caregiving situation, a score was derived by summing the five items. Examples of the items are as follows: "How much has care giving limited your social life?" "How much has care giving tasks affected your other relationships?" Higher scores indicated greater role conflict. The alpha coefficient for role conflict for this study was 0.80.

*Health Problems of the Elder* were measured using one item related to whether or not the elder had health problems that required prescription medication. The response was coded as: "1=yes" or "0=no". The question above was followed by a qualitative question to "list the chronic health problems for which the elderly person is taking prescription medication". Multiple responses were noted, such as prescription medications being taken by elderly for diabetes, cancer, high blood pressure and arthritis.

*Gender of the caregiver* was coded 1 as female and 0 as male.

## **Analysis procedure**

The variables included in the model were analyzed using a path-analytic framework using structural equation modeling (EQS, Bentler, 1985). Path analysis is a useful technique for testing

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direct as well as indirect relationships among variables (Rothman & Greenland, 2005; Vasconcelos, Almeida & Nobre, 2008). Figure 1 presents all the proposed paths between the set of independent variables, role conflict, role overload, caregiver gender, elder health; and the set of mediating variables, elder support and relationship quality. The outcome variable is caregiver burden. Bentler's EQS program was used to fit the model. Means and standard deviations for all the variables in the model are presented in Table 1.

Table 2 presents the standardized, and unstandardized beta coefficients which measure the direct effects of the explanatory variables on perceived caregiver burden.

## RESULTS

### Characteristics of the Sample

The age of the caregivers (n=259) ranged from 18 to 88 years with a mean age of 42 years. Of the 263 households four were dropped because of excessive missing data problems. The majority of the respondents were married, with children, living in a house owned by the elderly person receiving care. The mean household monthly income was Rs.7000 (\$146) with an average of 1.9 people contributing to this household income. Caregivers reported the elderly receiving, on the average, an income of Rs.800 (\$16) per month. More than 23% of the heads of the household had completed an undergraduate degree and about 25% had attained a postgraduate degree. About 25% of the heads of the household held professional jobs; and about 47% worked as cleaning/unskilled workers earning very little income. In this sample (60.6%) of the respondents identified themselves as being Hindus, followed by 29.3% as Muslims, 8.5% as Christians, 1.2% Sikhs. About 48% of the caregivers perceived their own physical health as being good. Over 60% of the caregivers were married. Of the primary

Variable	Mean	Standard Deviations
Perceived caregiver burden	88.72	12.81
Relationship Quality	42.20	11.36
Support tasks by elderly person	28.74	6.59
Role conflict	8.81	3.16
Role overload	9.41	3.55

**Table 1: Means and Standard deviations for the ordinal level variables in the model.**

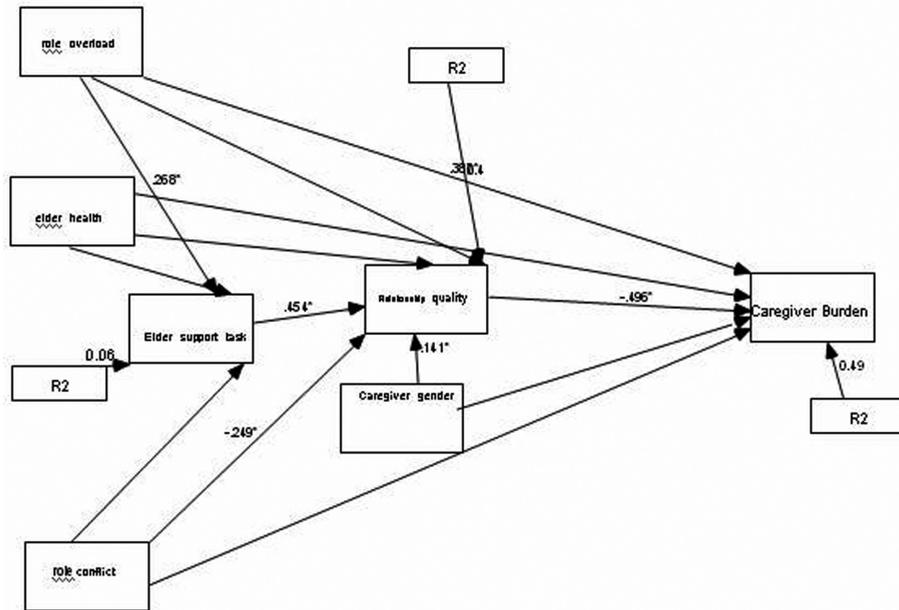


Figure 1: Path Model of Elder Caregiver Burden in Asian-Indian Families.

