FACTORS INFLUENCING PHYSICAL ASPECT AMONG PATIENTS WITH MULTIPLE SCLEROSIS

Assala Mohsin Hanoon¹, Rajha Abdul Hassan Hamza²

¹M.Sc. Nursing, Adult Nursing Department, Faculty Nursing/ University of Kufa, Iraq.
²Prof., Dr., Nursing, Adult Nursing Department, Faculty of Nursing / University of Kufa, Iraq.
assalaalhasani2020@gmail.com

ABSTRACT

Multiple sclerosis is considered one of serious causes that lead to persistent neurological disability especially among young people, that represent the most productive group in society. More than 2.5 million people around the world diagnosed with MS, it occurs in females more than males and it resulting psychological and physical effects. The study aimed to assess the physical aspect of patients with multiple sclerosis and to find the relationship between the physical aspect with their socio-demographic and clinical characteristics. A descriptive cross-sectional study was conducted at Middle Euphrates Center for Neurosciences in Najaf city for the period from 25th of December 2020 until 12th of June 2021. A non-probability (purposive sample) was collected from 68 MS patients through the interview method. The reliability and validity of the questionnaire were measured by Cronbach's Alpha test and a team of subject matter experts, respectively. The results showed that 60.3% for age group (31-40) year, 86.8% of participant was females, and 89.7% of them live in urban areas. The general assessment of the patients' physical aspect was moderate (39.7%). The study concluded that whenever the educational level progresses, the physical aspect of MS patients will improve, while increasing BMI and duration of MS will lead to a deterioration of the patient’s physical aspect. Patients with RRMS have a better physical aspect compared to (SPMS) type. The study suggested that conducting an educational program to increase patients' awareness of the factors affecting the physical aspect, and Conducting other studies in large numbers covering all regions of Iraq.

Keywords - Factors, Multiple sclerosis, physical aspect.

I. INTRODUCTION

Multiple sclerosis (MS) is one of the common causes of neurological origin that leads to a lack of activity in the young population

[1]. It has been observed that patients with multiple sclerosis around the world have increased from 2.1 million in 2008 to 2.3 million in 2013. A statistic conduced in 2020 showed that an estimated 2.5 million people have multiple sclerosis around the world. Canada and Scotland have the highest levels of multiple sclerosis, while parts of countries on the equator such as America, Asia and Africa have very low levels of MS [2]. Multiple sclerosis leads to challenges in physical health (3). This physical deterioration will affect the functions of the body systems such as the sensory organs, the brain, the spinal cord, the bladder and the intestine [1]. More than 90% of patients with multiple sclerosis suffer from impaired movement that limits their daily activity, restricts their mobility and need for help from others to carry out daily activities [4]. Due to the high cost of treating MS, increase in premature mortality and the disability rate, it has made multiple sclerosis a threatening health problem in society [5]. With regard to gender, it was found that the incidence rate of women was greater than that of men, while with regard to age, it was found to affect age groups from 20 to 50 years, except in rare cases it affects childhood [6]. With regard to Iraq the first recorded case of multiple sclerosis was in the year 1950, and in 1975 a study was conducted by researcher Hamdi in Iraq who found that most of the prevalence of MS was concentrated in the northern regions of Iraq, especially among the Kurdish people [7].
II. MATERIALS AND METHODS

Study Design: A Descriptive cross-sectional design completed to achieve objectives of the current study for the period from the 25th December 2020 until 12th July 2021.

Ethical Consideration: Before starting the data collection, it is necessary to protect the rights of the subjects through informed consent which includes the following important elements (the researcher introduces himself and his identity to the subject, explaining the objectives of the study, describing the benefits of study, maintaining the confidentiality of the patient’s identity and information, participating in the questionnaire is voluntary and the right to withdraw from the study without any compensation).

Setting of the Study: The study was conducted at the Najaf Health Directorate / Middle Euphrates Center for Neurosciences in Al-Najaf Al-Ashraf city. Sampling of study: A non-probability sampling technique (purposive sample) of 68 patients with multiple sclerosis who visit consultants and units of the Middle Euphrates Center for Neuroscience.

criteria:

1. Patients diagnosed with multiple sclerosis by a neurologist.
2. Patient’s age 18 year and older.
3. Patient speaks Arabic.
4. Patients agreed to participate in the study.
5. Patients attending to middle Euphrates Center for Neurosciences.

Instrument of the Study: The questionnaire was divided into three parts:

Part 1/Socio-Demographic Characteristic: It contains 7 variables including (Age, Gender, Level of Education, Residency, Marital status, Occupation and Monthly income).

