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PS PARIPET CI NE	YCHO SOCIAL DETERMINATS OF NCTIONAL COMPETENCE IN THE SENIOR FIZENS: AN INDEX FOR REHABILITATION EDS	KEY WORDS: Psychosocial Determinants, Functional Competence, Elderly, Rehabilitation, Senior Citizens.	
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Decline of functional competence is one of the markers of old age. Low functional competence imposes not only restrictions in mobility and increases dependency during old age. This study is an attempt to assess the patterns of functional competence in a sample of 300 elderly living in semi urban areas of Chittoor District. Patterns of functional competence were measured through ADL, IADL, PBADL and SPFC. Findings suggest a differential pattern of functional competence across physical and mental activities, social supports, health practices, age, gender and economic groups etc. The outcome of the study highlights the need for rehabilitation services for the need based vulnerable elderly.

INTRODUCTION

ABSTRACT

A critical aspect of functional competence is the maintenance of independent living in old age. Functional competence generally defined as the ability to care for one self, to manage one's affairs, and to live independently in the community. Elderly persons' competence to live independently is a concern not only of those who are old, but of society as a whole (Siegel & Taeuber, 1986).

A major challenge for those involved in assessment and judgment of competence is to define the critical domains of functional abilities associated with living independently. Prior research on the instrumental activities of daily living (IADLs) may be particularly useful. Elderly persons' performance on the measure of everyday cognition relate to behavioral observations of those subjects performing similar activities in their home and to self and spousal IADL ratings (Willis, 1996).

The prevalence's of functional disability in general sample for ADL, IADL and mobility were equivalents to the rates detected by Millán-Calenti, Tubío, Pita-Fernández, González, Lorenzo , & Fernández-Arruty (2010) and by Parahyba, Simões, & Simões (2006) and it was observed that the highest prevalence occurred for IADL, followed by ADL and mobility. This fact is justified by the hierarchy of losses in which more complex activities (IADL) are impaired in initial stages, and simpler activities (ADL) are affected in later stages of the disability process. Mobility loss is considered as an intermediate loss. On an opposite direction, the elevated percentage of independent elderly is highlighted in the general sample for ADL (58.0%), IADL (43.0%) and mobility (76.0%), which also corroborates with previous studies (Den, Schuurmans, Mueller-Schotte, van der Schouw, 2013) and confirms the necessity of preventing functional disability and its adverse effects.

The number of elderly people needing care is increasing rapidly in the home setting in many countries, despite of family size and ability to provide such support are declining. Emiko, Shouzoh, Nobufumi, Sachiko Yamazaki and Seiji (2014) identified the risk factors of functional disability by household composition among community-dwelling elderly people. According to household group, the risk factors for functional disability varied. In Japan the numbers of vulnerable households with senior citizens in require of care

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has increased gradually over the years. Appropriately identifying the risks associated to functional incomptence requires resources of assessment that takes the household composition into consideration. Given the increasing frailty and disability with age, social networks and social support play cardinal role in the quality of life of older people in societies where formal support and social protection programs are not available (Emiko et. al., 2014). Khalil (2011) evaluated the social networks and the support accessible for the older people who suffered from a variety of chronic conditions across diverse socio-economic neighborhoods of urban Lahore, Pakistan. Results of univariate analysis reveled that senior citizns social support had significant effect on their level of functional incomptence. Though elderly people were embedded in close networks, a significant proportion of them received rare instrumental and emotional support from their closed ones, particularly family members. Small sizes of families and increased nucleated families may reduce availability of social support for the older people in the future. It underscores the necessity of developing prospective strategies to enhance social protection programs for older people in Pakistan.

Giving a broad and interdisciplinary approach to health status, functional competence is considered, as the basis of an effective geriatric evaluation (Marengoni , Von Strauss , Rizzuto , Winblad & Fratiglioni 2009) . Thus, the different dimensions that influence the lives of the elderly people are included, as their health status, social relationships, socioeconomic, physical environment, demographic, cultural and psychological conditions. These persons are included in a framework in which public health is progressively understood in a holistic and interdisciplinary approach (Maciel & Guerra, 2007). The assessment of functional capability in the elderly persons should still regard as the steady deteriorate with age (Millán-Calenti, 2010).

Findings preceding studies show that old age, being female, poor health, and being alone are the key risk factors connected with functional disability among older adults in China. Even though urban elderly people are more likely to be functional incompetence, the overall functional incompetence risk is high among rural older adults. No matter whether functional incompetence rates remain constant, increase or decline in the future, the sheer number of disabled elderly and the ratio of disabled older adults to

potential caregivers will increase rapidly, particularly in rural areas. Both the quality and quantity of social support considerably influence the development of old-age functional incomptence (Mendes de Leon, 1999; Everard, 2000; Koukouli, 2002). A low incidence of social contact was related to poor or worse physical functioning, since people with strong social relations are more likely to recover from functionl incomptence and to stay alive than those with weak social relationships (Berkman, 2000). As a measure of social support, marital status was found to be another significant factor connected with disability in western countries, with the odds of functional incomptence higher for those who are unmarried. Apart from for marital status, existing studies also recommend some additional measures of social support, such as living with family members and participating in social activities (James, 2011).

