Relationship between Functional status (ADL and IADL) and WHODAS II Disability among older Malaysians

Tengku Aizan H., M.Ardjomand Hessabi, Siti Suhailah, A & Verbrugge, L.

INSTITUTE OF GERONTOLOGY, UPM

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Objective

- Study the relationship between Functional status as measured by (ADL & IADL) the Disability which was measured by WHODAS II

Data Source

- **Mental Health and Quality of Life survey 2005**

  - Community living older persons aged 60 years and over.

  - 13 states, nationwide representation, proportionately distributed across states

  - 2980 respondents interviewed, 88% response rate.

Variables

- Functional Status

- combination of Barthel Index Activities of Daily Living (ADL), <u>7 out of 10 </u>items

- and Lawton & Brody Instrumental Activities of Daily Living Scale (IADL), <u>6 out of 8 </u>items

Variables

- **WHODAS 11**

- 7 items of WHODAS II 12-Item Interviewer Administered Version

- Recoded into a dichotomous variable; Without Disability (<u>mild and none</u>) and With Disability (<u>moderate, severe and complete</u>).

WHODAS items in survey

Items WHODAS II (12 items version)	Domains	Disability (%)
S1		19.6
S7		26.8
S1 & S7	**Getting Around**	**23.2**
S3		17.8
S6		11.4
S3 & S6	**Understanding and Communicating**	**14.6**
S4	**Participation in Society**	**16.2**
S10		7.9
S11		8.7
S10 & S11	**Getting along with people**	**8.3**

Functional status of the respondents

ADL	No problem At all (%)	Have problem but still do it (%)	Problem and Need help (%)
Bathing*	94.2	3.6	**2.2**
Dressing*	95	3.4	1.6
Transfer*	91.8	5.8	**2.4**
Mobility*	90.6	7.3	2
Stairs*	87.1	9.2	**3.7**
Grooming*	95	3.4	1.7
Feeding*	95.9	2.7	1.3
IADL	No problem At all (%)	Have problem but still do it (%)	Problem and Need help (%)
Shopping*	85.2	5.7	**9**
Food Preparation*	87.9	5.6	6.5
Housekeeping*	89.1	5.5	5.4
Laundry*	86.7	6.2	**7**
Responsibility for own medications*	81.2	7.9	**10.9**
Ability to Handle Finances*	89.2	5	5.9

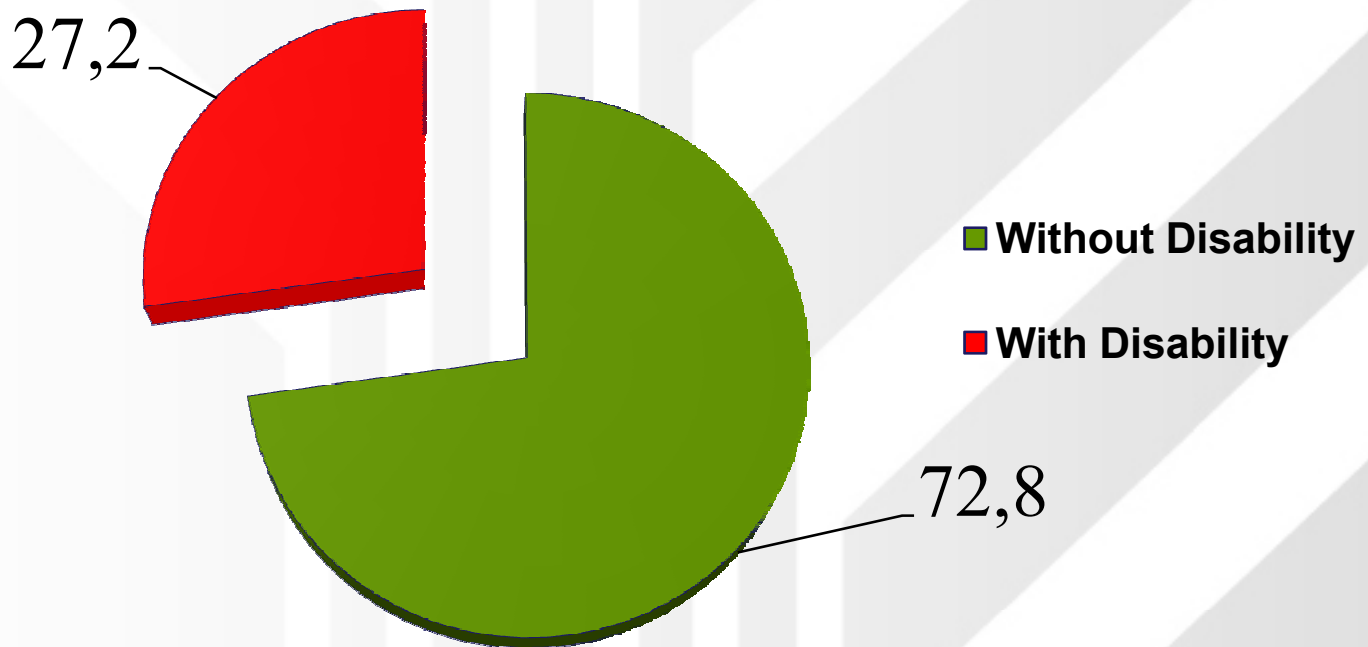*Pearson's correlation tests are significant at the 0.05 level with age and sex

