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# Musculoskeletal Health Committee Report on Evaluation of Musculosketeal Disability in Van

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**ABSTRACT**

Our aim in this study report of the medical board is to evaluate the characteristics of disabled people with musculoskeletal disability related to age, sex, and to determine the reasons for the application.
Between January 01, 2014, and June 31, 2014, a total of 4717 patients admitted to the health board of our hospital were retrospectively reviewed by using hospital information system and health board report records.
2703 patients evaluated from 4717 patients were male (57.3%), 2014 were women (42.7%) and the mean age was 40.75 ± 6.06 years. The most common reason for admission to disabled Health Board in 2074 (43.9%) was to take advantage of the law and in 1903 (40.3%) were identified as to benefit from self care salaries. The most common excuse presenting symptoms were as; osteoarthritis 584 (19.7%), cerebral palsy 387 (13.1%), hemiplegia 291 (9.8%) and developmental dysplasia of the hip 241 (8.2%), respectively. Severe disability rate 726 (15.4%) was found. The permanent disability rate was found to be 64.4% (n=3045).
Musculoskeletal disability is a major problem in our country as in the whole world. This study aimed to contribute to the musculoskeletal system disability epidemiologically. We need to take necessary measures for the musculoskeletal system disabilities, necessary laws, training and physical measures and social and physical rehabilitation of disabled people.

**Key Words:** Disability, Musculoskeleteal system, Health assessment board, Rehabilitation

## Introduction

People with disabilities, congenital or acquired, may have physical or mental disorders such as lost in sensory and social skills, difficulties in adapting to social life and in meeting their daily requirements, protection, care, rehabilitation, and they are defined as persons who need counseling and support services (1). The musculoskeletal disability is deficiency and loss of function in the musculoskeletal system (2). Disability may be permanent or temporary (3). According to the State Institute of Statistics, disability rate is 12.29% in our country and the vast majority of this ratio is formed by the musculoskeletal disorders (2).

Individuals with a musculoskeletal disability encounter various difficulties in their activities of daily life, the use of health services, education, employment, transportation, home life and social life. There are various disability evaluation criteria and mostly in line with the demands of the social security institutions in our country, international standards are used taking the extent and total disability into account.

The determination of musculoskeletal disability and to know its origin and frequency are important for the prevention and management of disability, and for post-rehabilitative process of integration into society. The service offered to people with disabilities is also an indicator of the level of economic development, community education, health care. The studies on musculoskeletal disability, can contribute to necessary arrangements for people with disabilities.

In this study, we retrospectively reviewed the characteristics of patients with musculoskeletal disability referred to the health board in terms of age, sex, disability degree, and reasons for reasons for applying to the health board.

## Matherial and Methods

Between January 01, 2014, and June 31, 2014, a total of 4717 patients admitted to the health board of our hospital were retrospectively reviewed by using hospital information system and health board report records. The data including age, sex, reason for admission, total disability rate, musculoskeletal disability rate, musculoskeletal disability diagnosis, the report period and severe disability rate were recorded.

Assessing the extent of disability, classification and

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**Table 1.** The reasons for applying to the health board

| | n | % |
|---|---|---|
| To benefit from the law 2022 | 2074 | 43.9 |
| To take advantage of the self-care services | 1903 | 40.3 |
| Special education | 339 | 7.3 |
| Excise tax reduction | 103 | 2.1 |
| Tax relief | 35 | 0.7 |
| Power wheelchair | 12 | 0.3 |
| Disability detection | 9 | 0.2 |
| Custom fitting tool | 8 | 0.2 |
| Disability card | 8 | 0.2 |
| Multiple requests | 185 | 3.9 |
| Other | 41 | 0.9 |
| Total | 4717 | 100 |

regulation on health reports and disabled persons' disability rates were calculated according to the certain criteria. The severely disabled was assessed as the disability rating ≥50% and patients who need the support of others in their activities of daily living were decided as severely disabled persons by the health board. SPSS version 16.0 software was used for statistical data analysis. All data were expressed as number (n) and percentage (%) or mean ± standard deviation. The study protocol was approved by the Ethics Review Board.

## Results

2950 (62.5%) subjects with musculoskeletal disability were present in 4717 admitted to the hospital's health board. 1801 (61.05%) subjects with musculoskeletal disability were male and 1149 (38.95%) were female. The mean age was 40.75 ± 6.06 years of our applicants. 726 (15.4%) were identified as severely disabled subjects. 3045 (64.4%) subjects were permanently disabled. Assessed total disability rate of subjects was 53.87 ± 27.66, while musculoskeletal disability rate was 30.72 ± 22.45.

The most common reasons for admission to health board were to benefit from the law (n=2074; 43.9%) and to take advantage of the self care salaries (n=1903; 40.3%). The reasons of refer to the health board are shown in (Table 1). Osteoarthritis (n=584; 19.7%), cerebral palsy (n=387; 13.1%), hemiplegia (n=291; 9.8%) and developmental dysplasia of the hip (n=241; 8.2%) were the most common disorders (Table 2). Severe disability found in 726 (15.4%) cases. The permanent disability rate was 64.4% (n=3045).

