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Seeking the disabled persons in Qena community in upper Egypt

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Abstract---Background: planning a rehabilitation system is based on the actual information on the classification (types) of disability and existing rehabilitation facilities. Objective: The study aimed to point out the prevalence of different forms of disability in sample urban and rural areas in Qena, Upper Egypt. Method: The study was carried out through random distribution of 32294 questionnaires over randomly selected urban and rural areas in Qena. The questionnaire included 6 types of disabilities. The aim of the study and the components of the questionnaire were explained to each household. Participants were asked to check one or more types of disability they suffer if any. Results: The information obtained showed a total of 1890 subjects suffering from movement disabilities, 3330 from vision disorders, 795 from hearing disorders, 1292 from learning disabilities, 135 from fits, 202 from strange behavior, and 184 from age-related disabilities. Furthermore, the number of disabled persons living in rural areas was bigger than those living in urban areas with hearing disabilities, learning disabilities, fits, and strange behavior. Meanwhile, the number of disabled persons living in urban areas was bigger than that who were living in rural areas with moving, seeing, and old age disabilities. The percentage of all types of disability was higher in females compared to males. Conclusion: Based on this prevalence, it is required to direct disability services to the more prevalent types of

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disability, namely visual, movement, learning, hearing, mental, and aging disabilities in sequence. Further concentration of services needs to target urban and rural areas according to the corresponding prevalence of the types of disabilities in each of them. This needs further studies to check the current status of services provided for different types of disability and their demographic distribution in Qena.

Keywords---prevalence, disabled persons, Qena community.

Introduction

A disability is any impairment of the body or mind that makes it more difficult for persons, limits activity, and restricts participation in the world (1). When it comes to disability types, there is a discrepancy in the types of disabilities and the health hazards associated with them. Persons with disabilities are considered to be a very heterogeneous group with substantial differences in disability type and severity (2). According to Kang et al., disability can be classified into six major types: physical, visual, hearing and speech, learning, mental, and multiple disabilities (3). Despite 80 % of disabled people worldwide resident in them, the research work on disabled people in developing countries is few. This few numbers of research work on the subject stem from the inconsistency in definitions of disability, lack of proper data collection strategies, and lack of long-term follow-up of the data concerning the disabled. Such misleading data collection results in an inadequate database about the disabled in developing countries. Together, the lack of proper information and the lack of thorough studies about their living circumstances form a vicious circle (4).

In this study, there is a target to check for two main demographic distributions of disabled people; geographic location, and gender. Geographic locations are metropolitan and nonmetropolitan areas, classified according to the office of management and budget (OMB) in the USA (5). According to OMB classification, metropolitan and nonmetropolitan areas are not a synonym for urban-rural classification, however, it helps to describe the communities that incorporate both urban and rural areas. In their delineation of metropolitan areas, OMB identified them as areas that include at least one urban core of 50,000 or more people (6 OMB, 2020). This mostly fits the Qena governorate areas included in this study showing a population of continuity between urban and rural zones. Such continuity reflects the most in the availability and distribution of services for disabled people. This work aimed to provide a sample-based prevalence of different types of disability in the Qena governorate, Upper Egypt. Further, to show the distribution of these types of disability by geographic areas and gender.

Methods

This study was a descriptive cross-sectional study carried out on 32.294 subjects from march 2021 to November 2021. This study was conducted in the Qena governorate in Upper Egypt. The study was carried out at three Urban sites; Nagaa Hamadi, Farshoot, and Abu-techt, and three rural areas; Qous, El-wakf,

and Qeft. Before the commencement of data collection, a pilot study was carried out on 30 subjects, where a specially designed data collection form was designed (figure 1), and checked for clarity of content. Further, it helped with estimating the time and resources needed for the fieldwork. Later, the data collection form was distributed to 32,294 subjects as a sample of convenience, distributed over the included urban and rural areas in Qena. The data collection form included (Name of the household head, address, and the number of persons in each household), besides a simple checklist. Each participant was asked to tick the types of disability he/ she suffers if any. Guardians were asked to fill out the form on behalf of their children. All members of the interviewed households were included in the study as long as their ages were 1 year old or more.

