

Health Care Accessibility of Lebanese Working-Age Adults with Musculoskeletal Disability

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Abstract: *Background. The diversity of the Lebanese society increased after the 1975-1990 civil war, the grapes of Wrath conflict and July 2006 war. Musculoskeletal disabilities affect up to 10% of this population. This category is more vulnerable in terms of health status, and hence requires more health care.*

Objective. To our knowledge, the health care accessibility of Lebanese young adults with physical disabilities has not been yet explored. This constituted the main objective of the current work.

Methods. 78 working-age adults with physical disabilities were enrolled. Each filled questionnaires regarding health care monitoring, health accessibility, and social inclusion. Demographic data were also collected.

Results. Around half of our sample did not graduate from high school, and 81% of them was either unemployed or earned less than 200\$. 40% of participants reported having difficulty in getting medical care in the past year. This was in relation to the proximity of the physician's office, the accessibility of health care institutions and services, the level of the received medical knowledge, and the affordability of health care fees. Their health status subsequently reflected the accessibility issue. Pain scores were significantly positively correlated with physical disability scores.

Conclusion. Our data emphasize the difficulties faced by the Lebanese working-age adults with musculoskeletal disabilities in terms of accessibility to public places in general, and health care in particular. Our data can be subsequently translated into empowering interventions in public and private sectors to maximize the social inclusion of this population in various domains.

1. Introduction

In Lebanon, the 1975-1990 civil war, the Grapes of Wrath conflict and July 2006 war increased the diversity of the Lebanese society, had a drastic impact on the mental health and extremely resulted in physical disabilities [5,14,20,28]. Few data are available on physical disability in Lebanon, with estimates ranging from 14.7/1000 up to 10% of the population [1,4,9,21,31]. On the one hand, 'disability' is no more considered a biological dysfunction, but rather in its social aspects which permits to understand the environmental impact on persons' functioning [30]. On the other hand, the 'handicap' describes the disadvantage resulting from such impairment and where environmental factors – the barriers- play a major role. In the case of individuals with musculoskeletal disabilities, the disability-handicap-barrier framework offers a powerful and practical way to advocate for this population along with other factors, namely the social exclusion [25]. Markers of the latter can have negative impact on musculoskeletal disability in the domains of economic resources, employment, educational attainment, healthcare, political participation and accessibility to places of leisure. The lack of infrastructure and economic opportunity relative to more developed countries might also exacerbate the situation, and can significantly result in a handicap [23,24]. To the best of our knowledge, issues that face the Lebanese working-age adults have not been sufficiently explored; particularly in terms of health care accessibility. This will constitute the main scope of the current work.

2. Methods

2.1 Study Participants

Participants were recruited from two non-governmental organizations (NGOs): the Lebanese Physically Handicapped Union (LPHU), Beirut,

Lebanon and Arc-En-Ciel, Beirut, Lebanon. We included individuals aged between 18 and 65 years which respectively define the date of high school graduation and age of retirement. The diagnosis of "musculoskeletal disability" was based on the International Classification of Functions (ICF) Browser of the World Health Organization [33]. We included patients with either a "structural" impairment from the category "Structures related to movement: Structure of lower extremity" (ICF code s750), or functional impairment in ambulation from the category "Challenges in neuromusculoskeletal and movement-related functions" (ICF code b7). Exclusion criteria were the presence of comorbid neurodegenerative or psychiatric disorders, concomitant visual or hearing impairments, and any other conditions that might prohibit proper filling of questions. The study was approved by the local ethical committee and performed in conformity with the declaration of Helsinki. All the participants voluntarily gave their informed consent prior to inclusion.

2.2 Self-Reported Questionnaire

The study survey covered four main domains. Disability level and health quality were assessed using the validated Arabic version of the RAND 36-Item Health Survey [8,13], which is a widely used tool for healthcare monitoring and includes indices to measure the participant's level of physical disability, role limitation due to physical or mental disability, and the level of pain. Social inclusion was assessed using Berkman-Syme Social Network Index (SNI) and scored as previously suggested [6,18]. Health accessibility was evaluated using the Chicago Southeast Diabetes Community Action Coalition form A.10. [11]; the latter two scales were translated them from English with the help of three different translators. Demographic and socioeconomic data were also collected.

2.5 Data Analysis

The full statistical analysis was performed using the SPSS 20 software. The mean \pm standard deviation was calculated for each score. Pearson correlation analyses were performed to study the relationships among the different variables. P values less than 0.05 were considered statistically significant.

