

Evaluating the Styles of Coping With Stress of Individuals With Multiple Sclerosis During the Covid – 19 Pandemic

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ABSTRACT

Objective: Multiple sclerosis (MS) is among the most influential environmental factors. Quarantine days during Covid-19 outbreak can cause conditions such as anxiety, isolation stress, financial and long-term economic stress, including health concerns. The descriptive study was planned and applied with the aim of examining the impacts of Covid-19 pandemic on the styles of coping with stress of individuals with multiple sclerosis.

Methods: The study was carried out on 246 volunteer individuals during April 2020-May 2020 following the approval of the Turkey MS Association and the briefing provided to the individuals. The data were acquired via Personal Information Form and The Styles of Coping with Stress Scale.

Results: The mean age of individuals with MS was 39.41±9.06 years. Statistically significant increase was found in the sub-dimensions of optimistic and helpless approach with gender, submissive approach with marital status, helpless and submissive approach with education status, helpless, submissive and seeking social support sub-dimensions with working status ($p<0.0$, $p<0.05$).

Conclusion: It was determined that individuals with MS use the helpless approach and submissive approach most frequently in coping with stress during the Covid-19 pandemic. It was determined that those living with their families mostly use the optimistic approach and self-confident approach. It is thought that MS associations will be effective in coping with stress in reducing symptoms and social and physical support through informative meetings, home visits, psychotherapies, yoga and organized trainings.

Keywords: covid 19, multiple sclerosis, stress, coping style

1. INTRODUCTION

Coronavirus disease 2019 (Covid-19) is a global viral pandemic that emerged in Eastern Asia and rapidly spread out all over the world. Multiple sclerosis (MS) is a demyelinating disease of unknown etiology caused or triggered by the virus. Different viruses including herpes viruses are considered as environmental, etiological agents or risk factors that result in relapse in the course of MS (1).

Stress is among the environmental factors that has the greatest impact on Multiple sclerosis (MS). It has been reported in various studies that there is a relationship between stress and MS (2). Mohr et al. (2004) reported more relapse after stressful life events. It is considered that stressful life events during infection may lead to immunosuppression

and problems in the removal of the pathogen in addition to MS advancement (3).

Although there are studies dealing with different forms of coping with stress, individuals with secure attachment styles tend to find more effective coping styles; There is a consensus that individuals with anxious and avoidant attachment styles use ineffective coping styles (4-5). In one study, securely attached individuals showed styles of active planning, external help seeking, religious indulgence, acceptance, and cognitive restructuring; apathetic-avoidant attachment style of active planning; Fearful-avoidant individuals, on the other hand, stated that they frequently use coping styles such as escaping, isolating, denying the problem and dealing with other things (6).

The quarantine procedures that went into effect during the Covid – 19 pandemic may lead to stressful situations including health concerns as well as anxiety, isolation stress(7). It is known that anxiety, depression and stress may trigger attacks in individuals with MS together with other symptoms (8). It is also known that relationships between individuals with MS and their social networks including families, friends, peers, colleagues, professional organizations are among the primary features for coping with stress. Various studies have put forth that interpersonal and social interactive relations have positive impacts on knowledge, trust, social support, clinical results, behaviors, decision making and self-care(9-10).

2. METHODS

2.1. Aim and Type of the Study

The study was planned and carried out in a descriptive style for examining the impact of the Covid-19 pandemic on the styles of coping with stress of individuals with Multiple sclerosis.

Study Questions

1. What are the styles of coping with stress of individuals with MS?
2. What are the styles of coping with stress of individuals with MS with regard to their sociodemographic characteristics?

2.2. Place and Time of the Study

The study was carried out on individuals with MS registered to the Turkey MS Association during the dates of April 2020-May 2020.

2.3. Study Population and Sample Group

The study population was comprised of individuals registered to the Turkey Multiple Sclerosis Association, whereas the sample group was comprised of 246 individuals with who volunteered to take part in the study. There are 1100 individuals with MS registered to the association. Turkish Multiple Sclerosis Association; To introduce the disease to patients, their relatives and the society, to increase national/international cooperation opportunities and to raise awareness about MS, to contribute to scientific research on the diagnosis and treatment of the disease, to represent our country in international platforms, to carry out mutual information flow, to be with the patients at every stage of the disease, to provide medical treatment places, to increase the quality of life of patients and their relatives, to organize activities to enrich their social lives, to contribute to their personal development in the fields of education and art,

and to provide rehabilitation and psychological counseling services.

