

Report **On** **Cognitive testing of the WG questions in Egypt.**

1. Introduction

The demand for accurate information for evidenced-based decision making for persons with disability at all levels is in the increase. The public sector, the private sector, research institutions and the civil society alike require complete, reliable and credible information on disability so as to effectively plan and implement their programs. The Central Agency For Public Mobilization and Statistics (CAPMAS) is charged with responsibility to fulfill this mandate of providing accurate, reliable and timely data for planning, implementation and Monitoring and Evaluation (M&E), including data on persons with disability.

Traditionally, Egyptian society ascribed simple work, such as cloth folding, threading beads and wool spinning to handicapped persons. Al- Azhar University was the first to rehabilitate the visionary handicapped persons and to educate them as motives for Islam. Early in the nineteenth century Egyptian citizens started to form benevolent assemblies serving the handicapped. In 1939 the Ministry of Social Affairs was established, with the handicapped persons through providing their essential requirements and rehabilitating them to be productive persons in the society. In 1953 the Ministry of social Affairs established the first handicapped rehabilitation center. Now, there are many center distributed in all the Egyptian governorates.

Various Government planning and policy strategy documents have identified persons with disabilities as one of the vulnerable segments of the population that requires special planning in view of their special needs, and hence credible data. Unfortunately, much of the required data for persons with disabilities are either not adequate or simply are lacking.

The cognitive interviews will provide an excellent opportunity to survey planners, policy makers and researchers alike to get a better understanding of their relevance and application under different socio-economic and cultural contexts.

Measurement of disability is difficult and in recognition of this constrain, it is important that before including any questions on disability in any survey or census, it is imperative that a good understanding of their relevance, application,

limitation and the reliability of the interpretable estimates are established, and particularly how they are interpreted by respondents. The WG disability questions aims at addressing these issues.

The main objectives of the cognitive interviews are to test the consistency of the questions, their interpretation by respondents and application under different contexts.

2. Implementation of the Cognitive testing

2.1 Translation of the Cognitive questionnaire.

The questionnaire of cognitive testing was translated to Arabic. The translated questionnaire was reviewed by a demographer person. The questions on health condition were checked by a person working in the field of health. The comments from the demographer and healthy checkers were reviewed and agreed on the final version of questionnaire. 100 copies of the questionnaire were typed.

After transferring income categories from Euro to national currency (Egyptian pound), It is noticed that the suggested categories are very high compared to the standard of living in Egypt especially the lowest one. So we used the categories that are relevant to our standard of living after reviewing the latest Income and Expenditure Survey which conducted in Egypt during 2004/2005.

2.2 Translation of the Questions Specifications for the Cognitive Test Protocol

A manual of interviewer's instructions based on the Specifications for the Cognitive Test Protocol was prepared in Arabic and typed.

2.3 Sample design

There is no available frame for the Egyptian disabled persons in CAPMAS. So to have enough cases of disabled persons, we visited The Social Rehabilitation Department in the Ministry of Social Affairs and we explained the aim of our work and we ask for a sample of disabled persons in three governorates with different kinds of disabilities and in different socio economic status (age, sex, education, residence, income) from the Rehabilitation Centers. The manager of The Social Rehabilitation Department has been agreed and suggested the six following centers:

Centers	Governorate	Kind of disability
1- Hospital day association	Cairo	Mobility
2- Light and hope organization for blind female caring	Cairo	vision
3-Ideal center for blind Male caring	Cairo	vision
4- Egyptian Association for deaf and dumb disability caring	Cairo	Hearing & Speaking
5- Multi- disability association	Giza	Multi- disabilities
6- The Social Rehabilitation association for disabled persons.	Kalyuobia	All kinds of Disabilities

Four persons visited the six centers and collect a frame for about 100 persons with different kinds of disabilities and soico economic status. The frame included the following information: name, place of residence, age, education, standard of living, Kind of disability and the degree of difficulty.

2.4 Interviewers Selection and Training:

Special attention was given to the selection and training of the test personnel. A total of 7 interviewers, who work at The Population Studies and Research Center in CAPMAS, and have long experience in population and health surveys (some of them have master degree or diploma in demography) were selected. They were trained for 3 days before the beginning of field operations.

The training course of interviewers consisted of classroom lectures on the objectives and organization of the test, detailed explanation of questionnaire, principle of interviewing and the art of asking questions, demonstration interviews, role playing interviews and practice interviews.

2.5 Data collection

Fieldwork was undertaken by seven female interviewers. Each interviewer was completed 10 questionnaires. 48 disabled persons with different kind of disability (vision, hearing. mobility and mental) and 22 persons without disability was interviewed in their place of residence. In addition, the data of proxy person for the 70 persons was completed. 27 disabled persons were selected from the prepared frame and 21 disabled persons were selected from normal families. The interviewed persons without disability were selected randomly from the same areas of disabled persons. Each interviewer was asked to prepare a report on her work to present the 10 interviewed cases including the description of how respondents felt about the questions, and how

easy or difficult the administration was. These reports will take into consideration during the preparing of the final report.

2.6 Data Editing and Translation of the opened questions

- Two persons from the team of data collection reviewed the questionnaires to ensure the completeness and follow the instructions of skips.
- Two persons translated the opened questions from Arabic to English.

2.7 Data Entry

Data entry of the 70 questionnaires started after the completing of data editing and the translation of the opened questions by using the prepared excel sheet. Three persons involved in the process of data entry.

We added seven variables at the end of the questionnaire to present information on the selected sample. They are:

Variables	Codes& explanation
Residence	1=Urban 2-Rural
Disable Y/N	1=Yes 2=No
Kind- disability	Kind- disability (in Arabic)
Kind- disability-Eng	Kind- disability (in English)
Rehabilitation Y/N	Selection of disabled person= 1- From Rehabilitation Center 2- Other
Duration/self	Duration of interview/Self
Duration/proxy	Duration of interview/Proxy

We inserted some columns for questions with allows more than one answer to the excel sheet. They are:

COGNITIVE SELF-REPORT QUESTION 5

CSCAUSE

COGNITIVE PROXY-REPORT QUESTION 5

CPCAUSE

GENERAL HEALTH QUESTION 2 INTERVIEWER CODE

GSWHYCODE

GENERAL HEALTH SELF-REPORT QUESTION 3

GSCOND

GENERAL HEALTH QUESTION 2
INTERVIEWER CODE1

GPWHYCODE

GENERAL HEALTH PROXY-REPORT
QUESTION 3

GPCOND1

INTERVIEWER QUESTION 4

IIMPAIRO

3. Background characteristics of respondents

3.1 Kinds of disability in the sample

The following table presents the cases of the sample of disabled persons who were interviewed.