## Discussion

People with disabilities are increasing in part due to population ageing and increases in chronic health conditions. Musculoskeletal disability resulting from structural damage and function losing is characterized by limitations in performing appropriate activities. According to WHO data, about 10% of the world's population, 200 million to 650 million people, including children have some form of disability (4). The estimated prevalence of disability varies between countries. In our country, according to the 2002 Turkey Disability Survey, the disabled population ratio was 12.29%, and orthopedic disabilities had be financed with high prevalance (1.25%) than visual disability (0.6%), and mentally disability (0.48%) (2-5). Orthopedic disabilities constitute 8.8% of registered disabled people in the national database (6). Uysal et al (7) at Dicle University have found that the musculoskeletal disability ratio was highest (21%) among others. Terzi et al (8) have defined that the musculoskeletal disability ratio was 29.6% in Kocaeli-Derince. On the other hand, when the disability rates are viewed in terms of other branches, neurological disability ratios were 10.8% and 13.6% in two studies (9,10). Ear-nose-troath disability rate have been reported as 13.5% (11). Similarly, in our results, musculoskeletal system had more disabilities compared with other systems. Patients who included in this study had the range of 101 years to 1 year of age, and the average age was 40.75 ± 6.06 years. Özyurda et al (12) has been reported that people with disabilities were mostly ages 40 and over. The median age of people with disabilities in Turkey was found to be 33.86-48.87 for those with chronic diseases (2,3). It is known that male patients require more handicapped health boards (3,8,13,14). In consistent with this data, 57% of the patients in our study were male. To get cash support from government agencies is an important reason for application to health boards.

According to our results, the most common reasons for admission to health board were to benefit from

**Table 2.** Musculoskeletal disorders in cases admitted to the health board

| | N | % |
|---|---|---|
| Ostheoarthritis | 584 | 19.7 |
| Cerebral palsy | 387 | 13.1 |
| Hemiplegia | 291 | 9.8 |
| Developmental dysplasia of the hip | 241 | 8.2 |
| Fracture sequelae | 235 | 8.0 |
| Lombar diskal hernia | 197 | 6.7 |
| Operated | 128 | 4.3 |
| Polio | 161 | 5.5 |
| Gait disturbance | 142 | 4.8 |
| Amputation | 102 | 3.5 |
| Lower limb amputation | 53 | 1.8 |
| Upper extremity amputation | 49 | 1.7 |
| Contractures | 81 | 2.8 |
| Total hip arthroplasty | 56 | 1.9 |
| Burn sequelae | 53 | 1.8 |
| Vertebral fracture | 52 | 1.8 |
| Rheumatoid arthritis | 51 | 1.7 |
| Range of motion limitation | 46 | 1.6 |
| Peripheral nerve injury | 46 | 1.6 |
| Ankylosing spondylitis | 36 | 1.2 |
| Brachial plexus injury | 32 | 1.1 |
| Meningomyelosele | 29 | 0.9 |
| Total | 2950 | 100 |

the law (43.9%) and to take advantage of the self care salaries (40.3%). Other reasons were to benefit from special education, special consumption tax cuts, tax cuts, demand for power wheelchairs, disability determination, custom-fitting tools, disability card. Terzi et al have repoted that the highest rate of admission to health board was to benefit from social services constituted reference (8). In the eastern region of our country, still the literacy rate and income levels are low and unemployment is high. Our findings may be releated to these socioeconomic problems.

Terzi et al (8) have found that osteoarthritis is the most common cause of the disability in their study on the prevalence of disability. Similar results from a study of older patients with osteoarthritis who admitted to outpatient polyclinic of physical therapy have been reported (15). Osteoarthritis is the most common joint disorder and also is the most common cause of musculoskeletal disability. Its prevalence increases with age. Similarly, our results demonstrate that osteoarthritis is the most prominent cause of disability (19.7%).

Cerebral palsy and hemiplegia are second and third most common cause of disability according to our study results (13.1% and 9.8%, respectively). Hemiplegia and cerebrovascular disease are third most common cause of morbidity and mortality in the world and they have been reported as most common causes of neurological disabilities (9). In general, osteoarthritis, cerebral palsy and hemiplegia are common diseases encountered in outpatient polyclinic. Unlike other studies, our study had higher rates of developmental dysplasia of the hip (8.2%).

According to our results, common inflammatuar diseases such as rheumatoid arthritis and ankylosing spondylitis encountered in rheumatology outpatient have apparently low role in disability (1.7% and 1.2%, respectively). This may be related to a decrease in physically demanding work and a increase in new treatment options (16). On the other hand, complications and sequelae like organ involvement of rheumatic diseases might be skipped, and thus the evaluation of disability may be limited to the diagnosis. Therefore, rheumatic diseases should be scored for both diagnosis and possible complications in disability evaluation (17). Knowing the rate and cause of disability is important for the rehabilitation process and follow-up. Severe disability rate was 15.4% in the present study. In the study done by Akar

et al (18), this ratio was 19.6%. Regional differences in disability rates may be related to health awareness, access to healthcare services, and economic and demographic factors.

This study was conducted to evaluate the causes of musculoskeletal disability in our region. Musculoskeletal disability is a major problem in our country as in the whole world. We need to take measures of disability, necessary laws, training, and social and physical rehabilitation. This study may contribute to the subject epidemiologically and to the health policy planning.

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