2.4. Data Acquisition Tools

2.4.1. Information form

Prepared by the researchers in accordance with the related literature, comprised of 7 questions on the individuals with MS (age, gender, education status, marital status, employment status, social security status) and individuals they live with.

2.4.2. The styles of coping with stress scale (CSS):

The Styles of Coping with Stress Scale is a 4-point Likert type developed by Folkman and Lazarus (1985) and consists of 30 items. The reliability and validity study was carried out in our country by Şahin and Durak (1995). The scale has two dimensions as problem-focused effective methods and emotion-focused ineffective methods. These two dimensions are reflected in 5 factors known as “self-confident”, “optimistic”, “helpless”, “submissive” and “seeking social support”. It was adapted to Turkish society by Şahin and Durak (1995) (11). The Cronbach Alpha internal consistency coefficient for the 5 sub-scales of CSS was calculated as 0.74. When the coronbach alpha values of the scale sub-dimensions were examined in our study, it was determined as Optimistic approach .83, Self-confident approach .85, Helpless approach .84, Submissive approach .85, Seeking social support .83. The sub-scales and the minimum and maximum scores vary as:

- Optimistic approach (items 2,4,6,12,18), 0 – 15 score
- Self-confident approach (items 8,10,14,16,20,23,26), 0 – 21 score
- Helpless approach (items 3,7,11,19,22,25,27,28), 0 – 24 score
- Submissive approach (items 5,13,15,17,21,24), 0 – 18 score
- Seeking social support (items 1,9,29,30). 0-12 score.

The scale comprised of 30 items in total provides a scoring that varies between 0-3 (0 = not used, 1 = used a little, 2 = used, 3 = used too much). Items 1 and 9 of the seeking social support sub-scale are scored reversely. Scores of each factor are calculated separately and the total score is not calculated.

2.5. Data Acquisition Method

The data were acquired by sending the informed consent form including information on the study and the online questionnaire form to individuals with MS isolated at their homes by taking the approval of the Turkey MS Association and with their support. Face-to-face interviews could not be carried out with the participants due to the Covid-19 pandemic and informed consents were received. They were

asked to answer the questions by taking their conditions during the previous month after the onset of the Covid-19 pandemic in Turkey.

2.6. Data Evaluation

The data were presented in the form of percentages, mean or median values. Kolmogorov Smirnov analysis was carried out to determine whether the data are distributed normally or not. Independent t test was used for comparing more than two independent groups during the analysis of data with normal distribution, where One Way ANOVA test was used for determining the difference between more than two independent groups and Post hoc Tukey test was used for determining the group or groups with differences. Statistical significance was evaluated as $p < 0.05$.

2.7. Limitation of the Research

No sample selection was made in the study and the results can be generalized to this group.

2.8. Ethical Aspect of the Study

Approval was taken from the Turkey MS Association and informed consent forms were taken from the participants in order to carry out the study. Ethics Council approval was obtained from the University Ethics Council (FBU/2020-005).

3. RESULTS

Table 1 presents the results on the styles of coping with stress of individuals with MS who participated in the study with regard to their descriptive characteristics. Mean age of the individuals with MS who participated in the study was 39.41 ± 9.06 (min:20, maks:63), 71.1% (n:175) were women, 62.6% (n:154) were married, 55.7% (n:137) had an education level of university and above, 46.3% (n:114) were employed, 93.1% had health insurance, 61.8% (n:152) were living with their nuclear family.

Mean score of the sub-dimensions of the MS patients coping styles scale according to gender were compared, and the increase in the optimistic approach ($p < 0.01$) in men and helpless approach ($p < 0.05$) sub-dimension in women was statistically significant. It was determined that men showed a more optimistic approach ($p < 0.01$), while women showed a desperate approach (Table 1).