Kinds of disability	Number of cases
<u>Visual</u>	
Blind	8
Partial	6
Cognitive	2
<u>Mobility</u>	
Poliomyelitis	5
Others	14
<u>Multiple</u>	
Hearing & speaking	1
Visual & Hearing	1
cognitive & speaking	1
Visual & cognitive	2
Visual & Mobility	2
Mobility, cognitive & speaking	1
Mobility, cognitive & Hearing	2
Mobility, cognitive & Visual	2
Visual & Hearing & Mobility	1
Total	48

3.2 Demographic characteristics of the respondents:

Table (3.1) displays the distribution of the selected sample by sex and place of residence. Data showed that the total sample size is 70 persons where 48 persons with disability and 22 persons without disability. With regard to place of residence of the respondents, data of the same table showed that 42 persons of them (28 with disability and 14 without disability) are residing in urban areas and 28 persons (20 with disability and 8 without) are residing in rural areas. It is also worth to note that 38 persons of the selected sample are females (24 with disability and 14 without) and 32 of them are males (24 with disability and 8 without).

Table 3.1: Distribution of the selected sample by sex and place of residence

Sex	Urban			Rural			Total		
	With disability	Without disability	Total	With disability	Without disability	Total	With disability	Without disability	Total
Females	14	10	24	10	4	14	24	14	38
Males	14	4	18	10	4	14	24	8	32
Total	28	14	42	20	8	28	48	22	70

Considering age characteristics of the selected sample, data of table (3.2) showed that more than half of the sample (54.3%) aged less than 40 years and 45.7% aged 40 years and over. Considering the disability, data showed that about 58% of disabled persons in the sample aged less than 40 years and about 42% aged 40 years or older. About 46% of persons without disability aged less than 40 years old.

Considering educational background of the sample, data showed that more than one third of disable persons in the sample (about 38%) spent from 1-6 years in school (primary education), about 23% never went to school and about 21% spent 13 years or more (secondary education or over) in education. For sampled persons without disability, about one third of them (32%) spent from 10-12 years in education while 27% of them never went school.

With regard to main work status of the sampled persons, data of the same table showed that about third of disable sampled persons are paid workers and about 17% of them are keeping house or homemakers. For sampled persons without disability, about 41% of them are paid workers and about 32% are keeping house or homemaker.

Examining marital status of the sampled persons, data showed that about half of sampled disabled persons (48%) never married. For sampled persons without disability, about 68% of them are married and about 18% never married.

For the Household income of the selected sample, data showed that more than half of the disabled sampled persons are in households with monthly income less than 500 L.E while this percent is about 41% among sampled persons without disability.

Table 3.2: Percentage distribution of the selected sample by place of residence

Background Characteristics	Urban			Rural			Total		
	With disability	Without disability	Total	With disability	Without disability	Total	With disability	Without disability	Total
Sex									
Females	50.0	71.4	57.1	50.0	50.0	50.0	50.0	63.6	54.3
Males	50.0	28.6	42.9	50.0	50.0	50.0	50.0	36.4	45.7
Age groups									
<20	28.6	7.1	21.4	5.0	12.5	7.1	18.8	9.1	15.7
20-29	17.9	28.6	21.4	35.0	-	25.0	25.0	18.2	22.9
30-39	17.9	7.1	14.3	10.0	37.5	17.9	14.6	18.2	15.7
40-49	14.3	35.7	21.4	5.0	25.0	10.7	10.4	31.8	17.1
50-59	7.1	7.1	7.1	25.0	12.5	21.4	14.6	9.1	12.9
60-69	7.1	14.3	9.5	15.0	12.5	14.3	10.4	13.6	11.4
70+	7.1	-	4.8	5.0	-	3.6	6.3	-	4.3
Years* spend in studying in school, college or university									
0	17.9	21.4	19.0	30.0	37.5	32.1	22.9	27.3	24.3
1-6	32.1	7.1	23.8	45.0	25.0	39.3	37.5	13.6	30.0
7-9	10.7	7.1	9.5	5.0	-	3.6	8.3	4.5	7.1
10-12	10.7	35.7	19.0	10.0	25.0	14.3	10.4	31.8	17.1
13+	28.6	28.6	28.6	10.0	12.5	10.7	20.8	22.7	21.4
Main work status									
-Paid work	45.4	42.9	45.2	15.0	37.5	21.4	33.3	40.9	35.7
-Self employed, such as own your business or farming	-	-	-	15.0	12.5	14.3	6.3	4.5	5.7
Non paid work, such as volunteer or charity	3.6	-	2.4	5.0	12.5	7.1	4.2	4.5	4.3
-Student	3.6	21.4	9.5	5.0	-	3.6	4.2	13.6	7.1
-Keeping house/ Homemaker	7.1	35.7	16.7	30.0	25.0	28.6	16.7	31.8	21.4
-Retired	7.1	-	4.8	5.0	-	3.6	6.3	-	4.3
-Unemployed (health reasons)	3.6	-	2.4	15.0	-	10.7	8.3	-	5.7
-Unemployed (other reasons)	10.7	-	7.1	10.0	12.5	10.7	10.4	4.5	8.6
Others	17.9	-	11.9	-	-	-	10.4	-	7.1
Marital Status									
Married	32.1	64.3	42.9	40.0	75.0	50.0	35.4	68.2	45.7
Widowed	7.1	7.1	7.1	10.0	12.5	10.7	8.3	9.1	8.6
Divorced	7.1	7.1	7.1	10.0	-	7.1	8.3	4.5	7.1
Separated	-	-	-	-	-	-	-	-	-
Never Married	53.6	21.4	42.9	40.0	12.5	32.1	47.9	18.2	38.6

* 1-6 years is equivalent to primary stage, 7-9 years is equivalent to preparatory stage, 10-12 years is equivalent to secondary stage and 13 year + years is equivalent to above secondary & higher education

(Continue)Table 3.2: Percentage distribution of the selected sample by place of residence

