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## RESEARCH ARTICLE

### Disability and Health Services: The Case of Women in Spain

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#### Abstract:

#### Background:

For as long as data have been collected, women with disabilities have had worse health conditions than other women. Moreover, women with disabilities make more use of healthcare services than women without disabilities.

#### Objective:

The main aim of this study is to analyze the impact of various factors on the use of healthcare services by this group of women at risk of exclusion.

#### Methods:

Binary logistic regression models are used to examine seven indicators of the use of healthcare services and evaluate the influence of factors, such as age and emotional and personal support. To that end, the analysis uses data from the most recent Spanish National Health Survey (SNHS, 2017) published by the Spanish Statistical Office (INE).

#### Results:

Studies on the use of healthcare services have focused on the influence of social status on economic factors and do not include explanatory variables relating to the social and family environment of women with disabilities. Therefore, this study includes variables representing home care services and emotional and personal support to capture the impact of human relationships and the home care environment on health in such a way that its importance and its effect on the use of health services can be determined, distinguishing between the general population and the female population with disabilities.

#### Conclusion:

The data in this study revealed important differences in the use of healthcare services by women with disabilities compared to other women and the population in general, as mentioned in the tables and the results indicated above. It is essential that healthcare workers and policymakers identify and account for the different requirements of women with disabilities.

**Keywords:** Disability, Healthcare services, Binary logistic, Regression models, Healthcare workers, Home care.

#### Article History

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## 1. INTRODUCTION

In March 2021, the European Commission (EC) updated its guidelines and presented its new strategy, Union of Equality: Strategy for the Rights of Persons with Disabilities 2021-2030. Following a series of expert technical assessments of the impact of the previous strategy, accompanied by public consultation, the new strategy builds on previous experiences. It is structured into two specific areas of work: one is under the direct competence of the EC, and the other is an area of shared

competence and/or the sole competence of member states and their regional and local authorities.

In a study like this, it is impractical to provide an exhaustive account of all the objectives and initiatives. Instead, our aim is to highlight the most critical issues and outline the foundational aspects on which the strategy is based, along with the tools that will facilitate its implementation. The strategy adopts an intersectional perspective, addressing the specific barriers faced by individuals with disabilities who belong to multiple identity intersections, such as gender, race, ethnicity, sexuality, religion, or those in challenging socioeconomic or vulnerable situations. Notably, the strategy emphasizes giving

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particular attention to various groups among persons with disabilities, including women, children, older individuals, homeless persons, refugees, migrants, Roma, and other ethnic minorities.

In conjunction with other equality strategies aimed at combating all forms of discrimination, this strategy plays a vital role in achieving a Union of Equality. Moreover, it strengthens Europe's position as a global partner in the fight against inequalities, contributing to the attainment of the UN Sustainable Development Goals and the promotion of human rights. While this study primarily focuses on disability, with a specific emphasis on women with disabilities, we also provide a concise introduction to the strategy and its key content areas (Source: European Commission (2021): Union of Equality: Strategy for the Rights of Persons with Disabilities (2021-2030)) [1, 2]. This study focuses on disability, especially on women with disabilities, although we present a brief introduction of this strategy and its content areas.

The strategy identifies eight areas of intervention, which are further divided into specific sub-areas. It provides a brief description of the individual activities and sets out multiple commitments and planned tasks backed by data that justify the initiatives. We will focus on those that affect women with disabilities.

Over the coming decade, the strategy will support both member states and EU institutions in their efforts to implement the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). The implementation of the initiatives envisaged in the strategy will contribute to reducing discrimination and inequality and will help people with disabilities to fully enjoy their human rights, fundamental freedoms, and EU rights on an equal basis with others by 2030, thereby optimizing their independence, participation, and living conditions.

To this end, healthcare services are turning their attention to the needs related to women with disabilities, encouraging good health and the prevention of health problems that stem from disability. People with functional diversity need more specialized healthcare that is not always on offer in the regular healthcare system (Pérez, 2006) [3].