Figure 1: Contents of a simple household questionnaire

Name of the household head:

Address:

Interviewed by:

The number of persons:

Questions		
Moving disability 1. Does any person have difficulty with moving the arms or legs or other parts of the body?	Yes ☐	No ☐
seeing disability 2. Does any person have difficulty with seeing?	Yes ☐	No ☐
Hearing disability 3. Does any person have difficulty with hearing?	Yes ☐	No ☐
Learning disability 4. Does any person have difficulty with learning?	Yes ☐	No ☐
Mental disability 5. Does any person get fits? 6. Does any person show strange behavior?	Yes ☐ Yes ☐	No ☐ No ☐
Old Age 7. Does any person old age person?	Yes ☐	No ☐

Results

The current study included a total of 32,294 subjects. Current results reported a total percentage of all types of disability of 24.87% out of this study's participants. Classifying the included zones into urban and rural areas, the results of the current study included 21179 subjects from urban areas included and 11115 subjects from rural areas. Subjects suffering movement disability were 1890 persons, constituting 5.85% of the total sample. Urban areas showed a percentage of 4.5% and rural areas with 8.4% of their samples with movement disability. Subjects suffering from vision (seeing) disability were 3330 persons constituting 10.31% of the total sample with 9.4% and 12.2% in urban and rural areas respectively. Hearing disability was reported in 795 persons constituting 2.46% of the total sample. Percent of 1.5% and 4.2% were reported in urban and rural areas respectively. Learning disability was reported in 1292 persons and a percent of 4% of the total study sample. Urban and rural areas showed 3% and 5.9% of the reported learning disability respectively. Mental disability showed a total of 337 persons of (1.04%) of the total study sample. This is further split into

persons with fits 135 (0.42%), with (0.3%) in urban, and (0.7%) in rural areas respectively. the other section was persons with strange behavior having a total of 202 persons (0.63%) in the total sample. Urban areas showed a percentage of 1% of persons with strange behavior.

Age-related disability showed a total of 184 persons (0.57%) in the total study sample. With urban areas (0.5%) and rural areas (0.8%) respectively (Table 1). Gender differences have been reported in the 6 types of disability in this study. Concerning movement disability males showed a percent of 8.6 % and females a percent of 4.3 %. Seeing disability showed a percentage of 10.4% and 5.3% for males and females respectively. Hearing disability percentages were 1.7% and 0.9% for males and females respectively. The learning disability percentage was 2.7% in males versus 1.5% in females. Persons with fits were 0.6% in males, and 0.3% in females. Strange behavior showed 0.8% in males and 0.6% in females. Age-related disabilities were 0.8% in males, and 0.3% in females (table 2).

Table 1
Disability of the study population according to a place of residence

Disability	Category	Urban area (n = 21179)	Rural area (n = 11115)
Moving disability			
Q1. Does any person have difficulty with moving the arms or the legs or other parts of the body?	Yes	965 (4.5%)	925 (8.4%)
	No	20214 (95.5%)	10190 (91.6%)
Seeing disability			
Q2. Does any person have difficulty with seeing?	Yes	1977 (9.4%)	1353 (12.2%)
	No	19202 (90.6%)	9762 (87.8%)
Hearing disability			
Q3. Does any person have difficulty with hearing?	Yes	328 (1.5%)	467 (4.2%)
	No	20851 (98.5%)	10648 (95.8%)
Learning disability			
Q4. Does any person have difficulty with learning?	Yes	640 (3.0%)	652 (5.9%)
	No	20539 (97.0%)	10463 (94.1%)
Mental disability			
Q5. Does any person get fits?	Yes	58 (0.3%)	77 (0.7%)
	No	21121 (99.7%)	11038 (99.3%)
Q6. Does any person show strange behavior?	Yes	88 (0.4%)	114 (1.0%)
	No	21091	11001

		(99.6%)	(99.0%)
Old age disability			
Q7. Does any person old age person?	Yes	97 (0.5%)	87 (0.8%)
	No	21082 (99.5%)	11028 (99.2%)

Data are expressed as numbers (percentage)