Background Characteristics	Urban			Rural			Total		
	With disability	Without disability	Total	With disability	Without disability	Total	With disability	Without disability	Total
<u>Household income (Egyptian Pound in month)</u>									
<100	3.6	-	2.4	-	-	-	2.1	-	1.4
100-199	10.7	-	7.1	35.0	12.5	28.6	20.8	4.5	15.7
-	10.7	7.1	9.5	-	12.5	3.6	6.3	9.1	7.1
-	10.7	7.1	9.5	15.0	12.5	14.3	12.5	9.1	11.4
-	17.9	21.4	19.0	10.0	12.5	10.7	14.6	18.2	15.7
-	10.7	-	7.1	25.0	25.0	25.0	16.7	9.1	14.3
-	10.7	21.4	14.3	-	12.5	3.6	6.3	18.2	10.0
-	10.7	14.3	11.9	5.0	12.5	7.1	8.3	13.6	10.0
-	3.6	14.3	7.1	10.0	-	7.1	6.3	9.1	7.1
-	10.7	14.3	11.9	-	-	-	6.3	9.1	7.1
>	-	-	-	-	-	-	-	-	-
Total	100	100	100	100	100	100	100	100	100

Note: 1\$=5.7 (Egyptian Pound)

4. Disability prevalence

Positive responses and prevalence

For ease of making statistical comparisons, it will be useful to transform the responses to the core questions from categorical variables to binary variables. In order not to lose the richness of the responses, the analysis done using different definitions of a positive response, D1, D2, D3, such that:

D1 = 1 if response is some difficulty, a lot of difficulty, or can't do at all,
else =0

D2 = 1 if response is a lot of difficulty or can't do at all, else =0

D3 = 1 if response is can't do at all, else=0

Clearly, D1 is the broadest definition of a disability and D3 is the most limited.

Overall disability prevalence can be measured many ways, but four are proposed:

P1 = 1 if at least one domain has D1=1, else =0

P2 = 1 if at least one domain has D2=1, else =0

P3 = 1 if at least one domain has D3=1, else =0

PM = 1 if more than one domain has D1=1; else =0 (M stands for multiple domains)

Using these measures the core questions for the self persons and the proxy persons yields a matrix of functioning for the six domains and presented in table (4.1) for self persons and in table (4.2) for proxy persons.

Similar to the core questions, the presence of disability needs to be coded for the extended questions. Within each domain, define the following variables (with ED for extended disability measure):

ED1 =1 if at least one extended question in a given domain has a response of some difficulty, a lot of difficulty, or can't do at all, else =0

ED2 =1 if at least one extended question in a given domain has a response of a lot of difficulty, or can't do at all, else =0

ED3 =1 if at least one extended question in a given domain has a response of can't do at all; else =0

The Prevalence estimates for the extended questions are presented in table (4.3) for self persons and in table (4.4) for proxy persons.

Table (4.1) shows that the overall disability prevalence (if at least one domain has D1=1) is 91.4%, it decreased to 60% in case of at least one domain has D2=1 and to 20% (if at least one domain has D3=1). While the multiple disability prevalence (if more than one domain has D1=1) is reached 77.2% for the total sample. In addition the same table presented the disability prevalence for each domain and three levels of difficulties D1, D2 and D3. In case of interviewing the persons themselves, the highest disability prevalence in the selected sample is for the lower mobility disability (D1=72.9%) followed by vision and cognitive disability (D1 about 55%). The lowest disability prevalence is for the hearing and communication disability (D1 =17%).

- Comparing the disability prevalence, either the overall disability prevalence or specific disability prevalence, it is noticed that the disability prevalence is somewhat higher for the persons themselves compared to that of the proxy persons (Table 4.2).

- with regard to the disability prevalence for some of the extended questions included in the questionnaire compared to the disability prevalence in the core questions, it is clear from the data of tables (4.3, 4.4) that:-

The persons themselves:

-For disability of degree (D1): disability prevalence increase in the case of extended questions for hearing disability (especially hearing in a crowded room) and communication disability compared to the core question.

-For disability of degree (D2): disability prevalence increased in some of the extended questions for vision, hearing (in a crowded room) cognitive, lower mobility and communication disability compared to the core question.

-For disability of degree (D3): disability prevalence increased in some of the extended questions for vision, cognitive, lower mobility disability compared to the core question.

The proxy persons:

For disability of degree (D1) disability prevalence increased in some of the extended questions for vision, hearing (in a crowded room), lower mobility and communication disability compared to the core question.

For disability of degree (D2) disability prevalence increased in some of the extended questions for vision, hearing (in a crowded room), cognitive and communication disability compared to the core question.

For disability of degree (D3): disability prevalence increased in some of the extended questions for vision, hearing, cognitive, lower mobility and communication disability compared to the core question.

Table 4.1: Disability Prevalence - SELF-REPORT- Core Domain

Core Domain	D1	D2	D3
Vision			
Hearing	17.1	5.7	1.4
Cognitive	54.3	8.6	0.0
Lower Mobility	72.9	40.0	10.0
Selfcare	28.6	12.9	2.9
Communication	17.1	0.0	0.0
Overall disability prevalence	91.4 (P1)	60.0 (P2)	20.0 (P3)
Multiple disability prevalence (PM)	77.2	--	--

Table 4.2: Disability Prevalence - Proxy -REPORT- Core Domain

Core Domain	D1	D2	D3
Vision	44.3	28.6	10.0
Hearing	12.9	2.9	1.4
Cognitive	40.0	8.6	0
Lower Mobility	65.7	48.6	12.9
Selfcare	32.9	11.4	1.4
Communication	14.3	1.4	1.4
Overall disability prevalence	85.7 (P1)	67.1 (P2)	21.4 (P3)
Multiple disability prevalence (PM)	67.2	--	--