\* indicates significance at the 0.05 level. R2 is residual error

caregivers 30.1% were daughters-in-law, 19.7% were daughters, 18.5% were sons, 13.9% was a grandchild, 9.7% were spouses, and 8.1% were others (which included hired help/neighbor or distant relative).

The characteristics of the elder care-recipient were as follows. Average age of the elderly care recipient was about 75 years and about 61% of the sample was female elderly persons. Fifty-six percent of elderly persons regularly save money and about 45% lived with their caregiver in the caregiver's home. About half live with the son's family and only 20% live with the daughter's family. The caregivers reported 38.2% of the elderly persons for whom care was provided as being mentally confused "sometimes" and 14.3% of the elderly persons as being "very confused". Mentally confused refers to lack of mental alertness and it was determined as lack of awareness of current year, names of family members, name of the current prime minister of India. The caregivers reported 18.5% of the older persons suffered from behavior problems "most of the time" and 39.8% of them as suffering from behavior problems "sometimes". Behavior problems of the older

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Perceived caregiver burden	B	Beta	z-value	R-Sq.
role overload	.387	.386*	5.888	.49
role conflict	.064	.063	.965	
Gender (Male=0)	.006	.006	.116	
relationship quality	-.496	-.489*	-9.162	
elder health problems	-.082	-.082	-1.715	
Relationship Quality				.40
Gender (Male=0)	-.141	-.143*	-2.748	
support tasks by elder	.454	.461*	8.581	
role conflict	-.249	-.252*	-3.589	
elder health problems	.053	.054	1.037	
Role overload	.098	.100	1.389	
Support tasks by elder				.06
Elder health	-.026	-.026	-.400	
role overload	.268	.268*	3.050	
Role conflict	.045	.045	.514	

Note: b=unstandardized path coefficients, Beta=standardized path coefficients. \*p<.05

**Table 2: EQS Path Estimates (Maximum Likelihood), Unstandardized, Standardized Estimates, z-values and R-square for caregivers in India.**

persons were deemed as being verbally abusive, loud paranoid thinking, crying or yelling without any reason. More than three-quarters of the sample had an elderly person who was suffering from health problems for which they had to take more than one prescription medicine per day. Spousal caregivers experience burden differently compared to non spouses (Schulz & Quittner, 1998). Spouses express fewer burdens compared to adult children caregivers. For details on ADL and IADL care and the caregivers that provide them (see Gupta & Chaudhuri, 2009). The numbers of married and widowed elderly care receivers are comparable.

**Results of the Path Analysis**

Overall the model explained 49% of the variance in perceived caregiver burden. The comparative fit index (CFI) for the model was 0.96. As the relationship quality between the

caregiver and care-recipient decreased, the level of caregiver burden increased ( $\beta=-0.489$ ,  $p\leq 0.05$ ). It was found that females report poorer relationship quality with elderly care-recipients ( $\beta=-0.143$ ,  $p\leq 0.05$ ) than males, and relationship quality was associated with greater perceived care giver burden. As expected, increases in role conflict was associated with decreases in the quality of relationship ( $\beta=-0.252$ ,  $p\leq 0.05$ ).

The number of conflicting roles that caregivers have to perform was negatively associated with relationship quality with the elderly, resulting in greater perception of burden. In addition, as expected, role overload had a bearing on perceived burden. The greater the role overload of the caregiver the greater the perception of burden ( $\beta=0.386$ ,  $p\leq 0.05$ ). We also found that as the role overload increased, the amount of support tasks provided by the elder also increased ( $\beta=0.268$ ,  $p<0.05$ ). The support tasks performed by the elder had a positive significant relationship to relationship quality ( $\beta=0.461$ ,  $p\leq 0.05$ ). An increase in the number of support tasks performed by the elderly was associated with better quality of relationship which in turn led to lower perception of caregiver burden.

## DISCUSSION

In this study a stress process model was used to analyze the relationship between stressors, resources and outcomes. The results suggest that there are two major stressors – role overload and role conflict – that influence caregiver burden indirectly. In this study relationship quality emerged as a central factor in explaining burden, underscoring the role of interdependence among Asian caregivers bound by culturally driven expectations of filial responsibility (Gupta, Rowe & Pillai, 2009). Earlier studies have revealed that relationships between the child and parent in Indian families are nurtured over a lifetime and a sense of mutual interdependency is a cultural norm (Gupta, 2009).