3. Results

3.1 Demographic Data

78 participants (38 males, 40 females) completed the surveys. Their mean age was 28.1 ± 9.2 . The residential distribution per districts was as follows: Mount Lebanon (n=26), Beirut (n=17), Bekaa (n=12), South (n=11), Baalbeck (n=6), Nabatiyyeh (n=1), unspecified (n=5). Among them, only 35% graduated from high school and 19% completed undergraduate studies. 81% was either unemployed

or earned less than 200 USD, while only 19% earned greater than 200 USD. However, the household income was reversed with 81% living in a household that earns greater than 200 USD, and 19% living in a household that earns less than 200 USD. In terms of accessibility to public places, universities and schools were the most difficult to access (only 46% and 44% reported no difficulty, respectively); followed by work and polling places which were slightly more accessible (67% and 60% reported no difficulty, respectively).

3.2 Health Status and Social Network

The RAND-36 mean physical function was 46.4 ± 8.3 . The mean role limitation due to physical disability and emotional health were 47.8 ± 12.7 and 61.1 ± 6.9 respectively. The mean pain index score was 61.1 ± 12.2 . Correlation analysis revealed a significant positive correlation between pain scores and physical disability ($r=0.8$, $p<0.001$). There was no statistically significant relationship between the level of physical disability and each of the role limitation due to physical health or emotional health.

3.3 Health Accessibility

40% of participants reported having difficulty in getting medical care in the past year. As for the medical coverage, 32% was covered by the social security, 26% by the ministry of public health, 20% directly paid the hospital fees, 12% was supported by NGOs, 7% had private insurance and 2% had the army insurance. The survey further looked at four possible sources of difficulty:

Physical Accessibility: Getting into the physician's office was reported to be difficult (n=19), more or less difficult (n=20) or not difficult (n=39). Only 11 individuals reported being dissatisfied or very dissatisfied with how convenient their physician's offices were in relation to their home. 23 Individuals required more than an hour to arrive at the physician, with two individuals spending more than two hours. The participants reached their physician's office driven by a family member (n=39), using public transportation (n=18), driving by their own (n=14) or by other means (n=7). In terms of health-related facilities, the three most inaccessible facilities were recreational centers such as "gyms, swimming pools, or public parks", followed by "shops, malls, supermarkets", and governmental facilities.

Accessibility to Medical Tests: 84% of individuals who attempted to perform an x-ray or other imaging test were unable to do so because they were not accommodated by their health care provider, 56% of those who tried to get on the physician's examination bed could not make it, and 33% of those who presented for stool/urine test did not have the adequate settings to provide the sample.

Physician Accessibility: The primary source of care was the personal physician (n=46), health clinics (n=17) and hospitals (n=15). Only 32 individuals stated having a regular follow-up with their physicians. 21 individuals considered that taking an appointment at their physician is either difficult or very difficult, and 6 individuals reported having to wait “too long” to see their doctor. Interestingly, 76 of them reported the physician to be either “very” or “quite” attentive. Nearly half of the sample was either dissatisfied or very dissatisfied concerning the accessibility to emergency care.

Accessibility to Health Information: 29 individuals reported being dissatisfied or very dissatisfied with their knowledge regarding where to get healthcare. 16 individuals were dissatisfied or very dissatisfied regarding their communication with physicians or other healthcare staff. 13 individuals reported having difficulties in understanding what the doctors told them. 27 individuals reported that their doctor does not give enough health information.

Affordability of Care: 46 individuals were either dissatisfied or very dissatisfied with physician fees. 38 were either dissatisfied or very dissatisfied with their health insurance. 15 were unable to acquire a medication prescribed in the past year..

4. Discussion

This study aimed to explore the accessibility status of the Lebanese working-age adults in terms of public places and particularly health care. To start, given that half of our participants resided in the capital and its surrounding areas, one might expect to observe a moderate accessibility to public places. Yet, about half of the participants did not finish high school, most of them were either unemployed or earning less than 200 USD, and around half of them could not physically access the majority of the public places, mostly the academic institutions. Our data are consistent with other studies where individuals with limited mobility in Lebanon do not fully enjoy educational, political, social, and economic equity, and bear a greater psychosocial burden than the general population [12,27,29]. In line with our results, one study showed that only 20 Lebanese schools allow entry to children with disabilities [4]. Indeed, disabled children in Lebanon at all stages were found to have lower educational attainment and are less likely to graduate from high school and university than other children with no disability [16]. As for the employment, there is an inequity in access that goes against the commitment to disabled individuals made by the Lebanese government when it signed the UN Convention on the Rights of Persons with Disabilities (article 27) [30]. In line with our results, one study in the Bekaa valley has shown that around half of the school graduates were unemployed [17]. Factors that can affect the

employment opportunities of people with disabilities include the physical barriers, marginalization and social comprehension of the disability concept, employer’s attitudes, and the lack of a good educational level [16]. It is noteworthy that Lebanese laws are already available in terms of accessibility. In 2000, the law 220 was inspired by the “UN Standard Rules for Equalisation of Opportunities” and the “World Programme of Action Concerning Disabled Persons”, and specifies the rights of the disabled persons to accessible transportation and to inclusion in employment, health services and education [1,19,21]. In 2004, the construction code was available and stated that licensing of public buildings should respect the adherence to accessibility [1]. However, the reality seems to be practically inconsistent with the named legislations. The Lebanese laws might need to be reviewed to ratify the international legislation signed by the government. Interestingly, voting places were accessible to 60 % of our sample and might be related to a significant step towards political inclusion, which occurred during the 2005 elections, when two Lebanese NGOs received funding to conduct a non-partisan, national campaign to provide access to voting areas that had previously been inaccessible to members of the disabled community [10,32].