Table 4.2: Disability Prevalence - SELF-REPORT- Extended Domain

Extended Domain	ED1	ED2	ED3
<u>Vision</u>	*	*	*
[Without your glasses], Do you have difficulty in seeing the print in a map, newspaper or book?	51.4	37.1	18.6
[Without your glasses], Do you have difficulty in seeing and recognizing a person you know from 7 meters (20 feet) away?	40.0	31.4	18.6
[With your glasses] ¹ , Do you have difficulty... Seeing the print in a map, newspaper or book?	38.6	25.7	14.3
Seeing and recognizing a person you know from 7 meters (20 feet)	35.7	25.7	17.1
<u>Hearing</u>	<i>17.1*</i>	<i>5.7*</i>	<i>1.4*</i>
[Without your hearing aid,] Do you have difficulty hearing what is said in a conversation with one other person... In a crowded room?	30.0	8.6	1.4
In a quiet room?	5.7	1.4	1.4
(When wearing your hearing aid) ² , Do you have difficulty hearing what is said in a conversation with one other person... In a crowded room?	30.0	8.6	1.4
(When wearing your hearing aid) ² , Do you have difficulty hearing what is said in a conversation with one other person... In a quiet room?	5.7	1.4	1.4
<u>Cognitive</u>	<i>54.3</i>	<i>8.6</i>	<i>0.0</i>
Do you have difficulty concentrating on doing something for ten minutes?	17.1	7.1	4.3
Do you have difficulty learning a new task, for example, learning how to get to a new place?	20.0	8.6	2.9
Do you have difficulty finding solutions to problems in day to day life?	32.9	11.4	0
<u>Lower Mobility</u>	<i>72.9*</i>	<i>40.0*</i>	<i>10.0*</i>
Do you have difficulty moving around inside your home?	32.9	8.6	2.9
Do you have difficulty going outside of your home?	58.6	31.4	7.1
Do you have difficulty walking a long distance such as a kilometer (or a mile)?	60.0	45.7	17.1
<u>Selfcare</u>	<i>28.6*</i>	<i>12.9*</i>	<i>2.9*</i>
Do you have difficulty using your hands and fingers, such as picking up small objects or opening or closing containers?	27.1	11.4	5.7
<u>Communication</u>	<i>17.1*</i>	<i>0.0*</i>	<i>0.0*</i>
Do you have difficulty in generally understanding what people say?	11.4	2.9	0
Do you have difficulty in starting and maintaining a conversation?	21.4	2.9	0

- For Core Domain .

- (1) For all the sample with take into consideration people who wear glasses all of the time, or for certain activities
- (2) For all the sample with take into consideration people wear a hearing aid all of the time, only for certain activities, or none of the time?

Table 4.4: Disability Prevalence -PROXY REPORT- Extended Domain

Extended Domain	ED1	ED2	ED3
<u>Vision</u>	44.3*	28.6*	10.0*
[Without his/her glasses], Does [Name] have difficulty in seeing the print in a map, newspaper or book?	51.4	38.6	22.9
[Without his/her glasses], Does [Name] have difficulty in seeing and recognizing a person you know from 7 meters (20 feet) away?	38.6	30.0	20.0
(With his glasses) ¹ , Does [Name] have difficulty... Seeing the print in a map, newspaper or book?	37.1	24.3	15.7
(With his glasses) ¹ , Does [Name] have difficulty... <u>Seeing and recognizing a person</u> he/she knows from 7 meters (20 feet) away?	32.9	24.3	17.1
<u>Hearing</u>	12.9*	2.9*	1.4*
When wearing his/her hearing aid, Does [Name] have difficulty hearing what is said in a conversation with another person... In a crowded room?	22.9	4.3	1.4
In a quiet room?	2.9	1.4	1.4
(When wearing his/her hearing aid) ² , Does [Name] have difficulty hearing what is said in a conversation with another person... In a crowded room?	22.9	2.9	1.4
(When wearing his/her hearing aid) ² , Does [Name] have difficulty hearing what is said in a conversation with another person... In a quiet room?	1.4	1.4	1.4
<u>Cognitive</u>	40.0	8.6	0
Does [Name] have difficulty concentrating on doing something for ten minutes?	12.9	5.7	2.9
Does [Name] have difficulty learning a new task, for example, learning how to get to a new place?	20.0	10.0	5.7
Does [Name] have difficulty finding solutions to problems in day to day life?	32.9	5.7	1.4
<u>Lower Mobility</u>	65.7	48.6	12.9
Does [Name] have difficulty moving around inside his/her home?	27.1	14.3	4.3
Does [Name] have difficulty going outside of his/her home?	58.6	35.7	14.3
Does [NAME] have difficulty walking a long distance such as a kilometer (or a mile)?	67.1	45.6	22.9
<u>Selfcare</u>	32.9	11.4	1.4
Does [Name] have difficulty <u>using your hands and fingers</u> , such as picking up small objects or opening or closing containers?	27.1	8.6	2.9
<u>Communication</u>	14.3	1.4	1.4
Does [Name] have difficulty in generally understanding what people say?	8.6	4.3	1.4
Does [Name] have difficulty in starting and maintaining a conversation?	17.1	2.9	1.4

• For Core Domain .

(1) For all the sample with take into consideration people who wear glasses all of the time, or for certain activities.

(2) For all the sample with take into consideration people who wear a hearing aid all of the time or only for certain activities, or none of the time.

5. Correlation Analysis

The question remains as to the relationship between D1, D2, and D3 for the core questions and ED1, ED2, and ED3 for the extended questions. Both sets of questions are asked for each respondent, after which we can construct the following correlation matrix for each domain, where each cell is the correlation coefficient of the variables in the corresponding row and column. For the purposes of this table, D0 and ED0 have been added, where

D0 = 1 if there are no reported difficulties; else=0

ED0 = 1 if there are no reported difficulties in any of the ED questions; else=0

In order to not “contaminate” the results of the WG census questions, the six questions were asked prior to the extended questions. This is because respondents’ interpretation of the questions may change once they are prompted with the more detailed questions, which will not be included in a census.

Using the correlation coefficients, it is straightforward to test if there are statistically significant differences between the D and ED measures. If those differences are statistically significant then the measures are not equivalent. The following comparisons between measures will be made for each of the six core domains:

D0 vs. ED0

D1 vs. ED1

D2 vs. ED2

D3 vs. ED3

The following tables from (5.1 to 5.12) present the correlation coefficients for the core questions and extended questions.

Vision disability:

The correlation coefficient for (D, ED) in case of the persons themselves or the proxy persons ranged between 0.6-0.8 with all levels of disability. It indicates that the core question is significant in the case of vision disability.

Hearing disability:

-The correlation coefficient for (D, ED) in case of the persons themselves with the difficulty degree of (D1, D2) ranged between 0.5-0.6 and reached to 1 with the difficulty degree of (D3).

-In case of the proxy persons, it is noticed that the correlation coefficient increase with the increase in the degree of difficulty and it decreased to less than 0.5 at the difficulty degree of (D1) and no difficulty (D0) when asking about hearing in a quiet room.