There is currently very little research in this field, which affects the planning of healthcare services in countries that have not adapted their healthcare systems to meet the needs of this group. International studies provide a definition of *access to healthcare services* as the use of healthcare services to achieve the best possible health outcomes, including potential access and effective use of such services (Aday and Andersen, 1984; Pinzón, 2014) [4, 5], which is measured by means of a multidimensional construct. People with functional diversity have different perceived levels of health than the rest of the population (Whitehead, 1990; Sánchez-Recio *et al.*, 2021) [6] [7]. This divergence could be ascribed to differences in social factors or access to services, an approach more commonly taken by the World Health Organization (WHO) [6] or studies focused on Europe; alternatively, it could be attributed to their pathologies or limitations, an approach more in line with the *health disparities* generally addressed in the North American

literature (Graham, 2002) [8].

Women with functional diversity require greater and more specialized attention. The health risks associated with certain rare diseases (which, due to their degenerative nature, can cause disability) are greater for women than for men; for example, multiple sclerosis is more common among women aged between 30 and 50 (MTAS, 2006) [9]. Women with functional diversity also face barriers to accessing some healthcare services (gynecology, mammograms, maternity care, family planning, *etc.*), which are not adapted to their particular circumstances (European Commission, 2015) [10] (Iezzoni, McCarthy, Davis, and Siebens, 2000) [11].

The previous literature contains almost no references from before the 1990s, specifically on women's use of healthcare services (Public Health Service Task Force on Women's Health Issues, 1985) [12]. Despite the advances made subsequently, papers focused on women's health have not generally considered the special needs of women with disabilities (Krotoski, Nosek, and Turk, 1996) [13]. The small number of references supports the need for more research focused on this group.

## 2. METHODOLOGY

In Spain, the most up-to-date official quantitative information on the use of healthcare services is provided by the 2017 Spanish National Health Survey, published by the Spanish Statistical Office (INE, 2017) [1], which uses a stratified multi-stage sampling design to obtain data from adults (aged 16 or over).

To accomplish the objective of this research, it is essential to determine whether disability and gender play significant roles as differentiating factors in the utilization of health services in Spain. Subsequently, we will examine the factors that impact these patterns of utilization and how they exert their influence. The analysis will be differentiated into two groups: the general population and women with disabilities [14].

For this research, data from the Spanish National Health Survey (INE, 2017) [1] have been used using the statistical program SPSS (version 27).

To measure the use of healthcare services, seven basic services have been selected for this study: whether in the last 12 months, the respondent has visited the family doctor, had a consultation with a specialist doctor, received treatment (including physiotherapy, psychology, psychotherapy, psychiatry or nursing treatments), been given a non-urgent test, been admitted to a hospital, visited a hospital outpatient clinic, and used the hospital emergency department.

Five factors have been used as explanatory variables: age, sex, the use of home care services (a variable constructed from five indicators: home care services provided by a nurse, home support for household chores or for older people, meal delivery for the elderly, special home transportation services, and other home care services), and emotional and personal support (variable measured as the mean score calculated from 11 indicators of emotional and personal support perceived by the respondent based on the survey classification: 1-Much less than I want, 2-Less than I want, 3-Neither a lot nor a little, 4-Almost

as much as I want and 5-As much as I want). The last is the disability (the determination of whether or not a person has a disability is based on whether they present a limitation to daily life and the performance of everyday activities, not counting temporary problems, following the methodology of the Global Activity Limitation Indicator (GALI) designated by the EC in 2015 for identifying people with disabilities (EU, 2015)) [10], based on the International Classification of Functioning, Disability and Health (ICF), which is understood broadly. Thus, based on the items of the ENSE-2017 itself, modules K and L were taken referring to the limitations and difficulties in carrying out activities of daily living (K: Limitations, Physical, Sensory and Cognitive; L: Limitations in carrying out daily life). In these modules, the possible answers, after debugging the unanswered ones, were 1-“No, no difficulty”, 2-“Yes, some difficulty”, 3-“Yes, a lot of difficulties,” and 4- “I cannot do it by myself”; identifying disability with answers 3 and 4, and with non-disability, the rest.

To analyze the influence of the factors that affect the use of healthcare services, a binary logistic regression model has been estimated. The choice of this multivariate analysis technique is based on the dichotomous nature of the dependent variable, while the independent variables can be quantitative (discrete or continuous) or qualitative (with two or more levels).