WHODAS II Scores according ICF(%)
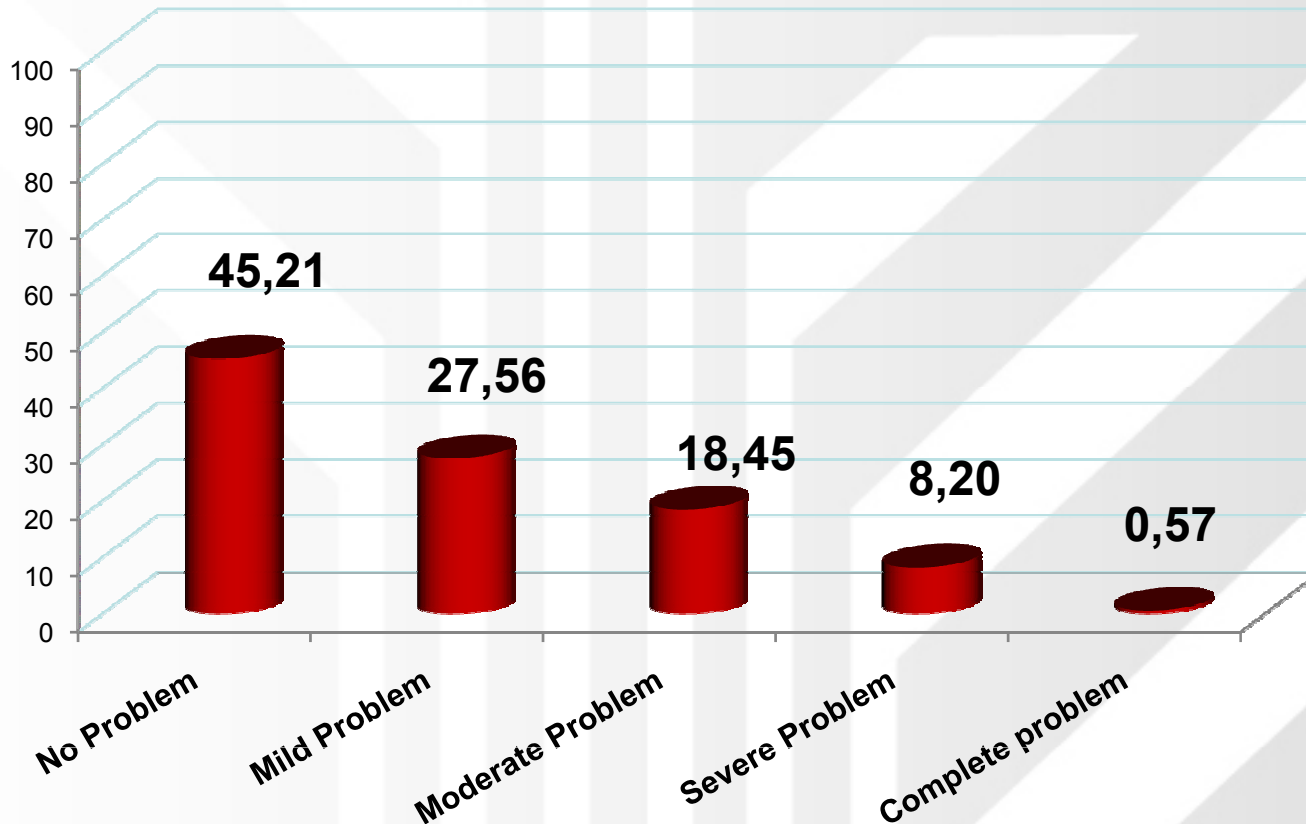
The mean scores of the respondents were 15.5(SD ± 20.20)