Cognitive disability:

Correlation coefficient for (D, ED) decreased to less than 0.5 for persons themselves and the proxy persons except one case with difficulty degree of (D2) in the relation of core question with question (11) which indicate that there are statistically significant differences between D and ED measures in case of cognitive disability.

Lower mobility disability:

For the persons themselves and the proxy ones, it is noticed that in general, there is an increase in the correlation coefficient for (D, ED) in the different difficulty degrees as the distance of walking increased from inside to outside home and walking for one kilometer.

Also, it is also noticed that correlation coefficient increased for (D, ED) in the case of walking outside home and walking for one kilometer in the case of proxy persons (ranged between 0.5-0.7) compared to the persons themselves in the different difficulty degrees.

Self care disability:

The correlation coefficient between the core question and question number (5) doesn't increase than 0.4 for different difficulty degree in the case of the persons themselves and the proxy persons. It indicates that there is no significant relationship between them.

Communication disability:

The correlation coefficient between the core question and question number (5) ranged between (0.5-0.6) for the difficulty degree (D0, D1, D2) and reached (1) for the difficulty degree (D3) for the proxy person while there is no any significant relationship between the core question and question number (6) for the difficulty degree of (D0, D1), it don't exceed 0.4 in the case of the persons themselves and the proxy ones but the correlation coefficient increased to reach (0.7) for the difficulty degree (D2) and reached (1) for the difficulty degree (D3) for the proxy persons.

**Table : Correlation coefficients for the core questions and the extended questions
VISION—SELF-REPORT**

Extended Questions	(VSVISION) Do you have difficulty seeing, even if wearing glasses?				
		D0	D1	D2	D3
9. [Without your glasses], Do you have difficulty... a. (VSNEAR) Seeing the print in a map, newspaper or book?		D0	D1	D2	D3
	ED0	0.683**			
	ED1		0.630**		
	ED2			0.626**	
	ED3				0.695**
9. [Without your glasses], Do you have difficulty... b. (VSFAR) Seeing and recognizing a person you know from 7 meters (20 feet) away?		D0	D1	D2	D3
	ED0	0.691**			
	ED1		0.669**		
	ED2			0.730**	
	ED3				0.695**
9a. [With your glasses] ¹ , Do you have difficulty... a- (VSNEARG) Seeing the print in a map, newspaper or book? †		D0	D1	D2	D3
	ED0	0.691**			
	ED1		0.647**		
	ED2			0.713**	
	ED3				0.819**
9a. [With your glasses] ¹ , Do you have difficulty... b- (VSFARG) Seeing and recognizing a person you know from 7 meters (20 feet)		D0	D1	D2	D3
	ED0	0.691**			
	ED1		0.665**		
	ED2			0.641**	
	ED3				0.731**

** Correlation is significant at 0.01 level. (2-tailed)

(1) For all the sample with take into consideration people who wear glasses all of the time, or for certain activities

**Table : Correlation coefficients for the core questions and the extended questions
VISION—PROXY REPORT**

Extended Questions	1A. (VPVISION) Does [Name] have difficulty seeing even if wearing glasses?				
		D0	D1	D2	D3
9. [Without his/her glasses], Does [Name] have difficulty... a. (VPNEAR) Seeing the print in a map, newspaper or book?					
	ED0	0.703**			
	ED1		0.636**		
	ED2			0.668**	
	ED3				0.612**
9. [Without his/her glasses], Does [Name] have difficulty... b. (VPFAR) Seeing and recognizing a person you know from 7 meters (20 feet) away?		D0	D1	D2	D3
	ED0	0.739**			
	ED1		0.771**		
	ED2			0.828**	
	ED3				0.667**
9a. (With his glasses) ¹ , Does [Name] have difficulty... a. (VPNEARG) Seeing the print in a map, newspaper or book?		D0	D1	D2	D3
	ED0	0.684**			
	ED1		0.684**		
	ED2			0.600**	
	ED3				0.772**
9a. (With his glasses) ¹ , Does [Name] have difficulty... †b. (VPFARG) Seeing and recognizing a person he/she knows from 7 meters (20 feet) away?		D0	D1	D2	D3
	ED0	0.739**			
	ED1		0.785**		
	ED2			0.674**	
	ED3				0.733**

** Correlation is significant at 0.01 level. (2-tailed)

(1) For all the sample with take into consideration people who wear glasses all of the time,
or for certain activities

**Table : Correlation coefficients for the core questions and the extended questions
HEARING—SELF-REPORT**

Extended Questions	2. (HSHEAR) Do you have difficulty hearing, even if using a hearing aid?				
		D0	D1	D2	D3
9. [Without your hearing aid,] Do you have difficulty hearing what is said in a conversation with one other person... a-(HSCROWD) In a crowded room?		D0	D1	D2	D3
	ED0	0.547**			
	ED1		0.529**		
	ED2			0.584**	
9. [Without your hearing aid,] Do you have difficulty hearing what is said in a conversation with one other person... b-(HSQUIET) In a quiet room?		D0	D1	D2	D3
	ED0	0.581**			
	ED1		0.541**		
	ED2			0.489**	
9a. (When wearing your hearing aid) ¹ , Do you have difficulty hearing what is said in a conversation with one other person... a. (HSCROWDA) In a crowded room?		D0	D1	D2	D3
	ED0	0.547**			
	ED1		0.529**		
	ED2			0.584**	
9a.(When wearing your hearing aid) ¹ , Do you have difficulty hearing what is said in a conversation with one other person b.(HSQUIETA) In a quiet room?)		D0	D1	D2	D3
	ED0	0.581**			
	ED1		0.541**		
	ED2			0.489**	
ED3				1.000**	

** Correlation is significant at 0.01 level. (2-tailed)

(1) For all the sample with take into consideration people wear a hearing aid all of the time, only for certain activities, or none of the time?