Our knowledge on the determinants of functional status vis-àvis health status of Indian elderly is limited. It is necessary to determine the factors that affect the functional competence to promote active and healthy ageing by maintaining independence and reducing disability. However, increased human longevity has been one of the greatest scientific achievements of this century, yet, similar achievements in quality of life in this lengthened period have not been achieved (Ramamurti & Jamuna 2007). In view of the above, the following objectives were framed.

OBJECTIVE

• To determine the contribution of psychological and socio demographic variables to functional competence in a sample of community dwelling elderly.

METHOD

Participants of the study

A sample of 300 community dwelling elderly men and women of rural and urban areas of Rayalaseema region from the age groups of 50-59, 60-69, and 70-79 years were drawn by using a multi-stage random sampling technique. The subjects were identified on the basis of census reports and also by house-tohouse survey. The subjects without chronic illness and those cognitively intact were included in the study. The subjects in the study were individually contacted and tests were administered in one session after taking willingness to participate.

Measures Used.

For the present study, the subtests of disability scale (Ramamurti & Jamuna 1996) were used to assess different facets of functional capability viz., Functional capability (ADL & IADL) performance based capability (PBADL) and selfperception of functional capability (SPFC). The Test-retest reliability for these subtests was 0.88, 0.86, 0.76, and 0.89 respectively. Extent of physical and mental activities of elderly was assessed by physical and mental activity scale (Ramamurti & Jamuna, 1996). The test-retest reliability of this scale was 0.81. Health Practices (HP), in the elderly were assessed by Health behavior scale (Ramamurti & Jamuna, 1996). The test –retest reliability for these scales was 0.85 and 0.81. Social supports scale was used to assess perception of social supports in the elderly. The test -retest reliability for this scale was 0.91. To seek information on relevant sociodemographic characteristics (age, gender, education, family, location, and marital status) of the participant, a Personal Data Form (PDF) was used.

RESULTS AND DISCUSSION

The output of MRA (step-wise) indicate (vide Table - I) that to predict the performance in ADLs and IADLs (physical competence), two variables entered the final regression equation by explaining 60 per cent of the total variance of physical competence in basic ADLs and IADLs. The variables entered in the equation were physical and mental activity by contributing 46 per cent, social supports with an additional contribution of 14 per cent, respectively.

Measures of Dependent variables						
S1. No.	Variables Entered	R ²	Increase in R ²	F		
	Activities of Daily Living and Instrumental					
	Activities of Daily Living (ADL and IADLs)					
1.	Physical and mental activity	.46	.46	145.27		
2.	Social supports	.60	.14	9.54		
	Performance Based Functional Competence					
	(PBFC)					
1.	Physical and mental activity	.045	.045	14.02		
2.	Social supports	.069	.024	11.03		
	Self Perception of Functional Competence					
	(SPFC)					
1.	Physical and mental activity	.164	.164	58.36		
2.	Social supports	.194	.030	35.82		
3.	Health practices	.218	.024	27.43		

The regression equation to predict performance based functional competence in certain basic motor tasks (Table - I) contained two variables viz., physical and mental activity and social supports. Together these variables accounted for 6.9 per cent of variance in the outcome variable, performance based functional competence in some motor tasks. In this total variance, 4.5 percent was contributed by physical and mental activity and 2.4 per cent was contributed by social supports.

The summary of multiple regression analysis for self perception of functional competence (Table - I) shows that to predict self-perception of functional competence, three variables entered the regression equation viz., physical and mental activity (16.4%), social supports (3%) and health practices (2.4%). Together, these variables contributed 21.8 per cent of variance to the total variance of self-perception of functional competence.

The contribution of psychological variables to the functional competence need to draw some more insights from other studies for further research. For eg., from the developmental study by Haga et al., (1997) on 678 elderly people at base line survey and 524 elderly in a follow-up survey carried out for 5 years, aims at showing changes and factors affecting changes in three levels of competence in instrumental self maintenance, intellectual activity and social roles.

Table II: Contribution of Socio-Demographic Variables like Activities of Daily Living (ADL) Instrumental Activities Daily Living (IADL) Performance Based Functional Competence (PBFC) and Self Perception of Functional Competence (SPFC).

Sl. No.	Variables Entered	R ²	Increase in R ²	F		
	Activities of Daily Living (ADL)					
1.	Age	.312	.312	134.92		
2.	Marital status	.336	.024	75.23		
3.	Gender	.345	.009	52.02		
	Instrumental Activities of Daily Living (IADL)					
1.	Age	.389	.389	189.84		
2.	Marital status	.411	.022	103.60		
3.	Living arrangements	.422	.011	72.11		
4.	Spiritual activities	.432	.010	56.00		
	Performance Based Functional Competence (PBFC)					
1.	Age	.379	.379	181.59		
2.	Gender	.393	.014	96.02		
	Self -Perception of Functional Competence (SPFC)					
1.	Marital status	.060	.060	19.07		
2.	Financial status	.075	.015	12.06		
3.	Living arrangement	.087	.012	9.60		