The sub-dimensions of the MS patients coping styles scale and their mean score according to marital status were compared, and the submissive approach ($p < 0.05$) of married

people was found to be statistically significant compared to singles (Table 1).

The sub-dimensions of MS patients coping styles scale and their educational status mean score were compared and it was found to be statistically significant in the helpless approach and submissive approach sub-dimensions ($p < 0.001$, $p < 0.05$). Primary school graduates from university or higher education level; On the other hand, secondary school graduates were found to have a more desperate approach than those with a university or higher education level ($p < 0.001$). It was found that secondary school graduates showed a more submissive approach than university and higher education levels (Table 1).

The sub-dimensions of coping styles and working status of MS patients were compared and it was found statistically significant in the sub-dimensions of helpless approach, submissive approach and seeking social support ($p < 0.01$, $p < 0.01$). It was determined that those who did not work were more helpless and submissive than others, and those who were employed more sought social support than those who did not work (Table 1).

The sub-dimensions of coping styles and health insurance scores of MS patients were compared and the helpless approach and seeking social support sub-dimensions were found to be statistically significant ($p < 0.05$, $p < 0.01$). The mean score of helpless approach was found to be significantly higher in those who did not have health insurance ($p < 0.05$), and it was determined that those with health insurance applied to social support more than those without health insurance (Table 1).

The sub-dimensions of coping with stress styles of MS patients and the mean scores of the people they live with were compared and the sub-dimensions of optimistic approach, self-confident approach and seeking social support were found to be statistically significant ($p < 0.05$). It was determined that the optimistic approach and self-confident approach score averages of those living with a nuclear family were higher than the others ($p < 0.05$), and those living with a nuclear family were more likely to seek social support than those living with an extended family (Table 1).

The mean scores of individuals with MS from the sub-dimensions of the stress coping style scale are optimistic approach 9.00 ± 3.05 , self-confident approach 14.35 ± 4.27 , helpless approach 11.60 ± 4.40 , submissive approach 6.90 ± 3.12 , seeking social support 5.79 ± 1.59 was determined (Table 2).

Table 1. The Styles of Coping with Stress Scale According to the Descriptive Characteristics of Patients (N:246)

Introductory Features	N; (%)	The Styles of Coping with Stress Scale				
		optimistic approach	self-confident approach	helpless approach	submissive approach	seeking social support
		Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Gender						
Woman	175 (%71.1)	8.65±2.85	14.07±4.27	11.92±4.24	6.84±3.18	5.76±1.56
Man	71 (%28.9)	9.90±3.25	14.70±4.20	10.64±4.56	7.08±4.00	5.88±1.65
Test value and p		t:-2.722;p: 0.007**	t:-1.440;p: 0.151	t:2.096;p: 0.037*	t:-0.608;p:0.544	t:-0.483;p:0.629
Marital Status						
Single 92(%37.4)		8.65±3.15	13.65±4.41	11.76±4.32	6.30±3.18	5.73±1.47
Married 154(%62.6)		9.25±2.95	14.70±4.13	11.44±4.40	7.26±3.00	5.85±1.65
Test value and p		t:-1.489;p:0.138	t:-1.803;p:0.073	t;-0.414;p: 0.679	t:-2.239;p: 0.026*	t:0.414;p:0.597
Education status						
^a Primary school	18(%7.3)	9.05±3.05	14.91±4.76	14.32±4.16	7.14±2.52	6.03±1.20
^b Middle School	16(6.5)	8.60±2.75	15.12±3.92	14.16±3.76	8.70±2.82	5.19±1.77
^c High school	75(30.5)	9.45±3.30	14.03±4.27	11.84±4.80	7.26±3.54	5.55±1.47
^d University and ↑	137(%55.7)	8.85±2.90	14.00±4.27	10.80±4.00	6.48±2.88	6.00±1.65
Test value and p		F:0.683;p: 0.563	F:0.689;p: 0.553	F:6.080;p: 0.001** a>d; b>d	F:3.155;p: 0.026* b>d	F:2.188;p:
Working status						
^a Working	114(%46.3)	8.95±3.15	14.00±4.13	12.32±4.24	7.08±3.06	6.15±1.53
^b Not working	79(%32.1)	8.55±2.60	14.28±4.13	12.72±4.56	7.44±3.30	5.40±1.59
^c Retired	42(%17.1)	9.95±3.40	14.98±4.90	11.28±4.16	5.94±2.76	5.64±1.53
^d Other (free, not working regularly)	11(%4.5)	9.50±2.55	15.33±4.06	8.32±2.32	4.80±2.22	5.85±1.74
Test value and p		F: 2.010;p:0.113	F:0.741;p: 0.528	F:4.337;p: 0.005** b>d	F:4.080;p: 0.008** b>d	F:3.885;p: 0.010* a>b
Health assurance						
Yes	229(%93.1)	9.00±3.25	14.21±4.27	11.36±4.40	6.78±3.12	5.88±1.56
No	17(%6.9)	9.10±2.90	15.33±3.85	13.92±3.44	8.22±3.12	4.83±1.77
Test value and p		t:-0.096;p:0.924	t:-0.993;p:0.321	t:-2.277;p: 0.024*	t:-1.774;p:0.077	t:2.612;p: 0.010*
People they live with						
^a Nuclear family	152(%61.8)	9.30±2.85	14.70±4.13	11.12±4.56	6.96±3.00	6.00±1.56
^b Extended family	20(%8.1)	8.60±2.90	14.70±3.85	12.48±5.60	7.50±4.50	5.01±1.59
^c Only	20(%8.1)	9.90±3.55	15.19±4.55	11.52±3.12	6.00±2.40	6.03±1.41
^d Other (friends, neighbors etc.)	54(%22.0)	8.05±3.15	12.81±4.48	12.40±3.60	6.78±3.06	5.49±1.62
Test value and p		F:2.930;p: 0.034* a>d	F:2.905;p: 0.035* a>d	F:1.441;p:0.232	F:-0.826;p:0.481	F:3.270;p: 0.022* a>b
Age 39.41±9.06 (min:20, max:63)		r:0.171;p:0.007**	r:0.048;p: 0.458	r:-0.010;p:0.870	r:-0.023;p:0.722	r:0.054;p:0.403