**Table : Correlation coefficients for the core questions and the extended questions
HEARING— PROXY –REPORT**

Extended Questions		2a. (HPHEAR) Does [Name] have difficulty hearing, even if using a hearing aid?			
		D0	D1	D2	D3
9. [Without his/her hearing aid,...] Does [Name] have difficulty hearing what is said in a conversation with another person... a. (HPCROWDA) In a crowded room?	ED0	0.579**			
	ED1		0.604**		
	ED2			0.810**	
	ED3				1.000**
b. (HPQUIET) In a quiet room?		D0	D1	D2	D3
	ED0	0.446**			
	ED1		0.446**		
	ED2			0.702**	
9a. (When wearing his/her hearing aid) ¹ , Does [Name] have difficulty hearing what is said in a conversation with another person... a. (HPCROWDA) In a crowded room?		D0	D1	D2	D3
	ED0	0.579**			
	ED1		0.604**		
	ED2			0.485**	
9a. (When wearing his/her hearing aid) ¹ , Does [Name] have difficulty hearing what is said in a conversation with another person b. (HPQUIETA) In a quiet room?		D0	D1	D2	D3
	ED0	0.446**			
	ED1		0.313**		
	ED2			0.702**	
	ED3				1.000**

** Correlation is significant at 0.01 level. (2-tailed)

- (1) For all the sample with take into consideration people wear a hearing aid all of the time, only for certain activities, or none of the time?

**Table : Correlation coefficients for the core questions and the extended questions
COGNITIVE—SELF-REPORT**

Extended Questions		3. (CSCOG) Do you have difficulty remembering or concentrating?			
		D0	D1	D2	D3
9. (CSTEN) Do you have difficulty <u>concentrating</u> on doing something for <u>ten minutes</u> ?	ED0	0.369**			
	ED1		0.341**		
	ED2			0.113	
	ED3				a
10. (CSNEW) Do you have difficulty learning a <u>new task</u> , for example, <u>learning</u> how to get to a new place?	ED0	0.339**			
	ED1		0.315**		
	ED2			0.453**	
	ED3				a
11. (CSSOLUT) Do you have difficulty finding solutions to problems in day to day life?	ED0	0.363**			
	ED1		0.398**		
	ED2			0.532**	
	ED3				a

a. Cannot be computed because at least one of the variables is constant

** Correlation is significant at 0.01 level. (2-tailed)

**Table : Correlation coefficients for the core questions and the extended questions
COGNITIVE—PROXY-REPORT**

Extended Questions		3a. (CPCOG) Does [Name] have difficulty remembering or concentrating?			
		D0	D1	D2	D3
9. (CPTEN) Does [Name] have difficulty concentrating on doing something for <u>ten minutes</u> ?	ED0	0.285*			
	ED1		0.383**		
	ED2			0.384**	
	ED3				a
10. (CPNEW) Does [Name] have difficulty learning a <u>new task</u> , for example, <u>learning</u> how to get to a new place?	ED0	0.218			
	ED1		0.321**		
	ED2			0.408**	
	ED3				a
11. (CPSOLUT) Does [Name] have difficulty finding solutions to problems in day to day life?	ED0	0.226			
	ED1		0.236*		
	ED2			0.854**	
	ED3				a

a. Cannot be computed because at least one of the variables is constant

** Correlation is significant at 0.01 level. (2-tailed)

**Table 5.7: Correlation coefficients for the core questions and the extended questions
LOWER MOBILITY—SELF-REPORT**

Extended Questions		4. (MSWALK) Do you have difficulty walking or climbing steps?			
		D0	D1	D2	D3
8. (MSINSIDE) Do you have difficulty moving around inside your home?	ED0	0.425**			
	ED1		0.427**		
	ED2			0.375**	
	ED3				0.514**
9. (MSOUTSIDE) Do you have difficulty going outside of your home?	ED0	0.474**			
	ED1		0.465**		
	ED2			0.515**	
	ED3				0.647**
10. (MSLONG) Do you have difficulty walking a long distance such as a kilometer (or a mile)?	ED0	0.608**			
	ED1		0.551**		
	ED2			0.480**	
	ED3				0.354**

** Correlation is significant at 0.01 level. (2-tailed)

**Table 5.8: Correlation coefficients for the core questions and the extended questions
LOWER MOBILITY—PROXY-REPORT**

Extended Questions		4a. (MPWALK) Does [Name] have difficulty walking or climbing steps?			
		D0	D1	D2	D3
8. (MPINSIDE) Does [Name] have difficulty moving around inside his/her home?	ED0	0.324**			
	ED1		0.373**		
	ED2			0.257*	
	ED3				0.340**
9. (MPOUTSIDE) Does [Name] have difficulty going outside of his/her home?	ED0	0.639**			
	ED1		0.676**		
	ED2			0.588**	
	ED3				0.697**
10. (MPLONG) Does [NAME] have difficulty walking a long distance such as a kilometer (or a mile)?	ED0	0.644**			
	ED1		0.648**		
	ED2			0.600**	
	ED3				0.502**

** Correlation is significant at 0.01 level. (2-tailed)

* Correlation is significant at 0.05 level. (2-tailed)

**Table 5.9: correlation coefficients for the core questions and the extended questions
SELFCARE—SELF-REPORT**

Extended Questions	4. (SSSCARE) Do you have difficulty with self-care, such as washing all over or dressing?				
		D0	D1	D2	D3
5. (SSOBJECTS) Do you have difficulty <u>using your hands and fingers</u> , such as picking up small objects or opening or closing containers? †	ED0	0.325**			
	ED1		0.325**		
	ED2			0.130	
	ED3				0.327**

** Correlation is significant at 0.01 level. (2-tailed)

**Table 5.10: correlation coefficients for the core questions and the extended questions
SELFCARE—PROXY-REPORT**

	5a. (SPSCARE) Does [Name] have difficulty with self-care, such as washing all over or dressing?				
		D0	D1	D2	D3
6. (SPOBJECTS) Does [Name] have difficulty <u>using your hands and fingers</u> , such as picking up small objects or opening or closing containers? †	ED0	0.394**			
	ED1		0.394**		
	ED2			0.211	
	ED3				-0.021

** Correlation is significant at 0.01 level. (2-tailed)

**Table 5.11: Correlation coefficients for the core questions and the extended questions
COMMUNICATION—SELF-REPORT**

Extended Questions		6. (TSCOMM) Because of a physical, mental or health condition, do you have difficulty communicating, for example understanding or being understood by others?			
		D0	D1	D2	D3
5. (TSSAY) Do you have difficulty in generally understanding what people say?	ED0	0.612**			
	ED1		0.551**		
	ED2			a	
	ED3				a
6. (TSCONVO) Do you have difficulty in starting and maintaining a conversation?		D0	D1	D2	D3
	ED0	0.383**			
	ED1		0.317**		
	ED2			a	
	ED3				a

a. Cannot be computed because at least one of the variables is constant.