The statistical model expresses the probability of a level of the dependent variable by means of a logistic transformation of a linear combination of the independent variables:

$$P(Y) = \frac{e^{\beta_0 + \sum \beta_i X_i}}{1 + e^{\beta_0 + \sum \beta_i X_i}}$$

Where P(Y) is the probability of a certain level of the dependent variable, and  $\beta_i$  is the coefficient of each independent variable  $X_i$  in the model.

Equivalently, the model can be expressed by means of the odds ratio (OR) coefficients for each level of the endogenous variable, estimated by means of a linear regression on the independent variables:

$$\ln \left( \frac{P(Y)}{1 - P(Y)} \right) = \beta_0 + \sum_{i=1}^k \beta_i X_i$$

These coefficients are calculated using the maximum likelihood method, with a significant coefficient ( $p < 0.05$ ) indicating that there is a relationship between the exogenous and the endogenous variables for the level in question.

If an independent variable is dichotomous, the exponentiated regression coefficient  $\beta$  corresponds to the OR coefficient. If the exogenous variable is qualitative with more than two levels, dichotomous dummy variables are usually generated for each of the levels except for the reference one. Lastly, if the independent variable is quantitative, the exponentiated coefficient indicates the increase in the probability of a certain level of the dependent variable for a unit increase in the independent variable.

### 3. RESULTS AND DISCUSSION

To begin the analysis, the demographic data of the study cohort are shown. The Spanish National Health Survey (SNHS) is conducted on a representative sample of the non-

institutionalized population living in Spain. It uses stratified multi-stage sampling. The survey is personal, home-based, administered by an interviewer and computer-assisted. The data presented correspond to 23,089 interviews conducted with people aged 15 and over between October, 2016 and October, 2017. By applying to the sample the elevation factor indicated in the survey itself, the demographic data of the study cohort is obtained (Table 1).

In the second stage, binary logistic regression models have been estimated for each of the seven indicators of the use of health care services, including the explanatory variables of sex and disability. The basic aim is to assess the effect of disability and gender by eliminating the possible effects of other variables. The first two columns of Table 2 show the ORs for each variable, taking being male and not having a disability as reference categories. The analysis has been calculated using the maximum likelihood method, with a significant coefficient ( $p < 0.05$ ) indicating that there is a relationship between the exogenous and the endogenous variables for the level in question. In all the cases, the p-value is  $< 0.001$ , thus all significant.

The Nagelkerke R Square value is shown in parentheses, which indicates the level of association between each of the explanatory variables (sex, disability and women with disabilities) and the indicators in each binary logistic regression (indicators).

As can be seen, women tend to use all healthcare services more than men do. As shown in the table above, it implies important information and, therefore, justifies an individualized study focused on this group, which is carried out in this study.

A similar situation arises regarding disability; people with disabilities also tend to use healthcare services more. In this case, the OR coefficients are much further from unity, which indicates a greater difference with respect to people without disabilities.

Lastly, the same binary logistic regression models have been repeated but applied exclusively to women with and without disabilities. In this case, the third column of Table 2 shows the OR coefficients for the variable women with disabilities, which all turn out to be significant. Just as with the comparison to the population as a whole, women with disabilities make more use of healthcare services than women without due to their greater healthcare needs associated with their limitations (Dejong, Batavia, and Griss, 1989) [15].

Having established the differences in the use of healthcare services, the second stage of the research is focused on measuring the influence of three social factors (age, home care services, and emotional and personal support), comparing the total population and the group of women with disabilities.

To do so, the relevant logistic regression models have been estimated, with the resulting OR coefficients, as mentioned in Table 3. The analysis has been calculated at a significance level of 95%, and in all cases, the p-value is  $< 0.001$ , resulting, therefore, in all cases being significant.

The Nagelkerke R Square has also been included in Table 3 to establish the level of association between the set of variables (age, home care service, and emotional and personal support) and each indicator, calculated for each of the study groups, total and women with disabilities.

The results shown in Table 3 confirmed the proposition that exhibits the direct effect between age and the use of health services for the population, as (Beck, Jijon and Edwuard, 1996) [16] the effects distinguishing between the general population and women with disabilities were analyzed previously. The

Nagelkerke R Square indicates the level of association between the explanatory variables together and the use of different health services; for their part, the ORs indicate the proportion of increase in the probability of use of each service attributed to each variable.