Table 2
Disability of the study population according to gender

Disability	Category	Urban area (n = 21179)		Rural area (n = 11115)	
		Males	Females	Males	Females
Moving disability					
Q1. Does any person have difficulty with moving the arms or the legs or other parts of the body?	Yes	635.37 3.0%	317.688 1.5%	622.44 5.6%	311.22 2.8%
	No	15651.28 73.9%	4998.24 23.6%	7747.15 69.7%	2434.18 21.9%
Seeing disability					
Q2. Does any person have difficulty with seeing?	Yes	593.01 2.8%	381.22 1.8%	844.74 7.6%	389.02 3.5%
	No	15270.05 72.1%	4934.70 23.3%	7524.85 67.7%	2356.38 21.2%
Hearing disability					
Q3. Does any person have difficulty with hearing?	Yes	127.07 0.6%	63.53 0.3%	122.26 1.1%	66.69 0.6%
	No	15714.81 74.2%	5252.39 24.8%	8258.44 74.3%	2667.6 24.0%
Learning disability					
Q4. Does any person have difficulty with learning?	Yes	190.61 0.9%	84.71 0.4%	200.07 1.8%	122.265 1.1%
	No	15651.28 73.9%	5231.21 24.7%	8169.52 73.5%	2623.14 23.6%
Mental disability					

Q5. Does any person get fits?	Yes	63.53 0.3%	21.179 0.1%	33.345 0.3%	22.23 0.2%
	No	15799.53 74.6%	5294.75 25.0%	8336.25 75.0%	2712.06 24.4%
Q6. Does any person show strange behavior ?	Yes	63.53 0.3%	21.179 0.1%	55.57 0.5%	55.57 0.5%
	No	15799.53 74.6%	5294.75 25.0%	8314.02 74.8%	2689.83 24.2%
Old age disability					
Q7. Does any person old age person?	Yes	63.53 0.3%	21.179 0.1%	55.57 0.5%	22.23 0.2%
	No	15778.35 74.5%	5294.75 25.0%	8314.02 74.8%	2712.06 24.4%

Data are expressed as numbers (percentage)

Discussion

The study was to report the prevalence of different types of disability in urban and rural zones in Qena governorate, Egypt. This study used a specially developed six-question survey in 2017, central agency for public mobilization and statistics (CAPMAS), Egypt, reported a total of 8.85% of the population of Qena governorate to have difficulty in one of six domains of disability. These are all figures for the six types of disability in the Qena governorate in 2017. This widely differs from the current study that reported overall 24.17% disability rates in all six domains. The disparity in overall disability figures is due to differences in study methodology, CAPMAS prevalence was population-based and the current study was sample-based. Social determinants of health include gender, race, geographic location, and socioeconomic state (6,7). In the current study, only geographic location was considered. Results are reported from urban and rural zones. Urban zones in the CAPMAS study showed a total of 19.6% compared to 8.16% in the Egypt census (2017) likewise rural zones showed an overall disability of 32.7% compared to 9.01% in the census of Egypt (8). The wide gap in outcome can be attributed to the methods of data collection in both studies.

The current study reported that urban and rural zones differ in overall disability rates, where disability percentages were 19.6% and 32.7% in the urban and rural zones respectively. This census in converses with US census results in 2016 (9), which reported differences in the prevalence of disability by geographic regions. Results of the current study concerning gender differences showed higher prevalence in females over males in all 6 types of disability under investigation. These results came in partial agreement with CAPMAS consensus Egypt 2017. Where the consensus showed a higher prevalence of all types of disability they reported in females except for vision, communication, and self-care which were higher prevalence in males. Likewise, Okoro et al. (2018) reported a higher prevalence of all types of disability in the USA consensus 2016 except for hearing and self-care (9).

This study had some limitations that need to be addressed in future studies. First, the relative size of the included sample needs to be increased in future studies. As the included 32294 subjects represent less than 1% of the population of the Qena governorate. This was due to the limited manpower available to the current study assigned for door-to-door data collection. Alternative contact means including phone calls and communication on social media might be helpful to outcome this drawback in the future. Second, the availability of services and their geographic distribution over the Qena governorate need to be considered and related to the numbers, types, and geographic distribution of different forms of disability reported. Third, economic factors and household incomes had not been covered in this study. Income, availability, and access to disabled services need to be considered in future studies to provide a vivid view of the sufficiency and/or enhancements that might be required for the services of the disabled.

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