The results of our study support prior findings that female caregivers have a poorer quality of relationship with the elderly care recipient (Gupta, Rowe & Pillai, 2009). In general, a large proportion of women are responsible for management of the household (for example the laundry, grocery, meal preparation and cleaning) tasks and men usually manage the finances. In addition, in India more and more women are in the labor force. Women perform several roles in a joint household as caregivers to their children as well as the elderly in the household (Gupta, Rowe & Pillai, 2009). Therefore women caregivers may be doing too many household tasks, which would have an effect on the quality of relationship with the elderly, living in the multigenerational household. While women are expected to extend their gender related caregiver role to the elderly as well, they did not report higher levels of perceived caregiver burden than men. Though

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we suggested that women are more likely to perceive greater care giver burden than men, this expectation was not supported. Perhaps the similarity between men and women in terms of perceived burden is due to the fact that female caregivers, especially daughters-in-law, spouses, and even to some degree daughters may not want to violate the cultural standard of the dutiful wife or daughter-in-law. Traditional norms stress that once a daughter is married, she is no longer responsible for the care of her own parents as her obligations for care giving are to her spouse's parents. Yet in our sample we found that married daughters are taking the responsibility for parent care, when a son or spouse is not available to provide care giving (India Abroad, 2010, p. 33).

Our suggestion that role conflict is associated with lower quality of relationship between a caregiver and the elderly care recipient was empirically supported. Similar results were found in a study with caregiver and care receiver dyads, in which female caregivers reported conflicting roles and poor relationship quality with the care recipient (Lyons, 2000). In an earlier study conducted in Canada, Cranswick and Dosman (2008) found that women perform a variety of care giving tasks. They experience role conflict as they are sandwiched between providing care for their children and parents while being employed outside the home. An understanding of the role of relationship quality in association with caregiver burden is central to development of policies and programs for informal caregiving. Even in European countries, women in particular bear the cost of caregiver burden more than men. Women providing informal care in the family setting in North as well as Southern Europe reduce their work hours. The reduction appears to be more significant in the North than in the South (Arksey & Glendinning, 2007; Milligan, 2009; Spiess & Schneider, 2003; Williamson & Schulz, 1990).

A large proportion of all caregivers of older adults experience high degrees of role overload (Lail & Leonenko, 2007). It is highly likely that a considerable number of Asian Indian caregivers are at risk for stress related health problems due to overwork and burnout. We found that support given by the older adult improves relationship quality between the elder and the caregiver. Prior studies show that the elderly persons who live with their primary caregivers get taken care of, if they contribute to the household either with resources such as their savings, emotional support and information (Gupta, 2002; Gupta & Chaudhuri, 2009).

We found that role overload did not significantly affect relationship quality. Though caregiving is provided in the presence of role conflict and role overload, their impact on caregiver burden is diminished by the supportive stance taken by elders. Reciprocity within the context of good relationship quality appears to play a role in minimizing perceived elder caregiver burden. It is likely that elderly care recipients who have not experienced deficiencies in their cognitive status contribute to higher levels of relationship quality than those who experience cognitive

impairments. In our sample, a large proportion, about 52% reported being confused either sometimes or more.

Our expectations with respect to the outcomes of role conflict for caregiver burden were not supported. This may be due to the fact that experiences of role conflict may not be totally discussed and its importance and effects on caregiver burden minimized. All the paths related to health problems of the elderly person may not have been significant as a result of measurement issues. We used only one item to measure it. This is one of the limitations of the study. Future studies need to include a comprehensive assessment tool to measure the health of the elderly care recipient and its impact on caregiver burden.

An elderly person's knowledge and participation in family activities may be limited due to health issues. In order to identify the various household chores it is necessary to develop a list with the help of the family members. An open discussion about the nature of these chores and how some of them may be shared with the older adult is likely to improve elderly persons support, resulting in improved relationship quality. Skills necessary to perform chores may have to be either learned or sharpened with the help of the family members. It is also necessary to facilitate the older adults to express his/her intention to improve participation in household chores.

### **Limitations**

Although the present research adds to the literature in unique ways, the findings must be viewed in light of the study's limitations. The self report nature of measures used in this study for the assessment of burden must be considered a limitation, which might be ameliorated by the inclusion of data from either other family members or care providers. One of the weaknesses of the study was the cross-sectional survey design. Longitudinal design is far more suitable for examination of relationships of dynamic processes such as relationship quality and health status than are cross sectional studies. Future studies need to assess the level of burden, coping strategies of the caregiver, and the nature of the quality of relationship over time.