**Table 1. Data of study cohort: Disability and Sex**

	No Disability			Disability			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
n	15,131,275	13,691,600	28,822,875	3,887,623	6,359,156	10,246,779	19,018,898	20,050,756	39,069,654
% into Sex	79.60%	68.30%	73.80%	20.40%	31.70%	26.20%	100.00%	100.00%	100.00%
% into Disability	52.50%	47.50%	100.00%	37.90%	62.10%	100.00%	48.70%	51.30%	100.00%
% of total	38.70%	35.00%	73.80%	10.00%	16.30%	26.20%	48.70%	51.30%	100.00%

Source: Own elaboration from Spanish National Health Survey of Spain. INE (2017).

**Table 2. Estimates of the OR (95% Confidence Interval) coefficients for sex and disability (R<sup>2</sup> Nagelkerke)**

Indicator	Sex	Disability	Women with Disabilities
Family doctor	1.947 (0.027)	4.909 (0.076)	4.540 (0.071)
Specialist doctor	1.783 (0.027)	3.267 (0.077)	2.613 (0.056)
Treatments	1.313 (0.006)	1.972 (0.029)	1.877 (0.028)
Non-urgent test	1.329 (0.005)	3.551 (0.058)	3.499 (0.063)
Admission to hospital	1.024 (0.000)	4.451 (0.089)	4.073 (0.080)
Hospital outpatient clinic	1.187 (0.001)	2.754 (0.041)	2.379 (0.032)
Hospital emergency department	1.230 (0.003)	2.649 (0.058)	2.474 (0.055)

Source: Own elaboration from Spanish National Health Survey of Spain. INE (2017).

**Table 3. Estimates of the OR coefficients and R<sup>2</sup> Nagelkerke**

Indicator	Variable	Total Population	R <sup>2</sup> Nagelkerke	Women with Disabilities	R <sup>2</sup> Nagelkerke
Family doctor	Age	1.027	0.064	1.022	0.031
	Home care services	3.068		1.065	
	Emotional and personal support	0.982		1.027	
Specialist doctor	Age	1.020	0.052	0.997	0.006
	Home care services	2.130		1.570	
	Emotional and personal support	1.082		1.081	
Treatments	Age	1.001	0.011	0.983	0.040
	Home care services	2.486		2.132	
	Emotional and personal support	1.092		1.094	
Non-urgent test	Age	1.031	0.083	1.008	0.014
	Home care services	2.226		1.851	
	Emotional and personal support	1.110		1.178	
Admission to hospital	Age	1.022	0.078	1.004	0.049
	Home care services	4.295		3.113	
	Emotional and personal support	0.954		0.981	
Hospital outpatient clinic	Age	1.011	0.021	0.991	0.019
	Home care services	2.505		2.253	
	Emotional and personal support	1.015		1.068	
Hospital emergency department	Age	0.992	0.031	0.981	0.060
	Home care services	2.505		2.253	
	Emotional and personal support	0.870		0.947	

Source: Own elaboration from Spanish National Health Survey. INE (2017).

In the case of the general population, an increase in age leads to a greater probability of use of all services except for

visits to the emergency department. For women with disabilities, the analysis yields the expected values for the use of the family doctor, non-urgent tests, and hospital admission (ORs above one). However, for the rest of the services, the resulting OR coefficients are below one, indicating a progressive decrease in the probability of use as age increases.

In general, studies on the use of healthcare services have focused on the influence of social status on economic factors and do not include explanatory variables relating to the social and family environment of women with disabilities. Therefore, this study includes variables representing home care services and emotional and personal support to capture the impact of human relationships and the home care environment on health in such a way that its importance and its effect on the use of health services can be determined, distinguishing between the general population and the female population with disabilities.

With regard to home care services, the OR coefficients present values greater than unity for all indicators, indicating more intense use of healthcare services by both the general population and women with disabilities. In the case of women with disabilities, social services have a similar influence, with OR coefficients greater than unity but lower than for the general population. These ORs above one may be the result of people who receive home care services getting more continuous, monitored care, meaning that they would make more use of healthcare services and health checks.