** Correlation is significant at 0.01 level. (2-tailed)

**Table 5.12: Correlation coefficients for the core questions and the extended questions
COMMUNICATION—PROXY-REPORT**

Extended Questions		6a. (TPCOMM) Because of a physical, mental or health condition, does [Name] have difficulty communicating, for example understanding or being understood by others?			
		D0	D1	D2	D3
5. (TPSAY) Does [Name] have difficulty in generally understanding what people say?	ED0	0.604**			
	ED1		0.604**		
	ED2			0.569**	
	ED3				1.000**
6. (TPCONVO) Does [Name] have difficulty in starting and maintaining a conversation?		D0	D1	D2	D3
	ED0	0.356**			
	ED1		0.356**		
	ED2			0.702**	
	ED3				1.000**

** Correlation is significant at 0.01 level. (2-tailed)

6. Interviewer's Comments on the Questionnaire

6.1 General Comments

1. In general, when the core question of each section (vision, hearing,...) the respondent answered that just there is a difficulty and don't define the degree of that difficult. This required asking another question on the degree of difficulty. If there isn't any kind of difficulty, the respondent astonished when asking him (why did you answered that way?). Sometimes the respondents reply it is my health and I know it well. The respondent also felt bored with the frequency of that question with different kind of difficulties and say it is enough for me what I'm suffering from.

2. The respondents also feel bored from the long questionnaire and the frequency of the some questions with different kinds of difficulties.

3. In some cases, the respondents and their families interested with the questionnaire as a result of their sense that there is someone cared with their problems and consequently they will try to help them in the future in terms of treatment for example. In the other cases, they mentioned that this work isn't important because the government will not do anything for them.

4. The word "acclivities" in the vision section and other sections of difficulties has been understood either by interviewer himself or the proxy one as cultural or sports activities not as ordinary day activities. So, it is recommended to be exchanged by (the ordinary or normal day activities).

5. The question of (How often do you have difficulty), the word how often in all difficult cases is not understandable especially in case of continuous& permanent difficulties that is not frequent.

6. The question "How concerned or worried are you about name's...", with the proxy person create a sense of confusion weather the worried of interviewer himself or the worried of proxy person about the capabilities of the interviewer. The answer on the same question in some cases is "I'm satisfied with God welling".

8. The respondents feel bored with asking about different kinds of difficulties. For example one of the interviewers who suffered from a difficulty in her eyes said that " is it not enough what I am suffering from, you want me to suffer from hearing and mobility. It means that they bothered from asking about the other kinds of difficulties they don't suffered.

9. One of the educated respondents "who have finished her university education" mentioned that this questionnaire is understandable for educated persons while the uneducated ones, it is difficult to understand some words like (how often, activities, communication. She recommended that such words needed to be explained.

10. There is a big difference between the psychological case of the disabled person and the proxy one. The handicapped person in most cases is somewhat nervous sometimes is optimistic hoping that his problem might be solved. The proxy person is quieter.

11. One of the respondents said that the disabled person who are educated is more nervous than non educated ones because he felt that he finished his higher education and don't offer either a suitable job or small enterprise and moreover, they handicapped him if he tried to start his own small project especially in getting the permission of starting the project or in getting an aid mobile method (motorcycle).

12. One of the respondents suggests that the questionnaire should start with the questions of the main difficulties of the disabled person to avoid the boring feel from the frequency of the questions related to other kinds of difficulty.

13. One of the data collectors complained that the duration of the interview maybe prolonged because of the desire of the disabled person to speak about his problem even before asking the questions related to his difficult.

14. One of the data collectors mentioned that the social specialist in the Social Rehabilitation association for disabled persons said that the mental retarded persons don't have the ability to answer any question because that his mental age don't exceed 5 years when we discussed the fact that such mental retardation center accept only those who can at least communicate with others, the social specialist in the center said that they are here to learn anything like painting and decoration as the children in the nursery but they can't learn any handicraft like carpenter that incorporate some kinds of adventures. Consequently, it is better to fell the questionnaire from the proxy person.

15. All the questions about (some difficulty, a lot of difficulties, some effort, and a lot of effort) required to be explained to declare the degree of difficulty and effort.

16. All the questions include (no answer, don't know), it recommended to add a category of other (specify) to be able to code this questions in case of different answer. For example, question (4) of cognitive section one of the respondents

answered that when she faced any difficulty in remembering or concentration, she leave this subject and do anything else until she remember it.

6.2 Comments on the detailed questions

- Respondents background

- It is recommended to categories educational status as (illiterate, read and write, primary.....) instead of number of years spent in education because we meet someone who never went to school and at the same time, he can read and write.

- It is recommend adding a category in question (3) concerned with employment status old ages/disabled.

- For the main question of employment status, some of the disabled persons don't go to the work in spite of they have already appointed by the law that obliged all organizations to appoint about 5% of its employees from disabled persons. In this case, how can we define the employment status of that person.

- With respect to income question, some respondents are annoyed, so it is recommended to delay asking household's income till the end of the interview.

1. Vision section

- Question number 2: Sometimes the person wear eye glasses all the time as a doctor advice to avoid headache and not for vision purpose because he is blind.

- With blind respondents, there is no need for questions number 2, 3, 4, 6 ,7 ,9 and (9a) or adding not applicable category in this questions. One of the respondents said that these questions are not for me because I am blind and so on with the proxy person.

-One of the data collectors suggest rearranging the frequency of the questions asking about the difficulty to be followed by those asking about the efforts. For example in vision section question (3) followed by question (4) and question (3a) followed by question (4a). This observation is valid for different health status and also the proxy.

-In the vision section-question (9) and (9a)- when asking about the difficulty in vision of newspaper or book with his eye glasses and if the respondent is illiterate and can't read or write, the answer is coded as don't know or no answer while in fact it is not reasonable.

2- Hearing Section:

- Question (9): one of the data collectors suggest rearrange of the questions to be started with (b) hearing in a quiet room then (a) hearing in a crowded room. It is reasonable to hear in a quiet room if the person can hear in a crowded room

-Question (10): It is recommended to add other categories like sometimes/according to the circumstances.

-If the respondent is deaf and can't hear absolutely, there is no need for asking questions 2, 3, (3a),4 ,(4a) ,9 ,(9a) and (10) or add not applicable code in such questions.