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A cursory glance at the results reported in Table - II indicates that a set of seven variables which were included in the final equation together explained 34.5 percent of total variance in the dependent variable. Out of seven variables only age, marital status and gender were found to be significant predictors. The first variable being the age of an individual accounted for 31.2 percent of the total variance in physical competence. The addition of second variable viz., marital status increased 2.4 per cent of variance. Thus, the multiple R² with 2 percent of the total variance in physical competence indicating that it is (marital status) one of the potent predictors of functional competence in daily tasks. The next variable, gender accounts for an addition of less than one percent of explained variance which shows that the gender (male , female) has a low, small contribution to physical competence. The results reported in Table - II indicates that a set of four variables which were included in the final equation together explained 43.2 per cent of the total variance in the dependent variable, physical competence in instrumental activities of daily living (IADLs). These variables were age, marital status, living arrangements and spiritual activities viz., age accounted for 38.9 per cent of the total variance in IADL physical competence, the addition of marital status a second variable with 2.2 per cent in physical competence indicating that it is one of the minor predictors of IADL competence, while marital status has a small contribution to physical competence (IADL). The next variable, living arrangements which were entered into the regression equation made a minimal addition of 1.1 per cent. The last variable spiritual activities also made a minimum addition. The increase in the multiple R² and percentage of explained variance was around 1 per cent indicating that spiritual activities are likely to influence functional competence in IADLs, to a small extent. Thus from the above, it may be concluded that the extent of experience of IADL functional competence is determined significantly by age, marital status, living arrangements and spiritual activities.

The contribution of demographic variables to the other measures of physical competence viz., performance based functional competence (PBFC) (vide Table - II), indicates that two variables get significance in the regression equation and together accounted for 39 per cent of the variance (R^2 =.39) in the dependent variable, PBFC. The variables entered were, age 37.9 per cent and gender 1.4 per cent. From these results we may conclude that age is the key determinant of performance based functional competence followed by gender of an individual to a small extent. The results reported in the sub heading self-perception of functional competence (Table - II) explained the contribution of set demographic variables to the dependent variable, functional competence. Among the variables included to predict this sub measure of functional competence viz., self perception of functional competence, variables entered into the regression equation were marital status, financial status and living arrangements. Together they account only 8.7 per cent of variance in the dependent variable, self-perception of functional competence. The first variable viz., marital status accounts for 6 per cent to the variance in the dependent variable. The addition of second variable viz., financial status significantly increased the multiple R^2 and added 1.5 per cent to the explained variance. The variable, type of living arrangements accounts for an additional 1.2 per cent, indicating that it is one of the less significant contributors to self-perception of functional competence.

It is clear from some researches that non-physical factors (individual and environmental) affect trajectories of disability (Verbrugge & Jette, 1994). Lower socioeconomic status is associated with functional decline (Guralnik & Kalpan, 1989; Hubert et al., 1993; Kalplan et al., 1993; Lammi et al., 1989; Maddox & Clark, 1992). Life long poor health practices and limited access to medical care may be responsible for the poorer functional outcomes in older persons with low incomes and education. Feelings of uselessness and non-

participation in social activities were shown to be associated with functional decline (Grand et al., 1988). Manton et al., (1994) showed that both physiological factors and functional ability Showed lower declines than expected based on mortality rates in those who survived beyond age 95. Together, these findings illustrate the heterogeneity of trajectories of disability.In understanding the level of functional competence; one has to understand the determinants of a sense of mastery. The association between predictor variables viz., socio-demographic variables, health conditions, social resources, and religiosity and feelings of mastery in community-dwelling African American and white older adults (Mortimer et al., 2003) indicated that African American older adults had a lower sense of mastery than white older adults. Significant modification by race was found in the association of age, self-rated health, and religiosity with feelings of mastery. The negative effects of old age and poor health on feelings of mastery were stronger in the white sample, whereas the positive effect of religiosity on feelings of mastery was observed only in the African American sample. Although African American older adults had a lower sense of mastery than whites, their feelings of mastery were less likely to be diminished by old age and poor health and more likely to be enhanced by religiosity. Age, sex, and residential status, for instance, are associated with basic personal activities, people in advanced old age, women and nursing home residents have lower functional performance levels in terms of ADLS and IADLS than that of their counterparts (Guralnik & Simonsick, 1993; Verbrugge, 1989). Education, income, and marital status are expected to have their influence (e.g., work, leisure, and social activity engagement) on the performance of basic activities of daily life (Altergott, 1990; Clark, 1995). The present study results are similar to the above Observations, in some aspects of functional competence.

CONCLUSION

In the above analysis, the more effective contributions made were physical and mental activity, social supports, age, marital staus, finacial staus and gender which accounted significantly for the dependent variable measures of functional competence. This underscores the importance of physical and mental activity, social supports, age, marital staus, finacial staus and gender in contributing to the variance in the experience of functional competence. This, highlights the fact that by manipulating these critical variables one can enhance better quality of life in the elderly through functional competence in daily life.

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