The emotional and personal support variable is measured on a five-point scale ranging from 1 for the least support to 5 for the most support, indicating the perceived intensity of the personal relationships providing help and care. The impact of this variable can be seen in both the total population and in the group of women with disabilities, leading to an increase in the use of healthcare services relating to specialist doctor consultations, treatments, non-urgent tests, and hospital outpatient clinics. This finding can be interpreted as an effect of more continuous health monitoring, which prompts greater use of such services. However, hospital admissions and visits to the emergency department present ORs below one. This may be because the aforementioned continuous health care, as we mentioned above, with its greater emotional support, replaces the need for the use of these extraordinary services in a clear way. It is only in the case of visits to the family doctor that there is a difference in the findings between the general population and the group of women with disabilities. The results show that women with disabilities make more visits to the family doctor as their level of emotional and personal support rises, while the opposite is true for the general population, who make fewer visits in such circumstances, which indicates a higher control and confidence in the generalist doctor in the case of women with disabilities.

## CONCLUSION

The data in this study revealed important differences in the use of healthcare services by women with disabilities compared to other women and the population in general, as shown in the tables and the results indicated above. It is essential that healthcare workers and policymakers identify and account for the different requirements of women with disabilities in order to allocate resources more efficiently and effectively meet their needs, possibly even by restructuring the healthcare system for this group. This is politically welcome, but when it comes to

allocating financial and staff resources, they are often left to intentions since when it comes to drawing up the distribution of expenditure, it is relegated to making it as long as there is money left over from other services.

Therefore, this study highlights the differences fundamentally related to emotional and personal support in access to healthcare services. The OR coefficients, estimated using binary logistic regression models, show how the probability of using the various healthcare services changes in response to variations in the factor under analysis, showing interesting results for this group, which highlights the need to develop appropriate policies with adequate financial resources to be able to cope with the use of these health services by people with disabilities.

For the population as a whole, an increase in age causes an increase in the use of the analyzed healthcare services, except the emergency department. This is common in all health systems around the world because the ageing of the population, in general, is the beginning of all possible age-related health problems.

However, in the case of women with disabilities, this effect occurs in the use of the family doctor, non-urgent tests and hospital admission, whereas in the other services studied, there is a progressive decrease in the probability of use as age increases due to increased control by the doctor and the family environment.

For the rest of healthcare services, there is a slight decrease in use with age. The ORs are closer to one for women with disabilities than the ORs for the general population; that is, the differences are smaller between the compared populations, which may indicate that the effect shown in the population as a whole is offset by the more regular use of healthcare services throughout the entire life of women with disabilities, as the results demonstrated in this study.

Regarding the last two factors studied, which represent emotional and personal support, in which data is focused in this article, it is observed that they have a stronger influence on the use of healthcare services. Receiving home care services raises the probability of both the general population and women with disabilities using healthcare services, most significantly for specialist doctor consultations, treatments, non-urgent tests and hospital outpatient clinics. Consequently, emotional and personal support leads to greater use of services due to the monitoring of the patient's health by those around her, which improves her health and daily life. Nevertheless, it is worth noting that both for the general population and for women with disabilities, there is a decrease in the use of emergency services that turns out to be significant. This can be explained as a possible substitution effect produced by more constant emotional assistance, which involves attention and follow-up of the person, preventing the use of this extraordinary healthcare service.

In general, the influence of emotional and personal support on the use of medical services varies according to the group analyzed, especially in that of women with disabilities, which shows a higher use. Therefore, public health and disability care policies should take into account the particular characteristics of this cohort in order to improve the efficiency of healthcare services when addressing the specific needs of this group, prioritizing such measures for better treatment of this

vulnerable cohort.

The levels of association between the explanatory variables (sex, disability and women with disabilities) and the use of health services are higher in the disability and women with disabilities groups (Nagelkerke R Squared in Table 2), indicating the greater sensitivity of these groups and pointing out the importance of the disability variable in the use of these services. However, in Table 3, these indicators indicate that the levels of association between the set of explanatory variables (age, home care services and emotional and personal support) and the use of health services are not always higher for any of the two groups analyzed in this table, total or women with disabilities (Nagelkerke R Squared in Table 3).

This study is the first of a series of our work in the field of disabled women, especially in Spain, focused on their problems with many obstacles in their lives.

#### LIST OF ABBREVIATIONS

(EC)	=	European Commission
(WHO)	=	World Health Organization
(GALI)	=	Global Activity Limitation Indicator

#### ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

#### HUMAN AND ANIMAL RIGHTS

Not applicable.