Part 2/ Clinical Data: It contains 5 variables including (Disease duration since diagnosis, type of MS, Family History, BMI, Smoking).

Part 3/ Multiple Sclerosis Impact Scale: This scale consists of 20 questions to assess the physical aspects of patient with MS.

III. RESULTS:

A total of 68 MS patients who participated in the current study. 60.3% of them are in the age group (31-40) years. Women were dominant by (86.8%) compared to men. With regard to educational level, it showed that (29.4%) of them were Preparatory school graduate. regarding to residency, it was revealed that the majority of patients (89.7%) live in urban regions. Concerning to marital status, it was revealed that the majority of patients (86.8%) were married. With regard to the occupation, it showed that (73.5%) of them were housewives. (82.4%) of the study sample said that the monthly income was some sufficient see table 1.

The overall assessment about physical aspect of MS is Moderate level at mean of score 1.96, see table 2.

The physical aspect is better for the patient who graduated from the college and above compared to other levels of education. Concerning to disease duration since diagnosis it was found that the category most affected on physical aspect is the category of 10 years and over comparing to rest groups. Regarding to (BMI) it was found that the category most affected on the physical aspect is the category of obese weight see table 3.

<table>
<thead>
<tr>
<th>Demographic data</th>
<th>Rating and interval</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>&lt;= 20</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>21 - 30</td>
<td>12</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>31 - 40</td>
<td>41</td>
<td>60.3</td>
</tr>
</tbody>
</table>

Table 1. Demographic characteristics of study sample:
### Table 2. Overall Patient’s physical aspect about MS

<table>
<thead>
<tr>
<th>Levels</th>
<th>Frequency</th>
<th>Percent</th>
<th>Mean score</th>
<th>Overall Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>22</td>
<td>32.4</td>
<td>1.96</td>
<td>Moderate</td>
</tr>
<tr>
<td>Moderate</td>
<td>27</td>
<td>39.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sever</td>
<td>19</td>
<td>27.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 3. Analysis of variance of patient’s physical aspect with some demographic & clinical factors

<table>
<thead>
<tr>
<th>Demographic data</th>
<th>Rating and interval</th>
<th>N</th>
<th>Mean</th>
<th>SD.</th>
<th>F. value</th>
<th>DF</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of Education</td>
<td>Illiterate</td>
<td>11</td>
<td>2.35</td>
<td>0.21</td>
<td>5.12</td>
<td>5</td>
<td>0.001</td>
</tr>
</tbody>
</table>

www.turkjphysiotherrehabil.org
The results show that the general assessment of physical aspects more than a third of the sample had a moderate level (39.7%). Perhaps as a result of the worsening of the physical symptoms of patients with multiple sclerosis that limited their physical activity, such as (balance problems, heaviness of the limbs, joint stiffness, muscle spasms and vision problems). This result comes along with [8] they showed that more than a third of the sample had a moderate level about physical aspects of MS (40%). Relative to deference in physical aspects with level of education, physical aspect is better for the patient who graduated from the college compared to other levels of education. This result similar to [9] they found that there is a relationship between the physical aspects and educational level of patients with MS. Regarding to Disease duration since diagnosis, it was found that the category most affected on physical aspect is the category of 10 years and over comparing to rest groups. This result may reflect the fact that the more years afflicting the disease, the worse the physical condition. This result in same line with [10] They proved in their studies that the physical condition worsens with progressive duration of the disease at 8 years and more. Regarding to Body Mass Index, it was found that the category most affected on the physical aspect is the category of obese weight. Perhaps as a result of the lack of physical activity for obese people, in addition it may be due to treatments such as corticosteroids that have side effects that cause weight gain. These results agree with [11] they found that the category most affected on the physical aspect is the category of obese weight.

V. CONCLUSIONS

1- The general assessment of the physical aspect was moderate

2- Increasing the educational level plays an effective role in improving physical aspect of MS patients, while increasing in body mass index and duration of MS will deteriorate physical aspect of patient.

Recommendations: it based on the conclusions of the current study

1. Conducting an educational program to increase patients' awareness of the factors affecting the physical and psychological aspects.

2. Creating a special unit to educate patients and their families on how to deal with the problems faced by a multiple sclerosis patient.
There is no financial disclosure.

**Conflict of interest**
None to declare.

**Ethical Clearance**
All experimental protocols were approved under the Adult Nursing Department and all experiments were carried out in accordance with approved guidelines.

**REFERENCES**