40% of the participants reported difficulty in getting medical care in the past year. Around one-quarter had difficulty in accessing their physician’s office and took public transportation, with 29% needing more than an hour to reach. Unluckily, only less than half of our participants were having their health regularly followed by a physician. Potential solutions can be through implementing policies that increase the availability and effectiveness of health care professionals. This can be accomplished by developing rural outreach clinics and emphasizing home visits. Another way would be by adapting public transportation to the need of our population as stated by the law 220 [1,19,21]. Nearly half of the participants were dissatisfied concerning the accessibility to emergency care. A total of 60 unique unsuccessful attempts were found in terms of accessing the imaging services, the physician examining table, and stool-urine testing. To note, although patients with physical disabilities have a higher medical utilization and expenditures, they still lack proper health care and equity to access health care units and instruments [16]. In this context, raising awareness among the Lebanese citizens is crucial regarding the importance of preventive medicine and role of the primary care physician. Indeed, since most of the participants described their physicians as attentive and one third reported an insufficient time spent at the physician’s office, strategies should focus on improving the quantity rather than the quality of time spent with patients.

Lebanese hospitals might also benefit from modifying their healthcare infrastructure and training nurses and technicians on appropriate interventions to serve the disabled population. The ministry of health should establish a national policy for health care by organizing capacity building, increasing the accessibility for persons with disabilities, raising awareness and providing basic training for the staff, and maintaining with regular assessments.

Affordability of care is certainly an issue since half of our sample was dissatisfied from their health insurance and 15 individuals were unable to pay for their medications. To note, although a large portion of the participants were covered by social security, the ministry of public health and NGOs, 27% had to pay by themselves for medical care. Although a disability card is present to serve the purpose, the regulating law is not being properly implemented which can explain the frequent difficulties reported by our participants.

Accessibility to health information is a challenge for a significant number of our participants in terms of the knowledge regarding where to get health care, their communication with their physicians including their level of understanding, and the lack of enough information. This might be explained in part by the large number of participants who did not have an opportunity to graduate from high school, which can account for the aforementioned knowledge gap while dealing with healthcare providers. Addressing the physicians is essential to overcome this communication barrier.

As for the health status, the mean score was around the average. People with disabilities are known to generally experience greater risks of poor health [16]. The abovementioned limitations in terms of health care accessibility could be seen as predictors to the health status of our participants. The mean pain index score was 61.1 ± 12.2 and was negatively correlated with the ability to fit a functional role, which is predictable due to the debilitating nature of pain. The latter was shown to contribute to poor self-rated health and disability independent of diagnosis [3,26]. Regarding the interaction between pain, disability and social networks, studies have shown that chronic positive or negative social exchanges are respectively associated with lower or higher level of disabilities [22]. In addition, social isolation may have pervasive health consequences' [6]. Many of our sample relied on family for transportation. It is of importance to mention that the Lebanese society particularly values kinship and extended family ties, and a predominant way to cope with stress would be by turning to others [2]. We believe that a way to assure the well-being of Lebanese adults with musculoskeletal disability would be by providing education and support for their families and enhancing the role of support groups, clubs and NGOs.

As much as possible, increasing accessibility in Lebanon is a unique challenge that must involve local, culturally appropriate solutions rather than importing the legislation and accessibility ideals of developed nations [15]. That being said, a more refined approach that emphasizes both quantitative (is there access?) and qualitative measures (how good is this access?) should be encouraged as it provides the greatest improvement for building-owner's budget [7].

A limitation of our sample is that individuals who are not registered at NGOs will be underrepresented, knowing that those might be the most excluded. The relationship between geographic location and access to emergency care should be addressed in future studies to help identifying the areas that are currently underserved. It would be worthwhile to investigate the accessibility of public transportations, given that a large proportion of our sample was using such services.

5. Conclusion

Our results highlight the difficulty faced by the Lebanese working-age adults with physical disabilities, particularly in health care accessibility. Our data should be implemented in health care policies aiming to improve the current situation and maximize the social inclusion of these individuals in various domains. This could be achieved by raising awareness, properly applying the present laws, and influencing the decision makers in private and public sectors.

6. Conflict of Interest

The authors declare no conflict of interest.

7. Acknowledgment

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