#### CONSENT FOR PUBLICATION

Not applicable.

#### AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article is available in the [2017 Spanish National Health Survey] at [<https://www.sanidad.gob.es/estadEstudios/estadisticas/encuestaNacional/encuesta2017.htm>], [1].

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#### CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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Declared none.

#### REFERENCES

- [1] National Institute of Statistics (INE). Spanish National Health Survey. Madrid: Instituto Nacional de Estadística. Spanish 2017.
- [2] European Comision (2021). Union of equality: Strategy for the rights of persons with disabilities 2021-2030. 2021. Available from:<https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vlgtpp9safyd>
- [3] Pérez LC. Discapacidad y Asistencia sanitaria Propuestas de mejora. Madrid: CERMI 2006.
- [4] Access to Medical Care in the U.S.: Who Has It, Who Doesn't. By Lu Ann Aday, Gretchen V. Fleming, and Ronald Andersen. (Chicago: Pluribus Press, 1984. Pp. 240. \$24.95, paper.). In: American Political Science Review. 1985; 79: pp. (2)616-6. [<http://dx.doi.org/10.2307/1956781>]
- [5] Pinzón Ochoa MI. Socioeconomic determinants of access to primary prevention, outpatient consultation and emergency services in Colombia: Secondary analysis of the national quality of life survey, 2013. Bucaramanga, Colombia: University of Santander 2014.
- [6] Whitehead M. The concepts and principles of equity and health. Copenhagen: WHO regional office for Europe 1990.
- [7] Sánchez-Recio R, Alonso-Pérez de Ágreda J P, Gasch-Gallén A, Aguilar-Palacio I. Gender inequalities in the use of health services, Spain 2006-2017. *public health of mexico* 2021; 63(2): 190-200.
- [8] Graham H. Building an inter-disciplinary science of health inequalities: The example of lifecourse research. *Soc Sci Med* 2002; 55(11): 2005-16. [[http://dx.doi.org/10.1016/S0277-9536\(01\)00343-4](http://dx.doi.org/10.1016/S0277-9536(01)00343-4)] [PMID: 12406467]
- [9] Ministry of Labor and Social Affairs, MTAS (2006). Action Plan for Women with Disabilities 2007.
- [10] European Comision. Meeting of The European Directors of Social Statistics. 2015. Available from:<https://circabc.europa.eu/sd/a/8eec189a-3389-47d3-999e-c12afc4a0f7d/DSS-2015-Sep-04.3%20GALI%20as%20a%20core%20variable.pdf>
- [11] Iezzoni LI, McCarthy EP, Davis RB, Siebens H. Mobility impairments and use of screening and preventive services. *Am J Public Health* 2000; 90(6): 955-61. [<http://dx.doi.org/10.2105/AJPH.90.6.955>] [PMID: 10846515]
- [12] Public Health Service Task Force on Women's Health Issues. Women's health: Report of the Public Health Service Task Force on Women's Health Issues. *Public Health Reports*, WO 1985; pp. 74-106.
- [13] Krotoski DM, Nosek MA, Turk MA, Eds. Women with physical disabilities: Achieving and maintaining health and well-being. Baltimore: Paul H. Brookes 1996.
- [14] Mondéjar-Jiménez J, Vargas-Vargas M, Meseguer-Santamaría ML, Mondéjar-Jiménez JA. Impact of social factors on labour discrimination of disabled women. *Res Dev Disabil* 2009; 30(6): 1115-23. [<http://dx.doi.org/10.1016/j.ridd.2009.07.013>] [PMID: 19692206]
- [15] DeJong G, Batavia AI, Griss R. America's neglected health minority: Working-age persons with disabilities. *Milbank Q* 1989; 67(Suppl. 2 Pt 2): 311-51. [<http://dx.doi.org/10.2307/3350148>] [PMID: 2534155]
- [16] Beck RW, Jijon CR, Edwards JB. The relationships among gender, perceived financial barriers to care, and health status in a rural population. *J Rural Health* 1996; 12(3): 188-96. [<http://dx.doi.org/10.1111/j.1748-0361.1996.tb00793.x>] [PMID: 10162850]