3- Cognitive Section:

-One of the data collectors mentioned that the core question doesn't understood for the first time but it needed to be explained for more than one time.

- Sometimes the word concentrating in the main question understood as remembering or forgetting.

- For the respondent who doesn't suffer any difficulty in cognitive, it is unreasonable to ask questions (6) and (7).

- Question (8): we should add a category of (sometimes).

- Question (10): The word new tasks are not understandable and needed to be changed.

- The core question with questions (9), (10), the blind person may not have any kind of difficulty in the main question and at the same time he can't concentrate or learn new tasks in questions (9) and (10) because he is blind.

- Question (11): most of the respondents understand this question from monetary side not concentration in the life matters where the interviewer explains this.

4- Lower Mobility Section:

- The main question needed to be divided into 2 questions one for walking and the other for climbing steps.

- The filter part needed to be transferred before question (2).

-Question (2a): The blind person may use a cane to find his way and not because he is not able to walk.

-Questions (8), (9): It is recommended to arrange cods ascending (zero ,1 ,2 ,3 ,...) instead of descending (3, 2 ,1 ,zero ,9).

- Question (9): one of the blind respondents mentioned that she has a difficulty in walking outside home not due to difficulty in mobility but as a result of being blind she can't go out alone. It recommended adding a category for (being blind or not applicable).

-Questions 9, 10: we need to clarify that we are asking about difficulty with the use of aid equipment (for example mobile chair). When we ask this question the respondents asked about that.

-Question (11): one of the respondents mentioned that she has difficulty in crouching and kneeling because she has experienced a surgery in her eyes and the doctor advised her not to kneeling. It is recommended to add a category for (sometimes).

-It case of amputee the leg: There is no need to ask the questions 3,5,9,10,11 (a, b, c, e) or adding not applicable category. One of the data collector added this question is not logical in case of two legs paralysis even if he use mobile chair.

-For the respondent who doesn't suffer from any difficulty in lower mobility, it is not reasonable to ask questions (6) and (7).

5- Self care section:

- Question (3): The respondent might suffer from difficulty but he doesn't do any effort because someone helps him. So, it is recommended to add (without aid from others) in the question.

-In case of amputee hand or amputee arm and hand, there is no need to ask about self-care (washing all over or dressing), questions 2 ,3 ,4 ,5 (from a to g), question (7) or add not applicable category in these cases.

- With respondents who don't suffer from any difficulty in self care, they astonished with asking the questions of self care.

- One of the interviewers asked that, in question (5) in case of difficulty in one of the two hands, can we ask about the activities the respondents can do with - Question (7): when we ask the respondent about ability in using his fingers or hand while it is safe but he is suffering difficulty as a result of being blind.

-Question (8): it is recommend to add sometimes category.

6- Communication section:

- One of the data collector mentioned that the main question is not understandable and needed to be explained for the respondents more than one time and the respondent might also answered that he don't know.
- Some of the data collectors mentioned that there is a frequency between the main question and question number (5).
- Question (7): The respondents answered (sometimes).

7- General Health Section:

the main question: one of the interviewers suggested change codes (Excellent, very good, good, fair, and poor). Another interviewer suggested (not reasonable, 50%, 100%).

Question (2): It is difficult to clarify the question for the respondents and it is recommended to exchange spiritual to physiological.

Question (3): It is recommended to add codes for other diseases such as, eye pressure, Liver, knee and other diseases. In the same question, the respondent felt pessimistic with some diseases like cancer, mental retardation, developmental problem and missing limbs.

Interviewer Debriefing:

Question (1): it is recommended to add category for some noisy and without interruptions

Question (2): it is recommended to add category (other).

Question (4): it is recommended to add category not exist (Zero), and allowed the answers to be multiple, and it is necessarily to define other difficulties.

6.3 The additional questions:

Respondents were asked about any additional questions to be asked. Some of them answered that:

- Asking about their ambitious, aspirations, their desire of traveling abroad, whether they prefer to have governmental jobs and favorable fields for them.
- Asking about their desires that they are dreaming to be achieved.
- Purpose of the study that is needed to be defined at the beginning of the questionnaire.

-What are their benefits from this survey, weather it will offer them job opportunities, anything else or it is just questions.

-Asking about the physiological and practical effects of the difficulty.

-Asking them about their need for aid equipments like motorcycle to go out for the out for the outer world, and the effect of having such aid methods. One of the respondents mentioned that when their family bought a motorcycle (fisba) cost 7500 Egyptian pound for her it changed here whole life, she go out and participated in a handicapped sports club and felt that she don't need help from anyone. She added that disabled person is trying to challenge their difficulty and trying to do what normal persons can't do and if we able to help disabled persons, a lot of changes will be happened in their life.

-Some of handicapped persons speak about themselves and their families' health and physical problems and they are looking forward the state help in terms of jobs, aid equipments or a means of transportation or medicine.

- Some of the disabled persons said that "what government wants from us, it is enough what we are suffering.

- Asking about their ability to work, if there is a job opportunity.

6.4 Interview duration:

For disabled persons: the duration of the interview ranged from 30-45 minutes. For the proxy persons: the duration of the interview ranged from 25-40 minutes. On average, the duration of the interview for self persons and proxy persons is presented in the following table

As well as the duration of the interview ranged according to type and degree of difficulty, educational status of the disabled person, the acceptance of the persons to the questions and according to his physiological state.

Average Duration of interview (in minutes)

Persons	With disability	Without disability
Self-person	43	35
Proxy-persons	34	28

As well as the duration of the interview ranged according to type and degree of difficulty, educational status of the disabled person, the acceptance of the persons to the questions and according to his physiological state.

6.5 General Suggestions:

- It is recommended to fill the questionnaire from the disabled persons himself except for mental retarded persons and those who are suffering from physiological disease. The proxy person will explain the case better than the disable person.

In the case of deaf and dumb persons, it is better to fill the questionnaire from the proxy person or use anyone who is able to translate the question for the disabled person.

-Special training must be given for Interviewers who meet the disable persons Interviewers needed to be trained well to be able to fill the questionnaire. Also need to train how to deal with the disable persons especially those who are suffering from serious difficulties. Although the interviewers who filled the questionnaire are highly experienced in the field work, they felt very sad and sometimes they cry due to the bad conditions of the disabled persons the met.