Another limitation is that recruitment was conducted without taking into account pre-conditions such the health status of the care-recipient, the number of Western medications that the elderly person is prescribed, and the level of social isolation as a result of health problems. This may have masked some important patterns because care giving demands often are confounded with disease type. Moreover, earlier studies have found that care-recipient's disease type (e.g., Alzheimer's vs. Parkinson's disease) helps to predict variations in levels of caregiver distress (e.g., Hooker, Monahan, Bowman, Frazier, & Shifren, 1998). It is possible that disease type and intensity also

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affect several aspects of caregiver burden. While the role of providing ADL/IADL care may not be discounted in general, in the Indian cultural context it is necessary to take into account the relationship quality with the elder care recipient (Gupta, 2000). Further research should be directed toward addressing these variables and also include variables such as amount of formal care assistance, roles of extended family members in the caregiving context, social pressure to provide in home care, and work and health and medication history of the older adult.

The cultural factors that influence women's perception of elder caregiver burden were not adequately examined in this study. Within a patriarchal system the dutiful wife is subjected to the authority of men. The multiplicity of roles she plays within the patriarchal household is balanced and coordinated toward the welfare of the household (Wadley, 1977). The ideal of "dutiful wife" encourages women to perform their duties cheerfully and without regret. Hindu mythology is replete with multifarious roles women play at the household and societal level. While the cultural norms encourage women to confirm to patriarchal authority, her inherent capacity to outdo, out perform and out compete men in almost all spheres of life is recognized at the religious and cultural levels (Acharya & Acharya, 2008). This causes a great deal of anxiety for men in patriarchal household who allow women to perform multiple roles with desired levels of compartmentalization and flexibility. The complex accommodations made within the household to reduce elder caregiver burden among women should be investigated.

### **Implications for Applied Sociology**

This study reveals several strengths in the process of elder caregiving in India. First, though role demand among care givers is high, they have succeeded in significantly minimizing the level of perceived caregiver burden. Secondly, elder care recipients are sensitive to the resource and time constraints caregivers face in providing the level of elder care. Elder recipients are not only sensitive to the role demands among care givers, but also provide support by performing several household tasks and chores. In the face of increases in role demands among care givers, presence of healthy supportive relationships among care givers and care recipients provides an environment of strength and resourcefulness necessary to sustain family centered care giving. In order to enhance the existing relationship quality, it is necessary to provide several types of support systems to the family. Changing economic and social environments dynamically shape role demands care givers face. Since most elder care recipients do not participate in the labor force, they may not be aware of the constraints faced by care givers. As elders become aware of the social and economic milieu in which care is being provided, they are more likely to become efficient in providing elder support. Furthermore, participation of the elderly as well as the

caregivers in educational sessions and separate support groups is likely to improve the existing bonds.

Family education/counseling could take place in-person and via television programs that can show therapeutic interventions, such that role overload can be lessened (Williamson & Schulz, 1990). Other programs may include the provision of hotlines to speak with care giving consultants or coaches (Teri McCurry, Logsdon, & Gibbons, 2005), and the design of mentoring programming for caregivers (Sánchez & Ferrari, 2005). The degree to which these distal- and one-on-one techniques are effective may vary as a function of caregiver personal traits and contextual circumstances (e.g., living with the care-recipient or apart). Nonetheless, the present study suggests that efforts in this direction would be worthwhile and may help more caregivers to lessen their role overload and role conflict.

Efforts of elderly to adjust to changing labor and time demands within the household should be supported. Elderly may have to learn new skills to effectively provide support to the caregivers. Learning new and effective ways of self care is also likely to enhance relationship quality (Koseki & Reid, 1991). Building an effective supportive system for the elderly involves facilitating an open communication system within the family. In order to facilitate good relationship among family members open communication is necessary to help elderly express intentions. There may be social and cultural barriers to open communication between the elder and the rest of the family. Sociologists may help identify these barriers in order to facilitate open communication among family members. Given the hierarchical nature of power relations and decision-making in Asian Indian households, it is inappropriate to involve young children, caregivers and elder parents in an open discussion. Consequently, service providers may disseminate information about role management and role adjustments to caregivers and other members of the family through public lectures and small group discussions (Segal, 1991).

Although gender was not a predictor in explaining care giver burden, we did find a high proportion of female caregivers who experience poor relationship quality with the elderly person. Declines in relationship quality are accompanied by high levels of perceived caregiver burden. Earlier studies have found that spouse caregivers had lower positive affect (Adams, 2008), and some of this lack of positive affect may be completely circumstantial and may respond to supportive, instrumental assistance or respite. Other behavioral interventions for caregivers in Indian context would include increases in pleasurable activities and self care, along with "permission" to do so from extended family and service providers. Caregivers support groups may also be useful to address relationship quality issues (Markut & Crane, 2005). Finally, caregivers experiencing burden can be taught intervention methods such as active problem solving, cognitive restructuring and attempts to find meaning in the caregiving role.

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