*p<.05; **p<.01; ***p<.001

Table 2. The Styles of Coping with Stress Scale (N:246)

Scale Sub-Dimensions	Minimum Values that can be taken	Maximum Values Patients Receive	Mean ± Standard Deviation
Optimistic Approach	0-15	1-15	9.00±3.05
Self-Confident Approach	0-21	2.03-21	14.35±4.27
Helpless Approach	0-24	2-23.04	11.60±4.40
Submissive Approach	0-18	0-16.98	6.90±3.12
Seeking Social Support	0-12	0.75-9	5.79±1.59

4. DISCUSSION

In this section, research and literature findings are discussed according to the findings of the study. The mean age of individuals with MS in our study was 39.41 ± 9.06 (min:20, maks:63), with 71.1 % (n:175) women, 62.6 % (n:154) married, 55.7 % (n:137) with education levels of university. Kiwi et al. (2019) put forth that the mean age of individuals with MS is 33.59 ± 8.70 (age interval: 18-57 years), that 67.8 % are women, 67.1 % are married(12).

Mean scores of men were observed to be higher at a statistically significant level compared with those of women in the optimistic approach sub-dimension ($p < 0.01$); whereas the mean scores of women in the hopeless approach sub-dimension were determined to be higher compared to men ($p < 0.05$). Dişçi et al. (2019) determined in their study that even though the difference between the ways of coping scale sub-dimensions and mean gender scores was not statistically significant; mean scores of women for self-confident approach, hopeless approach and seeking social support were determined to be higher than those of men; while the mean scores of men for optimistic approach and submissive approach were determined to be higher than those of women(13). Aung et al. (2018) reported in their study that individuals with MS mostly use self-confident approach (2.09 ± 0.66), followed by optimistic approach (1.86 ± 0.68), while the submissive approach is the least preferred approach (1.15 ± 0.58). Individuals with MS strive to provide confidence and analyze their conditions in order to cope with stress and continue their lives like other people (14). In our study, it is thought that gender differences have an effect on coping with stress.