Percentage of PWD

27,2

72,8

- Without Disability
- With Disability

Moderate to Complete = With Disability
None to Mild = Without Disability

PWD= People With Disability

Relationship between ADL & IADL components and WHODAS disability

ADL	Spearman Correlation
Bathing	0.33
Dressing	0.31
Transfer	0.39
Mobility	0.39
Stairs	0.45*
Grooming	0.32
Feeding	0.28
IADL	**Spearman Correlation**
Shopping	0.50*
Food Preparation	0.45*
Housekeeping	0.44*
Laundry	0.46*
Responsibility for own medications	0.41*
Ability to Handle Finances	0.44*

* Strong positive correlations with disability

Binary logistic regression models between ADL components and WHODAS

Variables	B	S.E.	df	Sig.	OR [EXP(B)]	95.0% C.I. for EXP(B)	
						Lower	Uppe
Bathing	0.93	0.352	1	0.008	2.526	1.267	5.030
Dressing	0.70	0.473	1	0.137	2.022	0.799	5.112
Feeding	-1.89	0.600	1	0.002	0.151	0.047	0.489
Transfer	0.27	0.306	1	0.385	1.305	0.716	2.377
Stairs	1.94	0.208	1	0.000	6.977	4.636	10.49
Mobility	0.26	0.276	1	0.356	1.290	0.751	2.216
Grooming	0.73	0.439	1	0.094	2.084	0.881	4.928

he **ADL model** only explained approximately 27% of the variance in disability,
osmer and Lemeshow Test, chi squares was significant (9.32, df=1, p=0.002)

Binary logistic regression models between IADL components and WHODAS

Variables	B	S.E.	df	Sig.	OR [EXP(B)]	95.0% C.I.for EXP(B)	
						Lower	Upper
Food Preparation	0.361	0.191	1	0.058	1.435	0.987	2.087
Shopping	0.965	0.146	1	0.000	2.624	1.969	3.497
Ability to Handle Finances	0.516	0.189	1	0.006	1.675	1.156	2.427
Housekeeping	-0.033	0.229	1	0.886	0.968	0.618	1.516
Laundry	0.411	0.194	1	0.034	1.508	1.031	2.206
Responsibility for own medications	0.180	0.107	1	0.094	1.197	0.970	1.477

The **IADL model** only explained approximately 31% of the variance in disability, Hosmer and Lemeshow Test, chi squares was significant (10.94, df=2, p=0.004)

Results

The odds of being disabled are higher

- **climbing stairs (OR= 6.977)**

- **bathing (OR= 2.526)**

- **shopping (OR= 2.624)**

- **laundry (OR= 1.508)**

- **financial management (OR= 1.675)**

- **Activities that involve movement and mobility.**

- **For FMgt, not related to movement and mobility but related to cognitive ability**

Conclusion

❖ **Prevalence of disability is less than 30%. Similar with other studies.**

❖ **Disability in older people due to mobility as it shown in the models. But in IADL the financial management item fitted the model, even though; it is not related to mobility.**

❖ **Exist relationship between WHODAS II and functional status.**

Conclusion

❖ Limitation in interpretation as only limited items of WHODAS were utilised

❖ Further analysis is needed to clarify the relationship controlling the socio-demographic and economic background of the respondents