It was determined in our study as a result of examining the relationship between the ways of coping scale sub-dimensions and mean marital state scores that there is a statistically significant increase in the submissive approach sub-dimension mean scores ($p < 0.05$). Dişçi et al.(2019) put forth that optimistic approach, helpless approach, submissive approach and seeking social support are higher for married individuals compared to single individuals while also indicating that the self-confident approach is higher for single individuals(13). Öz et al.(2019) reported in their study that married individuals who are receiving support experience more stress at a statistically significant level compared with single individuals(15). It was determined in our study as a result of evaluating the relationship between the ways of coping style sub-dimensions for individuals with MS and their education state mean scores that there is a statistically significant difference for the helpless approach and submissive approach sub-dimensions ($p < 0.001$, $p < 0.05$). Dehghani (2020) reported in their study that university or higher education graduates adopt self-confident approach more than high school graduates at a statistically significant level ($p < 0.05$) (9). Aung 2018 indicated in the study on coping methods that the effectiveness of coping with stress increases with increasing education level (14). In our study, it is thought that the higher mean scores of married people

compared to singles in coping with stress is the psychological and moral support provided by the spouses to each other.

The relationship between ways of coping sub-dimensions for individuals with MS and their employment state mean scores was examined as a result of which a statistically significant difference was observed in the helpless approach, submissive approach and seeking social support sub-dimensions ($p < 0.01$, $p < 0.01$). Okanlı et al. (2017) carried out a study as a result of which it was indicated that psychosocial adaptation is closely related with effective coping strategies for individuals with MS (16). It has been put forth that cognition and stress establish an indirect connection between depression and anxiety in MS(17-18). Kobelt et al. (2017) carried out a study as a result of which it was reported that the submissive approach is used more by unemployed individuals (18). It has been stated in another study that MS has an adverse impact on the careers of 54 % of individuals with MS. It has been set forth that unemployed individuals use submissive approach more, that MS results in a decrease in income, loss of employment-status-career resulting in early retirement and negative impacts on career plans(19).

The increase observed in our study between the ways of coping scale sub-dimensions of individuals with MS and health insurance mean scores was observed to be at a statistically significant level in the helpless approach and seeking social support sub-dimensions ($p < 0.05$, $p < 0.01$). Kiropoulos et al. (2020) indicated that factors that have an adverse impact on the quality of life of individuals with MS such as stress, anxiety, fatigue, pain, sleep disorders, insufficient social support, economic problems increase symptoms and attacks (20).

It was determined as a result of examining the relationship between the ways of coping scale sub-dimensions for individuals with MS and the mean scores of the individuals they live with that there are statistically significant differences in the optimistic approach, self-confident approach and seeking social support sub-dimensions ($p < 0.05$). It was determined as a result of a study carried out in Turkey on 50 patients diagnosed with MS that the majority of the patients use the self-confident and helpless approaches. The coping behavior of MS patients has been determined to be related with social support and especially the support from family, friends or MS patients(21-22). There is a negative relationship between coping strategies and nuclear family and social behaviors.

5. CONCLUSION

Individuals with Multiple Sclerosis(MS) mostly use helpless and submissive approaches in coping with stress during the Covid-19 pandemic. It was determined that the men display a more optimistic approach than women, while it was also determined that the women use the helpless approach more than men. It was put forth that the married individuals use the submissive approach more than the single individuals, while the primary school graduates use the helpless

approach more than the university. Unemployed individuals use the helpless and submissive approaches more than the others, while the employed individuals use the seeking social support style more than the unemployed. While those without health insurance use the helpless approach more, those with health insurance use the seeking social support style more. It was determined that those living with their nuclear families generally use the optimistic and self-confident approaches more. Hence, special trainings should be provided to individuals with MS for improving their ways of coping. Briefing meetings at MS associations, home visits, psychotherapies, various activities such as yoga etc. will have a positive impact on adaptation to symptom management and will also have a positive impact on coping with stress when the activities of the associations are able to provide social and physical support to the individuals. Support should be provided by the association to use stress coping methods more frequently for those who are primary school graduates and married and do not have social support. Due to the fact that individuals with MS remain closed at home during the pandemic process, services such as education and counseling can be planned online and support can be provided to individuals.

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Conflict of Interest

No conflict of interest has been declared by the author(s).

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